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**REPORT OF THE MARITIME SAFETY COMMITTEE  
ON ITS SEVENTY-SEVENTH SESSION**

Attached are annexes 19 to 27 to the report of the Maritime Safety Committee on its seventy-seventh session (MSC 77/26).

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## ANNEX 19

## DRAFT ASSEMBLY RESOLUTION

REVISED SURVEY GUIDELINES UNDER THE HARMONIZED  
SYSTEM OF SURVEY AND CERTIFICATION

THE ASSEMBLY,

RECALLING Article 15(j) of the Convention on the International Maritime Organization concerning the functions of the Assembly in relation to regulations and guidelines concerning maritime safety and the prevention and control of marine pollution from ships,

RECALLING ALSO that:

- (a) The International Conference on the Harmonized System of Survey and Certification, 1988 adopted the Protocol of 1988 relating to the International Convention for the Safety of Life at Sea, 1974 and the Protocol of 1988 relating to the International Convention on Load Lines, 1966, which introduce, *inter alia*, the harmonized system of survey and certification under the International Convention for the Safety of Life at Sea, 1974 and the International Convention on Load Lines, 1966,
- (b) By resolution MEPC.39(29), amendments have been adopted to introduce the harmonized system of survey and certification under the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the 1978 Protocol relating thereto (MARPOL 73/78),
- (c) By the resolutions given below, amendments have been adopted to introduce the harmonized system of survey and certification under the following instruments:
  - (i) The International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk (IBC Code), by resolutions MEPC.40(29) and MSC.16(58),
  - (ii) The International Code for the Construction and Equipment of Ships Carrying Liquefied Gases in Bulk (IGC Code), by resolution MSC.17(58),
  - (iii) The Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk (BCH Code), by resolutions MEPC.41(29) and MSC.18(58),

RECALLING FURTHER that it adopted, by resolution A.746(18), the Survey Guidelines under the Harmonized System of Survey and Certification, with a view to assisting Governments in the implementation of the requirements of the aforementioned instruments,

RECOGNIZING the need for the above Survey Guidelines to be revised to take account of the amendments to the IMO instruments referred to above, which entered into force or became effective since the adoption of resolution A.746(18),

HAVING CONSIDERED the recommendations made by the Maritime Safety Committee at its seventy-seventh session and the Marine Environment Protection Committee at its [forty-ninth] session,

1. ADOPTS the Revised Survey Guidelines under the Harmonized System of Survey and Certification, set out in the Annex to the present resolution;
2. INVITES Governments carrying out surveys required by the relevant IMO instruments to follow the provisions of the annexed Revised Survey Guidelines;
3. REQUESTS the Maritime Safety Committee and the Marine Environment Protection Committee to keep the Revised Survey Guidelines under review and amend them as necessary;
4. REVOKES resolution A.746(18).

ANNEX

**REVISED SURVEY GUIDELINES UNDER THE HARMONIZED  
SYSTEM OF SURVEY AND CERTIFICATION**

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## GENERAL

### 1 INTRODUCTION

1.1 These Guidelines supersede the guidelines adopted by resolution A. 746(18) and, take account of the Harmonized System of Survey and Certification in the following instruments:

- .1 International Convention for the Safety of Life at Sea, 1974 (SOLAS 1974), as modified by its 1988 Protocol and as amended by resolutions MSC.92(72) and MSC.100(73) (SOLAS 74/88/00);
- .2 International Convention on Load Lines, 1966 (LLC 1966) as amended and as modified by its 1988 Protocol (LL 66/88);
- .3 International Convention for the Prevention of Pollution from Ships, 1973 and of the Protocol of 1978 relating thereto (MARPOL 73/78), as amended by resolution MEPC.39(29) (MARPOL 73/78/90);
- .4 International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk (IBC Code), as amended by resolutions MEPC.40(29), MSC.16(58), MSC.28(61), MSC 50(66), MSC.58(67) and MSC.102(73) (IBC Code 83/90/00);
- .5 International Code for the Construction and Equipment of Ships Carrying Liquefied Gases in Bulk (IGC Code), as amended by resolutions MSC.17(58), MSC.30(61), MSC.59(67) and MSC.103(73) (IGC Code 83/90/00); and
- .6 Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk (BCH Code), as amended by resolutions MEPC.41(29) and MSC.18(58) (BCH Code 85/90);

1.2 These Guidelines contain amendments to statutory instruments up to the year 2000:

- .1 Survey Guidelines under the 1974 SOLAS Convention, as modified by the 1988 Protocol relating thereto (annex 1);
- .2 Survey Guidelines under the 1966 Load Line Convention, as modified by the 1988 Protocol relating thereto (annex 2);
- .3 Survey Guidelines under the 1973/78 MARPOL Convention (annex 3); and
- .4 Survey Guidelines under the mandatory Codes (annex 4).

1.3 The harmonized system, a diagrammatic arrangement of which is given in the appendix, provides for:

- .1 a one-year standard interval between surveys, based on initial, annual, intermediate, periodical and renewal surveys, as appropriate;

- .2 a scheme for providing the necessary flexibility for the execution of each survey with the provision that:
    - the renewal survey may be completed within 3 months before the expiry date of the existing certificate with no loss of its period of validity;
    - a "time window" of 6 months - from 3 months before to 3 months after the anniversary date of the certificate for annual, intermediate and periodical surveys;
  - .3 a maximum period of validity of five years for all certificates for cargo ships;
  - .4 a maximum period of validity of 12 months for the Passenger Ship Safety Certificate;
  - .5 a system for the extension of certificates limited to three months enables a ship to complete its voyage, or one month for ships engaged on short voyages;
  - .6 when an extension has been granted, the period of validity of the new certificate starts from the expiry date of the existing certificate before its extension;
  - .7 a flexible system for inspection of the outside of the ship's bottom on the following conditions:
    - a minimum of two inspections during any five-year period of validity of the Cargo Ship Safety Construction Certificate or the Cargo Ship Safety Certificate;
    - the interval between any two such inspections shall not exceed 36 months;
  - .8 a provision for a Cargo Ship Safety Certificate under SOLAS 74/88/00, as an alternative to separate Cargo Ship Safety Construction, Cargo Ship Safety Equipment and Cargo Ship Safety Radio Certificates;
  - .9 a flexible system concerning the frequency and the period of validity of certificates, provided that the minimum pattern of surveys is maintained.
- 1.4 In implementing the harmonized system, the following principal changes have been made to the survey and certification requirements of SOLAS 74/88/00:
- .1 unscheduled inspections are no longer included and annual surveys are mandatory for cargo ships;
  - .2 intervals between the periodical surveys of equipment covered by the Cargo Ship Safety Equipment Certificate are alternatively at intervals of two and three years instead of two years;
  - .3 intermediate surveys are required for all ships under the Cargo Ship Safety Construction Certificate;

- .4 inspection of the outside of the ship's bottom are required for all cargo ships;
- .5 intermediate surveys for the Cargo Ship Safety Construction Certificate are held within three months of either the second or third anniversary date;
- .6 all cargo ship certificates may be issued for any period of validity up to and including five years;
- .7 there is provision for a Cargo Ship Safety Certificate;
- .8 the extension provisions have been reduced from five months to three months to enable a ship to complete its voyage and the extension for one month for a period of grace is limited to ships engaged on short voyages.

1.5 With regard to LLC 66/88, the principal changes to the requirements for survey and certification are the introduction of similar extension provisions (see 1.4.8) and linking of the period of validity of the new certificate to the expiry date of the previous certificate (see 1.3.6).

1.6 With regard to MARPOL 73/78/90 and the IBC Code 83/90/00, the IGC Code 83/90/00 and the BCH Code 85/90, the main changes are the linking of the period of validity of the new certificate to the expiry date of the previous certificate (see 1.3.6), the holding of the intermediate survey within three months of the second or third anniversary date and the introduction of the same extension provisions (see 1.4.8).

## **2 TYPES OF SURVEY**

The types of surveys used in the harmonized system are as follows:

- (I) 2.1 *An initial survey* is a complete inspection before a ship is put into service of all the items relating to a particular certificate to ensure that the relevant requirements are complied with and that these items are satisfactory for the service for which the ship is intended.
- (P) 2.2 *A periodical survey* is an inspection of the items relating to the particular certificate to ensure that they are in a satisfactory condition and fit for the service for which the ship is intended.
- (R) 2.3 *A renewal survey* is the same as a periodical survey but also leads to the issue of a new certificate.
- (In) 2.4 *An intermediate survey* is an inspection of specified items relevant to the particular certificate to ensure that they are in a satisfactory condition and fit for the service for which the ship is intended.
- (A) 2.5 *An annual survey* is a general inspection of the items relating to the particular certificate to ensure that they have been maintained and remain satisfactory for the service for which the ship is intended.
- (B) 2.6 *An inspection of the outside of the ship's bottom* is an inspection of the underwater part of the ship and related items to ensure that they are in a satisfactory condition and fit for the service for which the ship is intended.

(Ad)2.7 *An additional survey* is an inspection, either general or partial according to the circumstances, to be made after a repair resulting from investigations or whenever any important repairs or renewals are made.

## **2.8 List of types of surveys in conventions and codes**

### **(I) 2.8.1 Initial surveys**

SOLAS 74/88, chapter I, regulation 7(a)(i)  
regulation 8(a)(i)  
regulation 9(a)(i)  
regulation 10(a)(i)  
LLC 66/88, article 14(1)(a)  
MARPOL 73/78/90, Annex I, regulation 4(1)(a)  
MARPOL 73/78/90, Annex II, regulation 10(1)(a)  
IBC Code 83/90, regulation 1.5.2.1.1  
IGC Code 83/90, regulation 1.5.2.1.1  
BCH Code 85/90, regulation 1.6.2.1.1

### **(P) 2.8.2 Periodical surveys**

SOLAS 74/88, chapter I, regulation 8(a)(iii)  
regulation 9(a)(iii)

### **(R) 2.8.3 Renewal surveys**

SOLAS 74/88, chapter I, regulation 7(a)(ii)  
regulation 8(a)(ii)  
regulation 9(a)(ii)  
regulation 10(a)(ii)  
LLC 66/88 article 14(1)(b)  
MARPOL 73/78/90, Annex I, regulation 4(1)(b)  
MARPOL 73/78/90, Annex II, regulation 10(1)(b)  
IBC Code 83/90, regulation 1.5.2.1.2  
IGC Code 83/90, regulation 1.5.2.1.2  
BCH Code 85/90, regulation 1.6.2.1.2

### **(In) 2.8.4 Intermediate surveys**

SOLAS 74/88, chapter I, regulation 10(a)(iii)  
MARPOL 73/78/90, Annex I, regulation 4(1)(c)  
MARPOL 73/78/90, Annex II, regulation 10(1)(c)  
IBC Code 83/90, regulation 1.5.2.1.3  
IGC Code 83/90, regulation 1.5.2.1.3  
BCH Code 85/90, regulation 1.6.2.1.3



3.6 Although part of the requirements for the Cargo Ship Safety Construction Certificate, a separate section is provided for inspection of the outside of the ship's bottom.

3.7 SOLAS 74/88 regulation I/12(v) provides for a Cargo Ship Safety Certificate to be issued as an alternative to the Cargo Ship Safety Equipment Certificate, the Cargo Ship Safety Construction Certificate and the Cargo Ship Safety Radio Certificate. Consequently, the surveys for the issue and renewal of the Cargo Ship Safety Certificate should be in accordance with the certificates it replaces and, similarly, the surveys for the annual and intermediate should be the same as those required for the replaced certificates and the appropriate sections of the Cargo Ship Safety Certificate endorsed accordingly.

3.8 On the left hand side of each item to be surveyed may be found two letters in brackets, the first indicating the certificate to which the survey relates, as follows:

- (E) for the Cargo Ship Safety *Equipment* Certificate;
- (C) for the Cargo Ship Safety *Construction* Certificate;
- (R) for the Cargo Ship Safety *Radio* Certificate;
- (L) for the International *Load Line* Certificate;
- (O) for the International *Oil Pollution* Prevention Certificate;
- (N) for the International Pollution Prevention Certificate for Carriage of *Noxious Liquid Substances* in Bulk;
- (D) for the International Certificate of Fitness for the Carriage of *Dangerous Chemicals* in Bulk or the Certificate of Fitness for the Carriage of *Dangerous Chemicals* in Bulk;
- (G) for the International Certificate of Fitness for the Carriage of Liquefied *Gases* in Bulk.
- (P) for the *Passenger* Ship Safety Certificate;

and the second for the type of survey, as follows:

- (I) for the *initial* survey;
- (A) for the *annual* survey;
- (In) for the *intermediate* survey;
- (P) for the *periodical* survey;
- (R) for the *renewal* survey;
- (B) for inspection of the outside of the *ship's bottom*;
- (Ad) for *additional* survey.

Consequently, for example, "(EI)", "(OIn)" and "(PR)" indicate the initial survey for the Cargo Ship Safety Equipment Certificate, the intermediate survey for the International Oil Pollution Prevention Certificate and the renewal survey for the Passenger Ship Safety Certificate respectively.

3.9 The amplification of various terms and conditions are given in section 5.

#### **4 DESCRIPTION OF THE VARIOUS TYPES OF SURVEYS**

##### **(I) 4.1 Initial surveys**

###### *4.1.1 Frequency*

4.1.1.1 The initial survey, as required by the relevant regulations (see 2.8.1), should be held before the ship is put in service and the appropriate certificate is issued for the first time.

###### *4.1.2 General*

4.1.2.1 The initial survey before the ship is put into service should include a complete inspection, with tests when necessary, of the structure, machinery and equipment to ensure that the requirements relevant to the particular certificate are complied with and that the structure, machinery and equipment are fit for the service for which the ship is intended.

4.1.2.2 The initial survey should consist of:

- .1 an examination of the plans, diagrams, specifications, calculations and other technical documentation to verify that the structure, machinery and equipment comply with the requirements relevant to the particular certificate;
- .2 an inspection of the structure, machinery and equipment to ensure that the materials, scantlings, construction and arrangements, as appropriate, are in accordance with the approved plans, diagrams, specifications, calculations and other technical documentation and that the workmanship and installation are in all respects satisfactory;
- .3 a check that all the certificates, record books, operating manuals and other instructions and documentation specified in the requirements relevant to the particular certificate have been placed on board the ship.

###### *4.1.3 Examination of plans and designs*

4.1.3.1 An application for an initial survey should be accompanied by plans and designs referred to in sections 1, 2, 4 and 5 of Annex 1 and in Annexes 2, 3 and 4, as appropriate, together with:

- .1 the particulars of the ship;
- .2 any exemptions sought;
- .3 any special conditions.

(A) **4.2 Annual surveys**

4.2.1 *Frequency*

4.2.1.1 The annual survey, as required by the relevant regulations (see 2.8.5) and as shown diagrammatically in the appendix, should be held within three months before or after each anniversary date of the certificate.

4.2.2 *General*

4.2.2.1 An annual survey should enable the Administration to verify that the condition of the ship, its machinery and equipment is being maintained in accordance with the relevant requirements.

4.2.2.2 In general, the scope of the annual survey should be as follows:

- .1 it should consist of certificate examination, of a visual examination of a sufficient extent of the ship and its equipment and of certain tests to confirm that their condition is being properly maintained;
- .2 it should also include a visual examination to confirm that no unapproved modifications have been made to the ship and its equipment;
- .3 the content of each annual survey is given in the respective guidelines. The thoroughness and stringency of the survey should depend upon the condition of the ship and its equipment;
- .4 should any doubt arise as to the maintenance of the condition of the ship or its equipment, further examination and testing should be conducted as considered necessary.

4.2.3 Where an annual survey has not been carried out within the due dates, reference should be made to 5.6.

(In) **4.3 Intermediate surveys**

4.3.1 *Frequency*

4.3.1.1 The intermediate survey, as required by the relevant regulations (see 2.8.4) and as shown diagrammatically in the appendix, should be held within three months before or after the second anniversary date or within three months before or after the third anniversary date of the appropriate certificate and should take the place of one of the annual surveys.

4.3.2 *General*

4.3.2.1 The intermediate survey should be an inspection of items relevant to the particular certificate to ensure that they are in a satisfactory condition and are fit for the service for which the ship is intended.

4.3.2.2 When specifying items of hull and machinery for detailed examination, due account should be taken of any continuous survey schemes that may be applied by classification societies.

4.3.2.3 Where an intermediate survey has not been carried out within the due dates, reference should be made to 5.6.

(P) **4.4 Periodical surveys**

4.4.1 *Frequency*

4.4.1.1 The periodical survey, as required by the relevant regulations (see 2.8.2) and as shown diagrammatically in the appendix, should be held within three months before or after the second anniversary date or within three months before or after the third anniversary date in the case of the cargo ship safety equipment certificate and should take the place of one of the annual surveys and within three months before or after each anniversary date in the case of the cargo ship safety radio certificate.

4.4.2 *General*

4.4.2.1 The periodical survey should consist of an inspection, with tests when necessary, of the equipment to ensure that requirements relevant to the particular certificate are complied with and that they are in a satisfactory condition and are fit for the service for which the ship is intended.

4.4.2.2 The periodical survey should also consist of a check that all the certificates, record books, operating manuals and other instructions and documentation specified in the requirements relevant to the particular certificate are on board the ship.

4.4.2.3 Where a periodical survey has not been carried out within the due dates, reference should be made to 5.6.

(R) **4.5 Renewal surveys**

4.5.1 *Frequency*

4.5.1.1 The renewal survey, as required by the relevant regulations (see 2.8.3) and as shown diagrammatically in the appendix, should be held before the appropriate certificate is renewed.

4.5.2 *General*

4.5.2.1 The renewal survey should consist of an inspection, with tests when necessary, of the structure, machinery and equipment to ensure that the requirements relevant to the particular certificate are complied with and that they are in a satisfactory condition and are fit for the service for which the ship is intended.

4.5.2.2 The renewal survey should also consist of a check that all the certificates, record books, operating manuals and other instructions and documentation specified in the requirements relevant to the particular certificate are on board the ship.

**(B) 4.6 Inspections of the outside of the ship's bottom of cargo ships**

*4.6.1 Frequency*

4.6.1.1 There should be a minimum of two inspections of the outside of the ship's bottom during any five year period (see 5.7), except where SOLAS 74/88 regulation I/14(e) or (f) is applicable. One such inspection should be carried out on or after the fourth annual survey in conjunction with the renewal of the Cargo Ship Safety Construction Certificate or the Cargo Ship Safety Certificate. Where the Cargo Ship Safety Construction Certificate or the Cargo Ship Safety Certificate has been extended under SOLAS 74/88 regulation I/14(e) or (f), this five-year period may be extended to coincide with the validity of the certificate. In all cases the interval between any two such inspections should not exceed 36 months.

*4.6.2 General*

4.6.2.1 The inspection of the outside of the ship's bottom and the survey of related items (see 5.1) should include an inspection to ensure that they are in a satisfactory condition and fit for the service for which the ship is intended.

4.6.2.2 Inspections of the outside of the ship's bottom should normally be carried out with the ship in a dry dock. However, consideration may be given to alternate inspections being carried out with the ship afloat. Special consideration should be given before ships of 15 years of age and over other than bulk carriers and oil tankers are permitted to have such surveys afloat. Inspection of the outside of the ship's bottom of bulk carriers and oil tankers of 15 years of age and over should be carried out with the ship in dry dock. Inspections with the ship afloat should only be carried out when the conditions are satisfactory and the proper equipment and suitably trained staff are available. For ships subject to enhanced survey, the provisions of paragraphs 2.2.2\* of Annexes A or B, as applicable, of resolution A. 744(18), as amended, should apply.

4.6.3 Where an inspection of the ships bottom has not been carried out before the due dates reference should be made to 5.6.

**(Ad) 4.7 Additional surveys**

4.7.1 Whenever an accident occurs to a ship or a defect is discovered which affects the safety or integrity of the ship or the efficiency or completeness of its equipment, the master or owner should make a report at the earliest opportunity to the Administration, the nominated surveyor or recognized organization responsible for issuing the relevant certificate. The Administration, the nominated surveyor or recognized organization responsible for issuing the relevant certificate should then initiate an investigation to determine whether a survey, as required by the regulations applicable to the particular certificate, is necessary. This additional survey, which may be general or partial according to the circumstances, should be such to ensure that the repairs and any renewals have been effectively made and that the ship and its equipment continue to be fit for the service for which the ship is intended.

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\* 2.2.2 For ships of 15 years of age and over, inspection of the outside of the ship's bottom should be carried out with the ship in dry dock. For ships of less than 15 years of age, alternate inspections of the ship's bottom not conducted in conjunction with the renewal survey may be carried out with the ship afloat. Inspections with the ship afloat should only be carried out when the conditions are satisfactory and the proper equipment and suitably trained staff are available.

## **4.8 Completion of surveys**

4.8.1 If a survey shows that the condition of the ship or its equipment is unsatisfactory, the officer of the Administration, nominated surveyor or recognized organization should be guided by the requirements of SOLAS 74/88 regulation I/6(c), MARPOL 73/78/90 Annex I regulation 4(3)(d), MARPOL 73/78/90 Annex II regulation 10(2)(c), the IBC Code 83/90 regulation 1.5.1.3, the IGC Code 83/90 regulation 1.5.1.3 and the BCH Code 85/90 regulation 1.6.1.3. These instruments require that corrective action be taken immediately and the Administration notified in due course. In cases where the corrective action has not been undertaken the relevant certificate should be withdrawn and the Administration notified immediately. If the ship is in the port of another Party, the appropriate authorities of the port State also notified immediately.

4.8.2 Although LLC 66/88 does not contain specific requirements, if a load line survey shows the condition of the ship or its equipment is unsatisfactory, the officer of the Administration, nominated surveyor or recognized organization should, nevertheless, be guided by 4.8.1.

## **5 AMPLIFICATION OF TERMS AND CONDITIONS**

### **5.1 Definition of related items**

Reference: SOLAS 74/88 regulation I/10(b)(v).

Related items mean those items which may only be inspected when the ship is in dry dock or undergoing an in-water examination of the outside of its bottom. For oil tankers, chemical tankers and gas carriers, this may mean that the ship has to be specially prepared by, for example, being cleaned and gas-freed. Then the survey of items such as the internal examination of cargo tanks, as referred to in (CIn) 2.3.2 and (CIn) 2.3.3 in Annex 1 may be undertaken at the same time.

### **5.2 Extending to five years a certificate issued for less than five years**

References: SOLAS regulation I/14(c), LLC 66/88 A.19(3), MARPOL 73/78/90 Annex I regulation 8(3), MARPOL 73/78/90 Annex II regulation 12(3), the IBC Code 83/90 regulation 1.5.6.3, the IGC Code 83/90 regulation 1.5.6.3 and the BCH Code 85/90 regulation 1.6.6.3.

Where a certificate has been issued for a period of less than five years, it is permissible under these regulations or article to extend the certificate so that its maximum period of validity is five years provided that the pattern of surveys for a certificate with a five-year period of validity is maintained (see appendix). This means that, for example, if a request is made to extend a two-year Cargo Ship Safety Equipment Certificate to five years, then a periodical and two further annual surveys, as detailed in SOLAS 74/88 regulation I/8, would be required. Also, for example, if it was intended to extend a four-year Cargo Ship Safety Construction Certificate to five years, then an additional annual survey would be required, as detailed in SOLAS 74/88 regulation I/10. Where a certificate has been so extended, it is still permissible to also extend the certificate under SOLAS 74/88 regulations I/14(e) and (f), LLC 66/88 articles 19(5) and (6), MARPOL 73/78/90 Annex I regulations 8(5) and (6), MARPOL 73/78/90 Annex II regulations 12(5) and (6), the IBC Code 83/90 regulations 1.5.6.5 and 1.5.6.6, the IGC Code 83/90 regulations 1.5.6.5 and 1.5.6.6 and the

BCH Code 85/90 regulations 1.6.6.5 and 1.6.6.6, when no additional surveys would be required but, of course, the new certificate issued after the renewal survey would date from the five-year expiry of the existing certificate, in accordance with SOLAS 74/88 regulation I/14(b)(ii), LLC 66/88 article 19(2)(b), MARPOL 73/78/90 Annex I regulation 8(2)(b), MARPOL 73/78/90 Annex II regulation 12(2)(b) of Annex II of MARPOL 73/78/90, the IBC Code 83/90 regulation 1.5.6.6.2, the IGC Code 83/90 regulation 1.5.6.2.2 and the BCH Code 85/90 regulation 1.6.6.2.2.

### **5.3 Extending the period between inspections of the outside of the ship's bottom**

Reference: SOLAS 74/88 regulation I/10(a)(v).

This permits the period of five years in which two inspections of the ship's bottom are to be carried out to be extended when the cargo ship safety construction Certificate is extended under regulation I/14(e) and (f). However, no extension should be permitted on the period of 36 months between any two such inspections. If the first ship's bottom inspection is carried out between 24 and 27 months then the thirty-sixth-month limitation may prevent the certificate being extended by the periods permitted in regulation I/14(e) and (f).

### **5.4 Definition of short voyage**

References: SOLAS 74/88 regulation I/14(f), LLC 66/88 article 19(6), MARPOL 73/78/90 Annex I regulation 8(6), MARPOL 73/78/90 Annex II regulation 12(6), the IBC Code 83/90 regulation 1.5.6.6, the IGC Code 83/90 regulation 1.5.6.6 and the BCH Code 85/90 regulation 1.6.6.6.

For the purpose of these regulations or article, a "short voyage" means a voyage where neither the distance from the port in which the voyage begins and the final port of destination nor the return voyage exceeds 1,000 miles.

### **5.5 Application of "special circumstances"**

References: SOLAS 74/88 regulation I/14(g), LLC 66/88 article 19(7), MARPOL 73/78/90 Annex I regulation 8(7), MARPOL 73/78/90 Annex II regulation 12(7), the IBC Code 83/90 regulation 1.5.6.7, the IGC Code 83/90 regulation 1.5.6.7 and the BCH Code 85/90 regulation 1.6.6.7.

The purpose of these regulations or article is to permit Administrations to waive the requirement that a certificate issued following a renewal survey that is completed after the expiry of the existing certificate should be dated from the expiry date of the existing certificate. The special circumstances when this could be permitted are where the ship has been laid-up or has been out of service for a considerable period because of a major repair or modification. Whilst the renewal survey would be as extensive as if the ship had continued in service, the Administration should consider whether additional surveys or examinations are required depending on how long the ship was out of service and the measures taken to protect the hull and machinery during this period. Where this regulation is invoked, it is reasonable to expect an examination of the outside of the ship's bottom to be held at the same time as the renewal survey when it would not be necessary to include any special requirements for cargo ships for the continued application of SOLAS 74/88 regulation I/10(a)(v).

## **5.6 Revalidation of certificates**

References: SOLAS 74/88 regulation I/14(i)(i), LLC 66/88 article 19(9)(a), MARPOL 73/78/88 Annex I regulation 8(9)(a), MARPOL 73/78/90 Annex II regulation 12(9)(a), the IBC Code 83/90 regulation 1.5.6.9.1, the IGC Code 83/90 regulation 1.5.6.9.1 and the BCH Code 85/90 regulation 1.6.6.9.1.

A certificate ceases to be valid if the periodical, intermediate or annual survey, as appropriate, or the inspection of the outside of the ship's bottom is not completed within the periods specified in the relevant regulation or article. The validity of the certificate should be restored by carrying out the appropriate survey which, in such circumstances, should consist of the requirements of the survey that was not carried out, but its thoroughness and stringency should have regard to the time this survey was allowed to lapse. The Administration concerned should then ascertain why the survey was allowed to lapse and to consider further action.

## **5.7 Meaning of "any five-year period"**

Reference: SOLAS 74/88 regulation I/10(a)(v).

*Any five-year period* is the five-year period of validity of the Cargo Ship Safety Construction Certificate or the Cargo Ship Safety Certificate.

## **5.8 Surveys required after transfer of the ship to the flag of another State**

The certificates cease to be valid when a ship transfers to the flag of another State and it is required that the Government of the State to which the ship transfers shall not issue new certificates until it is fully satisfied that the ship is being properly maintained and that there have been no unauthorised changes made to the structure, machinery and equipment. When so requested, the Government of the State whose flag the ship was formally entitled to fly is obliged to forward, as soon as possible, to the new Administration copies of certificates carried by the ship before the transfer and, if available, copies of the relevant survey reports and records, such as record of safety equipment and conditions of assignment for load line. When fully satisfied by an inspection that the ship is being properly maintained and that there have been no unauthorized changes, in order to maintain the harmonization of the surveys the new Administration may give due recognition to initial and subsequent surveys carried out by, or on behalf of, the former Administration and issue new certificates having the same expiry date as the certificates that ceased to be valid because of the change of flag.

ANNEX 1

**SURVEY GUIDELINES UNDER THE 1974 SOLAS CONVENTION,  
AS MODIFIED BY THE 1988 PROTOCOL RELATING THERETO**

**(E) 1 GUIDELINES FOR SURVEYS FOR THE CARGO SHIP SAFETY EQUIPMENT CERTIFICATE**

**(EI) 1.1 Initial surveys - see part "General" section 4.1.**

(EI) 1.1.1 For the life-saving appliances and the other equipment of cargo ships the examination of plans and designs should consist of:

- (EI) .1 examining the plans for the fire pumps, fire mains, hydrants, hoses and nozzles and the international shore connection (SOLAS 74/00 regs.II-2/10.2 and 10.4.4 and FSSC chs.2 and 12);
- (EI) .2 checking the provision, specification and arrangements of the fire extinguishers (SOLAS 74/00 reg.II-2/10.3) (SOLAS 74/88 reg.II-2/6);
- (EI) .3 checking the provision, specification and arrangements of the fire fighters' outfits and emergency escape breathing devices – EEBDs - (SOLAS 74/00 regs.II-2/10.10, 13.3.4 and 13.4.3; FSSC ch.3) (SOLAS 74/88 reg.II-2/17);
- (EI) .4 examining the plans for the fire-extinguishing arrangements in the machinery spaces -(SOLAS 74/00 regs.II-2/10.4 and 10.5 (except 10.5.5); FSSC chs.5, 6 and 7) (SOLAS 74/88 reg.II-2/7);
- (EI) .5 examining the plans for the special arrangements in the machinery spaces (SOLAS 74/00 regs.II-2/5.2, 8.3 and 9.5) (SOLAS 74/88 reg.II-2/11);
- (EI) .6 checking the provision of a fixed fire detection and fire alarm system for machinery spaces including periodically unattended machinery spaces (SOLAS 74/00 regs.II-2/7.2, 7.3 and 7.4) (SOLAS 74/88 regs.II-2/13 and 14);
- (EI) .7 checking the provision of a fixed fire detection and fire alarm system and/or an automatic sprinkler, fire detection and fire alarm system in accommodation and service spaces and control stations (SOLAS 74/00 regs.II-2/7.2, 7.3, 7.5.5, 7.7 and 10.6.2; FSSC chs.8 and 9) (SOLAS 74/88 reg.II-2/52);
- (EI) .8 checking the provision of a fire-extinguishing system for spaces containing paint and/or flammable liquids and deep-fat cooking equipment in accommodation and service spaces (SOLAS 74/00 regs.II-2/10.6.3 and 10.6.4; FSSC chs.5 and 7) (SOLAS 74/88 regs.II-2/18.7);
- (EI) .9 examining the arrangements for oil fuel, lubricating oil and other flammable oils (SOLAS 74/00 reg.II-2/4.2) (SOLAS 74/88 reg.II-2/15);
- (EI) .10 examining the plans for the fire protection arrangements in cargo spaces for general cargo and dangerous goods (SOLAS 74/00 regs.II-2/10.7 and 19) (SOLAS 74/88 regs.II-2/53 and 54);

- (EI) .11 examining the plans for the fire protection arrangements in vehicle, special category and ro-ro spaces (SOLAS 74/00 reg.II-2/20(except 20.2.2 and 20.5); FSSC chs.5, 6,7,9 and 10) (SOLAS 74/88 regs.II-2/37,38 and 53);
- (EI) .12 examining the plans for the helicopter facilities (SOLAS 74/00 reg.II-2/18) (SOLAS 74/88 regs.II-2/18.8);
- (EI) .13 examining the plans for the special arrangements for the carriage of dangerous goods, when appropriate, including water supplies, electrical equipment and wiring, fire detection, ventilation, bilge pumping, personnel protection and any water spray system (SOLAS 74/00 reg.II-2/19 (except 19.3.8, 19.3.10 and 19.4); FSSC chs.9 and 10) (SOLAS 74/88 reg.II-2/54);
- (EI) .14 examining the provision and disposition of the survival craft and rescue boats and, where applicable, marine evacuation systems (SOLAS 74/88 regs.III/11 to 16, 31 and 33);
- (EI) .15 examining the design of the survival craft, including their equipment, launching and recovery appliances and embarkation and launching arrangements (SOLAS 74/96 regs.III/16, 31, 32 to 33; LSAC sections. 3.2, 4.1 to 4.9, 6.1 and 6.2);
- (EI) .16 examining the design of the rescue boats, including their equipment and launching and recovery appliances and arrangements (SOLAS 74/00 regs.III/17 and 31; LSAC sections 5.1 and 6.1);
- (EI) .17 examining the provision, specification and stowage of two-way VHF radiotelephone apparatus and radar transponders. (SOLAS 74/88 reg.III/6);
- (EI) .18 examining the provision, specification and stowage of the distress flares and the line-throwing appliance and the provision of on board communications equipment and the general alarm system (SOLAS 74/00 regs II-2/12.1 and 12.2, and regs.III/6 and 18; and LSAC sections 3.1, 7.1 and 7.2);
- (EI) .19 examining the provision, specification and stowage of the lifebuoys, including those fitted with self-igniting lights, self-activating smoke signals and buoyant lines, lifejackets, immersion suits, anti-exposure suits and thermal protective aids (SOLAS 74/00 regs.III/7 and 32; LSAC sections 2.1 to 2.5 and 3.1 to 3.3);
- (EI) .20 examining the plans for the lighting of the muster and embarkation stations and the alleyways, stairways and exits giving access to the muster and embarkation stations, including the supply from the emergency source of power (SOLAS 74/88 regs.II-1/43 and III/11);
- (EI) .21 examining the plans for the positioning of, and the specification for, the navigation lights, shapes and sound signalling equipment (International Regulations for Preventing Collisions at Sea (COLREG) in force regs.20 to 24, 27 to 30 and 33);

- (EI) .22 examining the plans relating to the bridge design and arrangement of navigational systems and equipment and bridge procedures (SOLAS 74/00 regs.V/15 and 12);
  - (EI) .23 checking the provision and specification of the following navigation equipment as appropriate: daylight signalling lamp, magnetic compass, transmitting heading device, gyro compass, gyro compass repeaters, radar installation(s), automatic identification system, electronic plotting aid, automatic tracking aid(s) or automatic radar plotting aid(s), echo-sounding device, speed and distance measuring device(s), rudder angle indicator, propeller rate of revolution indicator, variable-pitch propeller pitch and operational mode indicator, rate-of-turn indicator, heading or track control system, GNSS receiver, terrestrial radio navigation system and sound reception system, means of communication with emergency steering position, ECDIS including back-up arrangements, a pelorus or compass bearing device and means for correcting heading and bearings (SOLAS 74/00 reg.V/19);
  - (EI) .24 checking the provision and specification of voyage data recorder (SOLAS 74/00 reg.V/20);
  - (EI) .25 checking the provision and specification of the pilot ladders and hoists/pilot transfer arrangements (SOLAS 74/88 reg.V/23).
- (EI) 1.1.2 For the examination of plans and designs of the life-saving appliances and the other equipment of cargo ships the additional requirements for oil tankers should consist of:
- (EI) .1 examining the plans for the cargo tank protection (SOLAS 74/00 regs.II-2/4.5.3, 4.5.5, 4.5.6, 4.5.7 and 10.8; FSSC chs.14 and 15) (SOLAS 74/88 regs.II-2/60 and 62) and
  - (EI) .2 examining the plans for protection of the cargo pump rooms (SOLAS 78/00 regs II-2/4.5.10 and 10.9) (SOLAS 74/88 reg.II-2/63).
- (EI) 1.1.3 For the life-saving appliances and the other equipment of cargo ships the survey during construction and after installation should consist of:
- (EI) .1 examining the fire pumps and fire main and the disposition of the hydrants, hoses and nozzles and the international shore connection and checking that each fire pump, including the emergency fire pump, can be operated separately so that two jets of water are produced simultaneously from different hydrants at any part of the ship whilst the required pressure is maintained in the fire main (SOLAS 74/00 reg.II-2/10.2; FSSC chs.2 and 12) (SOLAS 74/88 regs.II-2/4 and 19);
  - (EI) .2 examining the provision and disposition of the fire extinguishers (SOLAS 74/00 reg.II-2/10.3; FSSC ch.4) (SOLAS 74/88 reg.II-2/17);
  - (EI) .3 examining the fire fighters' outfits and emergency escape breathing devices - EEBDs - (SOLAS 74/00 regs.II-2/10.10, 13.3.4 and 13.4.3; FSSC ch.3) (SOLAS 74/88 reg.II-2/17);

- (EI) .4 checking the operational readiness and maintenance of fire-fighting systems (SOLAS 74/00 reg.II-2/14 1) (SOLAS 74/88 reg.II-2/21);
- (EI) .5 examining the fixed fire-fighting system for the machinery, cargo, vehicle, special category and ro-ro spaces, as appropriate, and confirming that the installation tests have been satisfactorily completed and that its means of operation are clearly marked (SOLAS 74/00 regs.II-2/10.4, 10.5, 10.7 and 20.6.1; FSSC chs.5 to 7) (SOLAS 74/88 regs.II-2/7 and 53);
- (EI) .6 examining the fire-extinguishing and special arrangements in the machinery spaces and confirming, as far as practicable and as appropriate, the operation of the remote means of control provided for the opening and closing of the skylights, the release of smoke, the closure of the funnel and ventilation openings, the closure of power operated and other doors, the stopping of ventilation and boiler forced and induced draft fans and the stopping of oil fuel and other pumps that discharge flammable liquids (SOLAS 74/00 regs.II-2/5.2, 8.3, 9.5 and 10.5) (SOLAS 74/88 regs.II-2/7 and 11);
- (EI) .7 examining any fire detection and alarm system and any automatic sprinkler, fire detection and fire alarm system and confirming that installation tests have been satisfactorily completed (SOLAS 74/00 regs.II-2/7.2, 7.3, 7.4, 7.5.1, 7.5.5, 19.3.3 and 20.4; FSSC ch.9) (SOLAS 74/88 regs.II-2/11, 13, 14, 53 and 54);
- (EI) .8 examining the fire-extinguishing system for spaces containing paint and/or flammable liquids and deep-fat cooking equipment in accommodation and service spaces and confirming that installation tests have been satisfactorily completed and that its means of operation are clearly marked (SOLAS 74/00 regs.II-2/10.6.3 and 10.6.4; FSSC chs.4 to 7) (SOLAS 74/88 reg.II-2/18.7);
- (EI) .9 examining the arrangements for oil fuel, lubricating oil and other flammable oils and confirming, as far as practicable and as appropriate, the operation of the remote means of closing the valves on the tanks that contain oil fuel, lubricating oil and other flammable oils (SOLAS 74/00 reg.II-2/4.2) (SOLAS 74/88 reg.II-2/15);
- (EI) .10 examining the fire protection arrangements in cargo vehicle and ro-ro spaces and confirming, as far as practicable and as appropriate, the operation of the means for closing the various openings (SOLAS 74/00 regs.II-2/10.7, 20.2.1, 20.3 and 20.6.2) (SOLAS 74/88 reg.II-2/53);
- (EI) .11 examining, when appropriate, the special arrangements for carrying dangerous goods, including checking the electrical equipment and wiring, the ventilation, the provision of protective clothing and portable appliances and the testing of the water supply, bilge pumping and any water spray system (SOLAS 74/00 reg.II-2/19 (except 19.3.8, 19.3.10 and 19.4); FSSC chs.9 and 10) (SOLAS 74/88 reg.II-2/54);
- (EI) .12 checking the provision and disposition of the survival craft, where applicable, marine evacuation systems and rescue boats (SOLAS 74/88 regs.III/11 to 16 and 31; LSAC section 6.2);

- (EI) .13 deployment of 50% of the MES after installation (LSAC paragraph 6.2.2.2);
- (EI) .14 examining each survival craft, including its equipment (SOLAS 74/88 reg.III/31; LSAC sections 2.5, 3.1 to 3.3 and 4.1 to 4.9);
- (EI) .15 examining the embarkation arrangements for each survival craft and the testing of each launching appliance, including overload tests, tests to establish the lowering speed and the lowering of each survival craft to the water with the ship at its lightest sea-going draught, and, where applicable, launching underway at 5 knots, checking the recovery of each lifeboat (SOLAS 74/00 regs.III/11, 12, 13, 16, 31 and 33; LSAC section 6.1);
- (EI) .16 examining the embarkation arrangements for each marine evacuation device, where applicable, and the launching arrangements, including inspection for lack of side shell opening between the embarkation station and waterline, review of distance to the propeller and other life-saving appliances and ensuring that the stowed position is protected from heavy weather damage, as much as practicable (SOLAS 74/00 reg.III/15; LSAC section 6.2);
- (EI) .17 examining each rescue boat, including its equipment (SOLAS 74/88 reg.III/31; LSAC sections 2.5, 5.1 and 6.1);
- (EI) .18 examining the embarkation and recovery arrangements for each rescue boat and testing each launching and recovery appliance, including overload tests, tests to establish the lowering and recovery speeds and ensuring that each rescue boat can be lowered to the water and recovered with the ship at its lightest sea-going draught, launching underway at 5 knots (SOLAS 74/88 regs.III/14, 17 and 31; LSAC section 6.1);
- (EI) .19 testing that the engine of the rescue boat(s) and of each lifeboat, when so fitted, start satisfactorily and operate both ahead and astern (SOLAS 74/00 reg.III/19);
- (EI) .20 confirming that there are posters or signs in the vicinity of survival craft and their launching stations and containers, brackets, racks and other similar stowage locations for life-saving equipment (SOLAS 74/88 regs.III/9 and 20);
- (EI) .21 examining the provision and stowage and checking the operation of portable on board communications equipment, if provided, and two-way VHF radiotelephone apparatus and radar transponders (SOLAS 74/88 regs.II-2/12.2 and III/6);
- (EI) .22 examining the provision and stowage of the distress flares and the line-throwing appliance, checking the provision and operation of fixed on board communications equipment, if provided, and testing the means of operation of the general alarm system (SOLAS 74/00 regs.III/6 and 18; LSAC sections 3.1, 7.1 and 7.2);
- (EI) .23 examining the provision, disposition and stowage of the lifebuoys, including those fitted with self-igniting lights, self-activating smoke signals and buoyant lines, lifejackets, immersion suits and thermal protective aids (SOLAS 74/00 regs.III/7 and 32 to 37; LSAC sections 2.1, 2.5 and 3.3);

- (EI) .24 checking the lighting of the muster and embarkation stations and the alleyways, stairways and exits giving access to the muster and embarkation stations, including when supplied from the emergency source of power (SOLAS 74/88 regs.II-1/43 and III/11);
- (EI) .25 examining the provision and positioning and checking the operation of, as appropriate, the navigation lights, shapes and sound signalling equipment (International Regulations for Preventing Collisions at Sea (COLREG) in force, regs.20 to 24, 27 to 30 and 33);
- (EI) .26 checking that the minimum safe distances from the steering and standard magnetic compasses for all electrical equipment are complied with (SOLAS 74/00 regs.V/17 and 19);
- (EI) .27 checking the electromagnetic compatibility of electrical and electronic equipment on or in the vicinity of the bridge (SOLAS 74/00 reg.V/17);
- (EI) .28 checking, as appropriate, the provision and operation of the following ship bourn navigational systems equipment (SOLAS 74/00 reg.V/19):
  - (EI) .28.1 the magnetic compass, including examining the siting, movement, illumination and a pelorus or compass bearing device (SOLAS 74/00 reg.V/19);
  - (EI) .28.2 nautical charts and nautical publications necessary for the intended voyage are available and have been updated, and, where electronic systems are used, the electronic charts have been updated and the required back-up system is provided and updated (SOLAS 74/00 reg.V/19);
  - (EI) .28.3 global navigation satellite system receiver or terrestrial radionavigation system;
  - (EI) .28.4 sound reception system, when bridge is totally enclosed;
  - (EI) .28.5 means of communication to emergency steering position, where provided;
  - (EI) .28.6 spare magnetic compass;
  - (EI) .28.7 daylight signalling lamp;
  - (EI) .28.8 echo sounding device;
  - (EI) .28.9 spare magnetic compass;
  - (EI) .28.10 radar(s), including examining the waveguide and cable runs for routing and protection and the display unit confirming lighting, correct operation of all controls, and functions;
  - (EI) .28.11 electronic plotting aid, automatic tracking aid or automatic radar plotting aid as appropriate, using the appropriate test facilities;

- (EI) .28.12 speed and distance measuring devices “through the water” and “over the ground”;
  - (EI) .28.13 transmitting heading device providing heading information to radar, plotting aids and automatic identification system equipment and voyage data recorder;
  - (EI) .28.14 automatic identification system;
  - (EI) .28.15 gyrocompass, including examining the alignment of the master and all repeaters;
  - (EI) .28.16 rudder angle indicator;
  - (EI) .28.17 propeller rate of revolution indicator;
  - (EI) .28.18 propeller, operational mode, thrust, and pitch indicator;
  - (EI) .28.19 rate-of-turn indicator;
  - (EI) .28.20 heading or track control system;
  - (EI) .29 checking for the provision and operation of the voyage data recorder (SOLAS 74/00 reg.V/20);
  - (EI) .30 checking record of the voyage data recorder annual performance test (SOLAS 74/00 reg.V/18);
  - (EI) .31 checking navigation bridge visibility (SOLAS 74/00 reg.V/22);
  - (EI) .32 checking the provision and, as appropriate, the deployment or operation of the pilot ladders and hoists/pilot transfer arrangements (SOLAS 74/00 reg.V/23).
- (EI) 1.1.4 For the life-saving appliances and the other equipment of cargo ships for the additional requirements for oil tankers the survey during construction and after installation should consist of:
- (EI) .1 checking the deck foam system, including the supplies of foam concentrate, and testing that the minimum number of jets of water at the required pressure in the fire main is obtained (see (EI) 1.1.3.1) when the system is in operation (SOLAS 74/00 reg.II-2/10.88; FSSC ch.15) (SOLAS 74/88 reg.II-2/61);
  - (EI) .2 examining the inert gas system (SOLAS 74/00 reg.II-2/4.5.5; FSSC ch.15) (SOLAS 74/88 reg.II-2/62) and in particular:
    - (EI) .2.1 examining externally for any sign of gas or effluent leakage;
    - (EI) .2.2 confirming the proper operation of both inert gas blowers;
    - (EI) .2.3 observing the operation of the scrubber-room ventilation system;
    - (EI) .2.4 checking the deck water seal for automatic filling and draining;

- (EI) .2.5 examining the operation of all remotely operated or automatically controlled valves and, in particular, the flue gas isolating valves;
- (EI) .2.6 observing a test of the interlocking feature of soot blowers;
- (EI) .2.7 observing that the gas pressure-regulating valve automatically closes when the inert gas blowers are secured;
- (EI) .2.8 checking, as far as practicable, the following alarms and safety devices of the inert gas system using simulated conditions where necessary:
  - (EI) .2.8.1 high oxygen content of gas in the inert gas main;
  - (EI) .2.8.2 low gas pressure in the inert gas main;
  - (EI) .2.8.3 low pressure in the supply to the deck water seal;
  - (EI) .2.8.4 high temperature of gas in the inert gas main;
  - (EI) .2.8.5 low water pressure or low water-flow rate;
  - (EI) .2.8.6 accuracy of portable and fixed oxygen-measuring equipment by means of calibration gas;
  - (EI) .2.8.7 high water level in the scrubber;
  - (EI) .2.8.8 failure of the inert gas blowers;
  - (EI) .2.8.9 failure of the power supply to the automatic control system for the gas regulating valve and to the instrumentation for continuous indication and permanent recording of pressure and oxygen content in the inert gas main;
  - (EI) .2.8.10 high pressure of gas in the inert gas main;
- (EI) .2.9 checking the proper operation of the inert gas system on completion of the checks listed above;
- (EI) .3 examining the fixed fire-fighting system for the cargo pump room, confirming that the installation tests have been satisfactorily completed and that its means of operation are clearly marked (SOLAS 74/00 reg.II-2/10.9; FSSC chs.5, 6, 7 and 8, as applicable) and, when appropriate, checking the operation of the remote means for closing the various openings;
- (EI) .4 examining the protection of the cargo pump-rooms and confirming that the installation tests have been satisfactorily completed (SOLAS 74/00 reg.II-2/4.5.10) (SOLAS 74/88 regs.II-2/55 to 58).
- (EI) 1.1.5 For the life-saving appliances and the other equipment of cargo ships the check that the required documentation has been placed on board should consist of:

- (EI) .1 confirming that the fire control plans are permanently exhibited or, alternatively, emergency booklets have been provided and that a duplicate of the plans or the emergency booklet are available in a prominently marked enclosure external to the ship's deckhouse (SOLAS 74/00 reg.II-2/15.2.4) (SOLAS 74/88 reg.II-2/20);
  - (EI) .2 confirming that maintenance plans have been provided (SOLAS 74/00 regs.II-2/14.2.2 and 14.4);
  - (EI) .3 confirming that the training manuals and the fire safety operational booklets have been provided (SOLAS 74/00 regs.II-2/15.2.3, 16.2 and 16.3);
  - (EI) .4 confirming, where appropriate, that the ship is provided with a document indicating compliance with the special requirement for carrying dangerous goods (SOLAS 74/00 reg.II-2/19.4) (SOLAS 74/88 reg.II-2/54(3));
  - (EI) .5 confirming that emergency instructions are available for each person on board, that the muster list is posted in conspicuous places and they are in a language understood by the persons on board (SOLAS 74/00 regs.III/8 and 37);
  - (EI) .6 confirming that the training manual and training aids for the life-saving appliances have been provided (SOLAS 74/00 reg.III/35);
  - (EI) .7 confirming that the instructions for on board maintenance of the life-saving appliances have been provided (SOLAS 74/88 reg.III/36);
  - (EI) .8 confirming that a table or curve of residual deviations for the magnetic compass has been provided, and that a diagram of the radar installations shadow sectors is displayed (SOLAS 74/00 reg.V/19);
  - (EI) .9 checking that operational and, where appropriate, maintenance manuals for all navigational equipment are provided (SOLAS 74/00 reg.V/16);
  - (EI) .10 checking that the charts and nautical publications necessary for the intended voyage are available and have been updated (SOLAS 74/88 reg.V/27);
  - (EI) .11 checking that the International Code of Signals is available (SOLAS 74/00 reg.V/21);
  - (EI) .12 checking that records of navigational activities have been maintained (SOLAS 74/00 reg.V/28);
  - (EI) .13 checking that the life-saving signals to be used by ships, aircraft or persons in distress are available (SOLAS 74/00 reg.V/29).
- (EI) 1.1.6 For the life-saving appliances and the other equipment of cargo ships for the additional requirements for oil tankers the check that the required documentation has been placed on board should consist of:

- (EI) .1 confirming, when appropriate, that the instruction manuals for the inert gas system have been provided (FSSC ch.15 paragraph 2.4.4) (SOLAS 74/88 reg.II-2/62.21).
- (EI) 1.1.7 For the life-saving appliances and the other equipment of cargo ships the completion of the initial survey should consist of:
- (EI) .1 after a satisfactory survey, the Cargo Ship Safety Equipment Certificate and its associated Record of Equipment (Form E) should be issued.
- (EA)1.2 Annual surveys** - see part "General" section 4.2.
- (EA)1.2.1 For the life-saving appliances and the other equipment of cargo ships the examination of current certificates and other records should consist of:
- (EA) .1 checking the validity, as appropriate, of the Cargo Ship Safety Equipment Certificate, the Cargo Ship Safety Radio Certificate and the Cargo Ship Safety Construction Certificate or the Cargo Ship Safety Certificate;
- (EA) .2 checking the validity of the Safety Management Certificate (SMC) and that a copy of the Document of Compliance (DOC) is on board;
- (EA) .3 checking the validity of the International Load Line Certificate or International Load Line Exemption Certificate;
- (EA) .4 checking the validity of the International Oil Pollution Prevention Certificate;
- (EA) .5 checking the certificates of class, if the ship is classed with a classification society;
- (EA) .6 checking, when appropriate, the validity of the International Certificate of Fitness for the Carriage of Dangerous Chemicals in Bulk or the Certificate of Fitness for the Carriage of Dangerous Chemicals in Bulk;
- (EA) .7 checking, when appropriate, the validity of the International Certificate of Fitness for the Carriage of Liquefied Gases in Bulk;
- (EA) .8 checking, when appropriate, the validity of the International Pollution Prevention Certificate for the Carriage of Noxious Liquid Substances in Bulk;
- (EA) .9 checking that the ship's complement complies with the Minimum Safe Manning Document (SOLAS 74/00 reg.V/14);
- (EA) .10 checking that the master, officers and ratings are certificated as required by the STCW Convention;
- (EA) .11 checking the manning and supervision of survival craft (SOLAS 74/00 reg.III/10);

- (EA) .12 checking whether any new equipment has been fitted and, if so, confirm that it has been approved before installation and that any changes are reflected in the appropriate certificate;
- (EA) .13 confirming that the fire control plans are permanently exhibited or, alternatively, emergency booklets have been provided and that a duplicate of the plans or the emergency booklet are available in a prominently marked enclosure external to the ship's deckhouse (SOLAS 74/00 reg.II-2/15.2.4) (SOLAS 74/88 reg.II-2/20);
- (EA) .14 confirming that the maintenance plans have been provided (SOLAS 74/00 regs.II-2/14.2.2 and 14.4);
- (EA) .15 confirming that the training manuals and the fire safety operational booklets have been provided (SOLAS 74/00 regs.II-2/15.2.3, 16.2 and 16.3);
- (EA) .16 checking whether any fire has occurred on board necessitating the operation of the fixed fire-extinguishing systems or the portable fire extinguishers since the last survey;
- (EA) .17 checking, when appropriate, that the ship is provided with a document indicating compliance with the special requirements for carrying dangerous goods (SOLAS 74/00 reg.II-2/19.4) (SOLAS 74/88 reg.II-2/54(3));
- (EA) .18 confirming, when appropriate, that there is a special list, manifest or stowage plan for the carriage of dangerous goods (SOLAS 74/88 reg.VII/5(3));
- (EA) .19 confirming, when appropriate, that the instruction manuals for the inert gas system have been provided and checking from the records of the pressure and oxygen content that the inert gas system is being operated correctly (FSSC ch.15) (SOLAS 74/88 reg.II-2/62);
- (EA) .20 checking that log-book entries are being made (SOLAS 74/00 regs.III/19 and 20) and in particular:
  - (EA) .20.1 the date when the last full muster of the crew for boat and fire drill took place;
  - (EA) .20.2 the records indicating that the lifeboat equipment was examined at that time and found to be complete;
  - (EA) .20.3 the last occasion when the lifeboats were swung out and when each one was lowered into the water;
  - (EA) .20.4 the records indicating that crew members have received the appropriate on board training;
- (EA) .21 confirming that the training manual and training aids for the life-saving appliances are on board (SOLAS 74/00 reg.III/35);
- (EA) .22 confirming that the checklist and instructions for on board maintenance of the life-saving appliances are on board (SOLAS 74/00 reg.III/36);

- (EA) .23 confirming that a table or curve of residual deviations for the magnetic compass has been provided, the compass deviation book has been properly maintained and a diagram of the radar installations shadow sectors is displayed (SOLAS 74/00 reg.V/19);
- (EA) .24 checking that operational and, where appropriate, maintenance manuals for all navigational equipment are provided (SOLAS 74/00 reg.V/16);
- (EA) .25 checking that nautical charts and nautical publications necessary for the intended voyage are available and have been updated, and, where electronic systems are used, the required back up system is provided (SOLAS 74/00 regs.V/19 and 27);
- (EA) .26 checking that the International Code of Signals is available;
- (EA) .27 checking that the life-saving signals to be used by ships, aircraft or persons in distress are available (SOLAS 74/00 reg.V/29).

(EA) 1.2.2 For the life-saving appliances and the other equipment of cargo ships the annual survey should consist of:

- (EA) .1 examining the fire pumps, fire main, hydrants, hoses and nozzles and the international shore connection and checking that each fire pump, including the emergency fire pump, can be operated separately so that two jets of water are produced simultaneously from different hydrants at any part of the ship whilst the required pressure is maintained in the fire main (SOLAS 74/00 reg.II-2/10.2; FSSC chs.2 and 12) (SOLAS 74/88 regs.II-2/4 and 19);
- (EA) .2 checking the provision and randomly examining the condition of the portable and non-portable fire extinguishers (SOLAS 74/00 reg.II-2/10.3; FSSC ch.4) (SOLAS 74/88 reg.II-2/6);
- (EA) .3 confirming that the fire fighters' outfits and emergency escape breathing devices – EEBDs - are complete and in good condition and that the cylinders, including the spare cylinders, of any required self-contained breathing apparatus are suitably charged (SOLAS 74/00 regs.II-2/10.10, 13.3.4 and 13.4.3; FSSC ch.3) (SOLAS 74/88 reg.II-2/17);
- (EA) .4 checking the operational readiness and maintenance of fire-fighting systems (SOLAS 74/00 reg.II-2/14) (SOLAS 74/88/91 reg.II-2/21);
- (EA) .5 examining the fixed fire-fighting system for the machinery, cargo, vehicle, special category and ro-ro spaces, as appropriate, and confirming that its means of operation is clearly marked (SOLAS 74/00 regs.II-2/10.4, 10.5, 10.7 and 20.6.1; FSSC chs.5 to 7) (SOLAS 74/88 regs.II-2/7 and 53);
- (EA) .6 examining the fire-extinguishing and special arrangements in the machinery spaces and confirming, as far as practicable and as appropriate, the operation of the remote means of control provided for the opening and closing of the skylights, the release of smoke, the closure of the funnel and ventilation openings, the closure of power operated and other doors, the stopping of ventilation and boiler forced and induced draft fans and the stopping of oil fuel and other pumps that discharge flammable liquids (SOLAS 74/00 regs.II-2/5.2, 8.3, 9.5 and 10.5) (SOLAS 74/88 regs.II-2/7 and 11);
- (EA) .7 examining, as far as possible, and testing, as feasible, any fire detection and alarm system (SOLAS 74/00 regs.II-2/7.2, 7.3, 7.4, 7.5.1, 7.5.5, 19.3.3 and 20.4; FSSC ch.9) (SOLAS 74/88 regs.II-2/11, 13, 14, 53 and 54);
- (EA) .8 examining the fire-extinguishing systems for spaces containing paint and/or flammable liquids and deep-fat cooking equipment in accommodation and service spaces (SOLAS 74/00 regs.II-2/10.6.3 and 10.6.4; FSSC chs.5 to 7) (SOLAS 74/88 reg.II-2/18.7);
- (EA) .9 examining the helicopter facilities (SOLAS 74/00 reg.II-2/18) (SOLAS 74/88 reg.II-2/18.8);

- (EA) .10 examining the arrangements for oil fuel, lubricating oil and other flammable oils and confirming, as far as practicable and as appropriate, the operation of the remote means of closing the valves on the tanks that contain oil fuel, lubricating oil and other flammable oils (SOLAS 74/00 regs.II-2/4.2 and 14.2) (SOLAS 74/88 reg.II-2/15);
- (EA) .11 examining and testing of the general emergency alarm system (SOLAS 74/88 reg.III/20);
- (EA) .12 examining the fire protection arrangements in cargo, vehicle and ro-ro spaces and confirming, as far as practicable and as appropriate, the operation of the means of control provided for closing the various openings (SOLAS 74/00 regs.II-2/10.7, 20.2.1, 20.3 and 20.6.2) (SOLAS 74/88 reg.II-2/53);
- (EA) .13 examining, when appropriate, the special arrangements for carrying dangerous goods, including checking the electrical equipment and wiring, the ventilation, the provision of protective clothing and portable appliances and the testing of the water supply, bilge pumping and any water spray system (SOLAS 74/00 reg.II-2/19 (except 19.3.8, 19.3.10 and 19.4)) (SOLAS 74/88 reg.II-2/54);
- (EA) .14 checking that emergency instructions are available for each person on board and that copies of the suitably updated muster list are posted in conspicuous places and that they are in a language understood by all persons on board and confirming that there are posters or signs in the vicinity of survival craft and their launching stations (SOLAS 74/00 regs.III/8, 9 and 37);
- (EA) .15 examining each survival craft, including its equipment and, when fitted, the on-load release and hydrostatic lock and, for inflatable liferafts, the hydrostatic release unit and float-free arrangements. Checking that the hand-held flares are not out of date (SOLAS 74/00 regs.III/20 and 31; LSAC sections 2.5, 3.1 to 3.3);
- (EA) .16 checking that the falls used in launching have been turned end for end in the previous 30 months and renewed in the past 5 years or have been subject to periodic inspection and been renewed within 4 years (SOLAS 74/00 reg.III/20);
- (EA) .17 examining the embarkation arrangements and launching appliances for each survival craft. Each lifeboat should be lowered to the embarkation position or, if the stowage position is the embarkation position, lowered a short distance and, if practicable, one of the survival craft should be lowered to the water. The operation of the launching appliances for davit-launched liferafts should be demonstrated. A check that the thorough examination of launching appliances, including the dynamic testing of the winch brake, and servicing of lifeboat on-load release gear have been carried out (SOLAS 74/00 regs.III/11, 12, 13, 16, 20 and 31; LSAC section 6.1);
- (EA) .18 examining each rescue boat, including its equipment (SOLAS 74/00 reg.III/31; LSAC sections 2.5 and 5.1);

- (EA) .19 confirming that there are posters or signs in the vicinity of the survival craft, their launching stations and containers, brackets, racks and other similar stowage locations for life-saving equipment (SOLAS 74/00 regs.III/9 and 20);
- (EA) .20 examining the embarkation and recovery arrangements for each rescue boat. If practicable, the rescue boat(s) should be lowered to the water and its recovery demonstrated (SOLAS 74/00 regs.III/14, 17 and 31; LSAC section 6.1);
- (EA) .21 testing that the engine of the rescue boat(s) and of each lifeboat, when so fitted, start satisfactorily and operate both ahead and astern;
- (EA) .22 examining and checking the operation of two-way VHF radiotelephone apparatus and radar transponders (SOLAS 74/88 reg.III/6);
- (EA) .23 examining the line-throwing appliance and checking that its rockets and the ship's distress signals are not out of date, and examining and checking the operation of on board communications equipment and the general emergency alarm system (SOLAS 74/00 regs.II-2/12.2 and III/6 and 18; LSAC sections 3.1, 7.1 and 7.2);
- (EA) .24 examining the provision, disposition, stowage and the condition of the: lifebuoys, including those fitted with self-igniting lights, self-activating smoke signals and buoyant lines, lifejackets and their whistles and lights, immersion suits, anti-exposure suits and thermal protective aids and that their associated batteries are not out of date (SOLAS 74/88 regs.III/7 and 32, LSAC sections 2.2 and 2.5);
- (EA) .25 checking the lighting of the muster and embarkation stations and the alleyways, stairways and exits giving access to the muster and embarkation stations, including when supplied from the emergency source of power (SOLAS 74/88 regs.II-1/42 or 43 and III/11);
- (EA ) .26 checking that the required the navigation lights, shapes and sound signalling equipment are in order (International Regulations for Preventing Collisions at Sea (COLREG) in force, regs.20 to 24, 27 to 30 and 33);
- (EA) .27 checking that the following items of navigation equipment are in working order, as appropriate: daylight signalling lamp, magnetic compass, transmitting heading device, gyro compass, gyro compass repeaters, radar installation(s), automatic identification system, electronic plotting aid, automatic tracking aid(s) or automatic radar plotting aid(s), echo-sounding device, speed and distance measuring device(s), rudder angle indicator, propeller rate of revolution indicator, variable-pitch propeller pitch and operational mode indicator, rate-of-turn indicator, heading or track control system, GNSS receiver, terrestrial radio navigation system and sound reception system, means of communication with emergency steering position, ECDIS including back-up arrangements, a pelorus or compass bearing device and means for correcting heading and bearings. Items that cannot be checked with the ship in port should be verified from records (SOLAS 74/00 reg.V/19);

- (EA) .28 checking that the International Code of Signals is available (SOLAS 74/00 reg.V/21);
- (EA) .29 rotational deployment of MES (SOLAS 74/88 reg.III/20.8.2; LSAC section 6.2.2.2);
- (EA) .30 checking the provision and specification of the voyage data recorder, where fitted (SOLAS 74/00 reg.V/20);
- (EA) .31 checking the provision and specification of the pilot ladders and hoists/pilot transfer arrangements (SOLAS 74/00 reg.V/23).

(EA)1.2.3 For the life-saving appliances and the other equipment of cargo ships for the additional requirements for oil tankers the annual survey should consist of:

- (EA) .1 checking the deck foam system, including the supplies of foam concentrate and testing that the minimum number of jets of water at the required pressure in the fire main is obtained (see (EA) 1.2.2.1) when the system is in operation (SOLAS 74/00 reg.II-2/10.8; FSSC ch.14) (SOLAS 74/88 reg.II-2/61);
- (EA) .2 examining the inert gas system (SOLAS 74/00 reg.II-2/4.5.5; FSSC ch.15) (SOLAS 74/88 reg.II-2/62), and in particular:
  - (EA) .2.1 examining externally for any sign of gas or effluent leakage;
  - (EA) .2.2 confirming the proper operation of both inert gas blowers;
  - (EA) .2.3 observing the operation of the scrubber-room ventilation system;
  - (EA) .2.4 checking the deck water seal for automatic filling and draining;
  - (EA) .2.5 examining the operation of all remotely operated or automatically controlled valves and, in particular, the flue gas isolating valves;
  - (EA) .2.6 observing a test of the interlocking feature of soot blowers;
  - (EA) .2.7 observing that the gas pressure regulating valve automatically closes when the inert gas blowers are secured;
  - (EA) .2.8 checking, as far as practicable, the following alarms and safety devices of the inert gas system using simulated conditions where necessary:
    - (EA) .2.8.1 high oxygen content of gas in the inert gas main;
    - (EA) .2.8.2 low gas pressure in the inert gas main;
    - (EA) .2.8.3 low pressure in the supply to the deck water seal;
    - (EA) .2.8.4 high temperature of gas in the inert gas main;
    - (EA) .2.8.5 low water pressure or low water-flow rate;

- (EA) .2.8.6 accuracy of portable and fixed oxygen-measuring equipment by means of calibration gas;
- (EA) .2.8.7 high water level in the scrubber;
- (EA) .2.8.8 failure of the inert gas blowers;
- (EA) .2.8.9 failure of the power supply to the automatic control system for the gas regulating valve and to the instrumentation for continuous indication and permanent recording of pressure and oxygen content in the inert gas main;
- (EA) .2.8.10 high pressure of gas in the inert gas main;
- (EA) .3 checking, when practicable, the proper operation of the inert gas system on completion of the checks listed above (FSSC ch.15) (SOLAS 74/88 reg.II-2/62);
- (EA) .4 examining the fixed fire-fighting system for the cargo pump rooms, (SOLAS 74/00 reg.II-2/10.9) (SOLAS 74/88 reg.II-2/ 63) and confirming, as far as practicable and when appropriate, the operation of the remote means for closing the various openings;
- (EA) .5 checking condition and operation of water spray and air supply systems that are in totally enclosed lifeboats and have self-contained air support systems (LSAC sections 4.4 and 4.6 to 4.9);
- (EA) .6 checking protection of cargo pump room (SOLAS 74/00 reg.II-2/4.5.10), and in particular:
  - .6.1 checking temperature sensing devices for bulkheads glands and alarms;
  - .6.2 checking interlock between lighting and ventilation;
  - .6.3 checking gas detection system;
  - .6.4 checking bilge level monitoring devices and alarms.
- (EA) 1.2.4 For the life-saving appliances and the other equipment of cargo ships the completion of the annual survey should consist of:
  - (EA) .1 after a satisfactory survey, the Cargo Ship Safety Equipment Certificate should be endorsed;
  - (EA) .2 if a survey shows that the condition of a ship or its equipment is unsatisfactory, see part “General” section 4.8.
- (EP) 1.3 **Periodical surveys** - see part “General” section 4.4.
- (EP) 1.3.1 For the life-saving appliances and the other equipment of cargo ships the examination of current certificates and other records should consist of:

- (EP) .1 the provisions of (EA) 1.2.1.
- (EP) 1.3.2 For the life-saving appliances and the other equipment of cargo ships the periodical survey should consist of:
- (EP) .1 the provisions of (EA) 1.2.2;
- (EP) .2 confirming during the examination of the fixed fire-fighting system for the machinery, cargo, vehicle, special category and ro-ro spaces that, as appropriate, any foam compounds and the CO<sub>2</sub> capacity have been checked and that the distribution pipework has been proved clear (SOLAS 74/00 regs.II-2/10.4, 10.5, 10.7 and 20.6.1; FSSC chs.5 to 7) (SOLAS74/88 regs.II-2/7 and 53);
- (EP) .3 testing the operation of the remote means of control provided for the opening and closing of the skylights, the release of smoke, the closure of the funnel and ventilation openings, the closure of power operated and other doors, the stopping of ventilation and boiler forced and induced draft fans and the stopping of oil fuel and other pumps that discharge flammable liquids (SOLAS 74/00 regs.II-2/5.2, 8.3, 9.5 and 10.5) (SOLAS 74/88 reg.II-2/11);
- (EP) .4 testing any fire detection and alarm system (SOLAS 74/00 regs.II-2/7.2, 7.3, 7.4, 7.5.5, 19.3.3 and 20.4; FSSC ch.9) (SOLAS 74/88 regs.II-2/11, 13 14, 53 and 54);
- (EP) .5 testing, as feasible, the fire-extinguishing system for spaces containing paint and/or flammable liquids and deep-fat cooking equipment in accommodation and service spaces (SOLAS 74/00 regs.II-2/10.6.3 and 10.6.4; FSSC chs.5 to 7) (SOLAS 74/88 reg.II-2/18.7);
- (EP) .6 testing the operation of the remote means of closing the valves on the tanks that contain oil fuel, lubricating oil and other flammable oils (SOLAS 74/00 reg.II-2/4.2) (SOLAS 74/88 reg.II-2/15);
- (EP) .7 testing the operation of the means of control provided for closing the various openings for the cargo, vehicle, special category and ro-ro spaces (SOLAS 74/00 regs.II-2/5.2 and 20.3) (SOLAS 74/88 reg.II-2/53);
- (EP) .8 testing, as feasible, the helicopter facilities (SOLAS 74/00 reg.II-2/18) (SOLAS 74/88 regs.II-2/18.8).
- (EP) 1.3.3 For the life-saving appliances and the other equipment for the additional requirements for oil tankers the periodical survey should consist of:
- (EP) .1 the provisions of (EA) 1.2.3;
- (EP) .2 confirming during the examination of the fixed fire-fighting system for the cargo pump rooms that, as appropriate, any foam compounds have been checked and that the distribution pipework has been proved clear (SOLAS 74/00 reg.II-2/10.9; FSSC chs.5 to 7) (SOLAS 74/88 reg.II-2/ 63) and checking the operation of the remote means for closing the various openings.

(EP) 1.3.4 For the life-saving appliances and the other equipment of cargo ships the completion of the periodical survey should consist of:

- (EP) .1 after a satisfactory survey, the cargo Ship Safety Equipment Certificate should be endorsed;
- (EP) .2 if a survey shows that the condition of a ship or its equipment is unsatisfactory, see part “General” section 4.8.

(ER) **1.4 Renewal surveys** - see part “General” section 4.5

(ER) 1.4.1 For the life-saving appliances and the other equipment of cargo ships the examination of current certificates and other records should consist of:

- (ER) .1 the provisions of (EA) 1.2.1, except for the validity of the Cargo Ship Safety Equipment Certificate.

(ER) 1.4.2 For the life-saving appliances and other equipment of cargo ships the renewal survey should consist of:

- (ER) .1 the provisions of (EP) 1.3.2.

(ER) 1.4.3 For the life-saving appliances and the other equipment for the additional requirements for oil tankers the renewal survey should consist of:

- (ER) .1 the provisions of (EP) 1.3.3;
- (ER) .2 examining the deck water seal for the inert gas system internally and checking the condition of the non-return valve (FSSC ch.15 paragraphs 2.2.4 and 2.3.1.4) (SOLAS 74/88 reg.II-2/62).

(ER) 1.4.4 For the life-saving appliances and the other equipment of cargo ships the completion of the renewal survey should consist of:

- (ER) .1 after a satisfactory survey, the cargo Ship Safety Equipment Certificate should be issued.

## (C) **2 GUIDELINES FOR SURVEYS FOR THE CARGO SHIP SAFETY CONSTRUCTION CERTIFICATE**

(CI) **2.1 Initial surveys** - see part “General” section 4.1.

(CI) 2.1.1 For the hull, machinery and equipment of cargo ships the examination of plans and designs should consist of:

- (CI) .1 examining the plans for the hull (SOLAS 74/88 regs.II-1/11, 12.1, 14, 18 and 19);
- (CI) .2 examining the plans for the bilge pumping (SOLAS 74/88 reg.II-1/21);

- (CI) .3 examining the stability information and the damage control plans (SOLAS 74/88/00 regs.II-1/22, 23-1 and 25);
- (CI) .4 examining the plans for the machinery installation (SOLAS 74/88 regs.II-1/26 to 36);
- (CI) .5 examining the plans for the electrical installation (SOLAS 74/88 regs.II-1/40, 41, 43, 44 and 45);
- (CI) .6 examining the plans for the periodically unattended machinery spaces (SOLAS 74/00 reg.II-2/4.2.5) (SOLAS 74/88 regs.II-1/46 to 53);
- (CI) .7 examining the plans for the structural fire protection, including ventilation systems, in accommodation and service spaces, control stations and machinery spaces and oil fuel and lubricating oil systems (SOLAS 74/00 regs.II-2/4.4, 4.2.2, 4.2.2.3, 4.2.2.4, 4.2.2.5, 5.2, 5.3.1, 5.3.2, 6.2, 6.3, 7.5.5, 7.7, 8.2, 8.4, 9.2.1, 9.2.2, 9.3, 9.5, 9.7.1, 9.7.2, 9.7.3, 9.7.5.2, 11.2, 11.3, 11.4, 11.5 and 17) (SOLAS 74/88 regs.II-2/42 to 52 (except 45 and 51)).
- (CI) .8 examining the plans for the structural fire protection, including ventilation systems, in cargo spaces (SOLAS 74/00 regs.II-2/5.2, 11.2, 11.3, 11.5, 19.3.8, 19.3.10, 20.2.1 and 20.3) (SOLAS 74/88 regs.II-1/42 to 54);
- (CI) .9 examining the plans for the means of escape (SOLAS 74/00 regs.II-2/13.2, 13.3.1, 13.3.3, 13.4.2 and 13.6; FSSC ch.13 paragraph 3) (SOLAS 74/88 reg.II-1/45);
- (CI) .10 examining the plans for the arrangements for gaseous fuel for domestic purposes (SOLAS 74/00 reg.II-2/4.3) (SOLAS 74/88 reg.II-1/ 51);
- (CI) .11 examining the plans for helicopter facilities for ships fitted with such facilities (SOLAS 74/00 reg.II-2/18) (SOLAS 74/88 reg.II-1/18.8);
- (CI) .12 examining the Cargo Securing Manual for ships carrying cargo units including containers (SOLAS 74/98 reg.VI/5.6);
- (CI) .13 checking for the loading booklet for carriage of cargoes in bulk (SOLAS 74/00 reg.VI/7);
- (CI) .14 examining the loading instrument for bulk carriers of 150 m in length and upwards (SOLAS 74/97 reg.XII/11);
- (CI) .15 confirming that bulk carriers constructed on or after 1 July 1999 of 150 m in length and upwards of single skin construction designed to carry solid bulk cargoes having a density of 1,000 kg/m<sup>3</sup> and above have sufficient strength to withstand flooding of any cargo hold (SOLAS 74/97 reg.XII/5);
- (CI) .16 examining the functionality of bilge well alarms to all cargo holds and conveyor tunnels (SOLAS 74/97 reg.XII/9);

- (CI) .17 confirming that the ship is constructed in accordance with the requirements of a recognized classification society or with equivalent national standards (SOLAS 74/00 reg.II-1/3-1);
- (CI) .18 confirming that a corrosion prevention system is fitted in dedicated ballast water tanks of oil tankers and bulk carriers (SOLAS 74/ reg.II-1/3-2).
- (CI) 2.1.2 For the hull, machinery and equipment of cargo ships the examination of plans and designs the additional requirements for oil tankers, chemical tankers and gas carriers should consist of:
- (CI) .1 examining the plans for the steering gear (SOLAS 74/88 reg.II-1/29);
- (CI) .2 examining the plans for the electrical installation (SOLAS 74/00 reg.II-1/43) (SOLAS 74/88 reg.II-1/45);
- (CI) .3 examining the plans for the structural fire protection (SOLAS 74/00 reg.II-2/1.6, 4.5.1, 4.5.2, 4.5.9, 9.2.4, 9.3, 9.4, 9.5, 9.6.5 and 11.6) (SOLAS 74/88 regs.II-2/55 to 58);
- (CI) .4 examining the plans for the cargo tank venting, cargo tank purging and gas-freeing and other ventilation arrangements and protection of the cargo tank structure against pressure or vacuum (SOLAS 74/00 reg.II-2/4.5.3, 4.5.4, 4.5.6, 4.5.8, 11.6 and 16.3) (SOLAS 74/88 reg.II-2/59);
- (CI) .5 examining the plans of access to bow (SOLAS 74/00 reg.II-1/3-3);
- (CI) .6 examining the plans for emergency towing, for tankers of not less than 20,000 tonnes deadweight (SOLAS 74/00 reg.II-1/3-4);
- (CI) .7 checking the access to spaces in the cargo area of oil tankers (SOLAS 74/00 reg.II-1/12-2) (SOLAS 74/88/92 reg.II-1/12-2).
- (CI) 2.1.3 For the hull, machinery and equipment of cargo ships the survey during construction and after installation should consist of:
- (CI) .1 confirming that the collision bulkhead is watertight up to the freeboard deck, that the valves fitted on the pipes piercing the collision bulkhead are operable from above the freeboard deck and that there are no doors, manholes, ventilation ducts or any other openings (SOLAS 74/88 reg.II-1/11);
- (CI) .2 confirming that the subdivision bulkheads are constructed and tested as watertight up to the freeboard deck or margin line, as applicable (SOLAS 74/88 reg.II-1/14);
- (CI) .3 confirming that each watertight door has been tested (SOLAS 74/88 reg.II-1/18);
- (CI) .4 confirming that the arrangements for operating any watertight doors are generally in accordance with the requirements for passenger ships and carrying out similar tests, (see (PI) 5.1.2.5 to (PI) 5.1.2.7) (SOLAS 74/88 reg.II-1/15);

- (CI) .5 confirming by a hose or flooding test the watertightness of watertight decks and trunks, tunnels and ventilators (SOLAS 74/88 reg.II-1/19);
- (CI) .6 confirming that each bilge pump and the bilge pumping system provided for each watertight compartment is working efficiently (SOLAS 74/88 reg.II-1/21);
- (CI) .7 confirming that the drainage system of enclosed cargo spaces situated on the freeboard deck is working efficiently (SOLAS 74/88 reg.II-1/21);
- (CI) .8 conducting an inclining test, when this is required (SOLAS 74/88 reg.II-1/22);
- (CI) .9 confirming that the machinery, boilers and other pressure vessels, associated piping systems and fittings are installed and protected as to reduce to a minimum any danger to persons on board, due regard being given to moving parts, hot surfaces and other hazards (SOLAS 74/88 reg.II-1/26);
- (CI) .10 confirming that the normal operation of the propulsion machinery can be sustained or restored even though one of the essential auxiliaries becomes inoperative (SOLAS 74/88 reg.II-1/26);
- (CI) .11 confirming that means are provided so that the machinery can be brought into operation from the dead ship condition without external aid (SOLAS 74/88 reg.II-1/26);
- (CI) .12 confirming that the boilers, all parts of the machinery, all steam, hydraulic, pneumatic and other systems and their associated fittings which are under internal pressure have been subjected to the appropriate tests, including a pressure test as may be specified in the requirements of the Administration or the classification societies (SOLAS 74/88 reg.II-1/26);
- (CI) .13 confirming that means is provided to ensure that the safe speed is not exceeded where there is the risk of machinery overspeeding (SOLAS 74/88 reg.II-1/27);
- (CI) .14 confirming that, where practicable, means are provided to protect against overpressure in the parts of main, auxiliary and other machinery that are subject to internal pressure and may be subject to dangerous overpressure (SOLAS 74/88 reg.II-1/27);
- (CI) .15 confirming that, when required, crankcase explosion relief devices are fitted to internal combustion engines and that they are arranged so as to minimize the possibility of injury to personnel (SOLAS 74/88 reg.II-1/27);
- (CI) .16 confirming that main turbine propulsion machinery and, where applicable, main internal combustion propulsion machinery and auxiliary machinery are provided with automatic shut-off arrangements in the case of failures, such as lubricating oil supply failure, which could rapidly lead to a complete breakdown, serious damage or explosion (SOLAS 74/88 reg.II-1/27);

- (CI) .17 confirming and recording the ability of the machinery to reverse the direction of the thrust of the propeller in sufficient time and to bring the ship to rest within a reasonable distance, including the effectiveness of any supplementary means of manoeuvring or stopping the ship (SOLAS 74/88 reg.II-1/28);
- (CI) .18 confirming that the main and auxiliary steering gear are so arranged that the failure of one of them does not render the other inoperative (SOLAS 74/88 reg.II-1/29);
- (CI) .19 confirming that, where appropriate, essential components of the steering gear are permanently lubricated or provided with lubrication fittings (SOLAS 74/88 reg.II-1/29);
- (CI) .20 confirming that relief valves are fitted to any part of a steering gear hydraulic system which can be isolated and in which pressure can be generated from the power source or from external forces and that these relief valves are set to a pressure not exceeding the design pressure (SOLAS 74/88 reg.II-1/29);
- (CI) .21 confirming that the main steering gear is capable of steering the ship at maximum ahead service speed and is capable of putting the rudder over from 35° on one side to 35° on the other side with the ship at its deepest seagoing draught and running ahead at maximum ahead service speed and, under the same conditions, from 35° on either side to 30° on the other side in not more than 28 s (SOLAS 74/88 reg.II-1/29);
- (CI) .22 confirming that the auxiliary steering gear is capable of steering the ship at navigable speed and of being brought speedily into action in an emergency and that it is capable of putting the rudder over from 15° on one side to 15° on the other side in not more than 60 s with the ship at its deepest seagoing draught and running ahead at one half of the maximum ahead service speed or 7 knots, whichever is the greater (SOLAS 74/88 reg.II-1/29);
- (CI) .23 confirming that the main and auxiliary steering gear power units restart automatically when power is restored after a power failure, that they are capable of being brought into operation from a position on the navigating bridge and that, in the event of a power failure to any one of the steering gear power units, an audible and visual alarm is given on the navigating bridge (SOLAS 74/88 reg.II-1/29);
- (CI) .24 confirming that, where the main steering gear comprises two or more identical power units and an auxiliary steering gear is not fitted, a defect can be isolated so that steering capability can be maintained or speedily regained after a single failure in its piping system or in one of the power units (SOLAS 74/88 reg.II-1/29);
- (CI) .25 confirming that the control systems for the main steering gear from both the navigating bridge and the steering gear compartment are operating satisfactorily (SOLAS 74/88 reg.II-1/29);

- (CI) .26 confirming that, where the main steering gear comprises two or more identical power units and an auxiliary steering gear is not fitted, the two independent control systems from the navigating bridge are operating satisfactorily (SOLAS 74/88 reg.II-1/29);
- (CI) .27 confirming that the control system for the auxiliary steering gear in the steering gear compartment and, if this gear is power operated, from the navigating bridge are operating satisfactorily and that the latter is independent of the control system for the main steering gear (SOLAS 74/88 reg.II-1/29);
- (CI) .28 confirming that the control system for any main and auxiliary steering gear control system operable from the navigating bridge is capable of being brought into operation from a position on the navigating bridge, that means are provided in the steering gear compartment for disconnecting it from the steering gear that it serves and that an audible and visual alarm is given on the navigating bridge in the event of a failure of electrical power supply (SOLAS 74/88 reg.II-1/29);
- (CI) .29 confirming that the electric power circuits and steering gear control systems, together with their associated components, cables and pipes, are separated, as far as practicable, throughout their length (SOLAS 74/88 reg.II-1/29);
- (CI) .30 confirming that the means of communication between the bridge and the steering gear compartment is operating satisfactorily and that, with ships having emergency steering positions, a telephone or other means of communication for relaying heading information and supplying visual compass readings to the emergency steering position are provided (SOLAS 74/00 reg.V/19.2.1) (SOLAS 74/88 regs.II-1/29);
- (CI) .31 confirming that the angular position of the rudder is indicated independently of the steering control system on the navigating bridge if the main steering gear is power-operated and that this angular position is given in the steering gear compartment (SOLAS 74/88 reg.II-1/29);
- (CI) .32 confirming that with a hydraulic power-operated steering gear the audible and visual low-level alarms on the navigating bridge and in the machinery space for each hydraulic fluid reservoir are operating satisfactorily and that at least one power actuating system including the reservoir can be recharged from a position within the steering gear compartment by means of a fixed storage tank (to which a contents gauge is fitted) with fixed piping (SOLAS 74/88 reg.II-1/29);
- (CI) .33 confirming that the steering gear compartment is readily accessible, that it is separated, as far as practicable, from machinery spaces and is provided with suitable arrangements to ensure working access to steering gear machinery and controls under safe conditions (SOLAS 74/88 reg.II-1/29);
- (CI) .34 confirming that with electric and electro-hydraulic steering gear the means for indicating on the navigating bridge and at a main machinery control position that the motors are running and that the overload alarm and alarm for the loss of a phase in a three phase supply located at the main machinery control position are operating satisfactorily (SOLAS 74/88 reg.II-1/30);

- (CI) .35 confirming that the main and auxiliary machinery essential for propulsion and the safety of the ship are provided with the effective means for its operation and control (SOLAS 74/88 reg.II-1/31);
- (CI) .36 confirming that appropriate means are provided where it is intended that the propulsion machinery should be remotely controlled from the navigating bridge (SOLAS 74/88 reg.II-1/31);
- (CI) .37 confirming that arrangements to operate main and other machinery from a machinery control room are satisfactory (SOLAS 74/88 reg.II-1/31);
- (CI) .38 confirming that, in general, means are provided for manually overriding automatic controls and that a failure does not prevent the use of the manual override (SOLAS 74/88 reg.II-1/31);
- (CI) .39 confirming that oil-fired and exhaust gas boilers, unfired steam generators, steam pipe systems and air pressure systems are fitted with the appropriate safety features (SOLAS 74/88 regs.II-1/32, 33 and 34);
- (CI) .40 confirming the operation of the ventilation for the machinery spaces (SOLAS 74/88 reg.II-1/35);
- (CI) .41 confirming that the measures to prevent noise in machinery spaces are effective (SOLAS 74/88 reg.II-1/36);
- (CI) .42 confirming that the engine room telegraph giving visual indication of the orders and answers both in the machinery space and on the navigating bridge is operating satisfactorily (SOLAS 74/88, reg.II-1/37);
- (CI) .43 confirming that the second means of communication between the navigation bridge and machinery space is also operating satisfactorily and that appropriate means are provided to any other positions from which the engines are controlled (SOLAS 74/88 reg.II-1/37);
- (CI) .44 confirming that the engineer's alarm is clearly audible in the engineers' accommodation (SOLAS 74/88 reg.II-1/38);
- (CI) .45 confirming that precautions, taken to prevent any oil that may escape under pressure from any pump, filter or heater from coming into contact with heated surfaces, are efficient;
- (CI) .46 confirming that the means of ascertaining the amount of oil contained in any oil tank are in good working condition;
- (CI) .47 confirming that the devices provided to prevent overpressure in any oil tank or in any part of the oil system, including the filling pipes, are in good working condition (SOLAS 74/00 reg.II-2/4.2.2.4);
- (CI) .48 confirming that forepeak tanks are not intended for carriage of oil fuel, lubrication oil and other flammable oils;

- (CI) .49 confirming that the electrical installations, including the main source of power and lighting systems, are installed in accordance with the approved plans (SOLAS 74/88 regs.II-1/40 and 41);
- (CI) .50 confirming that a self-contained emergency source of electrical power has been provided and that the appropriate systems are satisfactorily supplied (SOLAS 74/88 reg.II-1/43);
- (CI) .51 confirming that starting arrangements of each emergency generating set are satisfactory (SOLAS 74/88 reg.II-1/44);
- (CI) .52 confirming that precautions have been provided against shock, fire and other hazards of electrical origin (SOLAS 74/88 reg.II-1/45);
- (CI) .53 confirming that the arrangements for periodically unattended machinery spaces are satisfactory (SOLAS 74/88 regs.II-1/46 to 53) and in particular:
  - (CI) .53.1 checking the fire precautions and testing alarms, as appropriate;
  - (CI) .53.2 checking the means for the protection against flooding;
  - (CI) .53.3 checking the means to control the propulsion from the navigating bridge;
  - (CI) .53.4 ensuring that a means of vocal communication between the main machinery control room or its control position, as appropriate, and the navigating bridge and engineer officer's accommodation is provided and is effective;
  - (CI) .53.5 checking that an alarm system is provided with random testing of functions;
  - (CI) .53.6 checking that means are provided to automatically shut down machinery or boiler operations in the event of serious malfunction and testing the alarms;
  - (CI) .53.7 ensuring that special requirements for the machinery, boiler and electrical installations, as appropriate, are provided;
- (CI) .54 confirming that all aspects of the structural fire protection, including the ventilation systems, in accommodation and service spaces, control stations and machinery spaces are installed in accordance with the approved plans, testing the operation of the means of closing the main inlets and outlets of all ventilation systems and proving that the power ventilation is capable of being stopped from outside the space served (SOLAS 74/00 regs.II-2/4.4, 5.2, 5.3.1, 5.3.2, 6.2, 6.3, 7.5.5, 7.7, 8.2, 8.4, 9.2.1, 9.3, 9.4.2, 9.5, 9.7.1, 9.7.2, 9.7.3, 9.7.5.2, 11.2, 11.3, 11.4 and 11.5) (SOLAS 74/88 regs.II-2/42 to 44, 46 to 50 and 52);
- (CI) .55 confirming that all aspects of the structural fire protection, including the ventilation systems, in cargo spaces are installed in accordance with the approved plans, testing the operation of the means of closing the main inlets and outlets of all ventilation systems and proving that the power ventilation is capable of being stopped from outside the space served (SOLAS 74/00

regs.II-2/5.2.1, 11.2, 11.3, 11.5, 19.3.8, 19.3.10, 20.2.1 and 20.3)  
(SOLAS 74/88 regs.II-2/42 to 44, 46 to 50 and 52 to 54);

- (CI) .56 confirming that stairways and ladders are so arranged to provide a means of escape from all accommodation spaces and from spaces in which the crew is normally employed, other than machinery spaces, to the open deck and thence to the lifeboats and liferafts (SOLAS 74/00 regs.II-2/13.2, 13.3.1, 13.3.3 and 13.6; FSSC ch.13 paragraph 3) (SOLAS 74/88 reg.II-2/45) and in particular that:
    - (CI) .56.1 at all levels of accommodation there are provided at least two widely separated means of escape from each restricted space or group of spaces;
    - (CI) .56.2 below the lowest open deck the main means of escape is a stairway (the second being a trunk or a stairway);
    - (CI) .56.3 above the lowest open deck the means of escape are stairways or doors to an open deck or a combination of them;
    - (CI) .56.4 the radiotelegraph station has direct access to the open deck or is provided with two means of access or egress, one of which is a porthole or window of sufficient size;
  - (CI) .57 confirming that two widely separated means of escape and, when appropriate, a fire shelter from the lower part of the space, are provided from each machinery space of Category A and that suitable escape routes are provided from other machinery spaces (SOLAS 74/00 reg.II-2/13.4.2; FSSC ch.13 paragraph 3) (SOLAS 74/88 reg.II-2/45);
  - (CI) .58 examining the arrangements for gaseous fuel for domestic purposes (SOLAS 74/00 reg.II-2/4.3);
  - (CI) .59 confirming, when appropriate, that all aspects of the helicopter facilities are installed in accordance with the approved plans (SOLAS 74/00 reg.II-2/18) (SOLAS 74/88 reg.II-2/18.8);
  - (CI) .60 confirming that asbestos is not used on board unless for applications where its use is allowed (SOLAS 74/00 reg.II-1/3-5);
  - (CI) .61 confirming, for bulk carriers, that dedicated sea water ballast tanks have an efficient corrosion protection system such as hard coating (SOLAS 74/00 reg.II-1/3-2).
- (CI) 2.1.4 For the hull, machinery and equipment of cargo ships for the additional requirements for oil tankers the survey during construction and after installation should consist of:
- (CI) .1 confirming, when appropriate, that the main steering gear comprises the necessary two or more identical power units and the requisite arrangements to regain steering capability in the event of the prescribed single failure (SOLAS 74/88 reg.II-1/29);

- (CI) .2 confirming that a hull return system of distribution and earthed distribution system are not used (SOLAS 74/88 reg.II-1/45);
  - (CI) .3 confirming that all aspects of the location of spaces and the structural fire protection, including the special arrangements when the ship is a combination carrier, are in accordance with the approved plans (SOLAS 74/00 regs.II-2/1.6, 4.5.1, 4.5.2, 4.5.9, 9.2.4, 9.3 and 9.6.5) (SOLAS 74/88 regs.II-2/55 to 58);
  - (CI) .4 confirming that permanent approved gastight lighting enclosures for illuminating cargo pump rooms, having adequate strength and not impairing the integrity and gas tightness of the bulkheads or decks, are fitted in bulkheads and decks separating cargo pump rooms and other spaces;
  - (CI) .5 confirming that all aspects of the cargo tank venting, cargo tank purging and gas-freeing and other ventilation arrangements and protection of the cargo tank structure against pressure or vacuum are in accordance with the approved plans (SOLAS 74/00 regs.II-2/4.5.3, 4.5.4, 4.5.6, 4.5.8 and 11.6) (SOLAS 74/88 regs.II-2/59 and 62.13.1 to 62.13.3);
  - (CI) .6 confirming that access to bow is arranged in accordance with approved plans (SOLAS 74/00 reg.II-1/3-3);
  - (CI) .7 confirming, for tankers of not less than 20,000 tonnes deadweight, that emergency towing is arranged in accordance with approved plans (SOLAS 74/00 reg.II-1/3-4);
  - (CI) .8 confirming that dedicated sea water ballast have an efficient corrosion protection system such as hard coating (SOLAS 74/00 reg.II-1/3-2).
- (CI) 2.1.5 For the hull, machinery and equipment of cargo ships for the additional requirements for chemical tankers and gas carriers the survey during construction and after installation should consist of:
- (CI) .1 the provisions of (CI) 2.1.4.
- (CI) 2.1.6 For the hull, machinery and equipment of cargo ships the check that the required documentation has been placed on board should consist of:
- (CI) .1 confirming that the stability information and the damage control plans have been provided (SOLAS 74/88 regs.II-1/22 and 23-1);
  - (CI) .2 confirming that the manoeuvring booklet has been provided and that the manoeuvring information has been displayed on the navigating bridge (SOLAS 74/88 reg.II-1/28);
  - (CI) .3 confirming that the approved Cargo Securing Manual for ships carrying cargo units including containers is provided on board (SOLAS 74/94 reg.VI/5.6);
  - (CI) .4 confirming that the approved loading instrument on bulk carriers of 150 m in length and upwards is provided on board (SOLAS 74/97 reg.XII/11).

(CI) 2.1.7 For the hull, machinery and equipment of cargo ships the completion of the initial survey should consist of:

(CI) .1 after a satisfactory survey, the Cargo Ship Safety Construction Certificate should be issued.

(CA)2.2 **Annual surveys** - see part "General" section 4.2.

(CA)2.2.1 For the hull, machinery and equipment of cargo ships the examination of current certificates and other records should consist of:

(CA) .1 checking the validity, as appropriate, of the Cargo Ship Safety Equipment Certificate, the Cargo Ship Safety Radio Certificate and the Cargo Ship Safety Construction Certificate or the Cargo Ship Safety Certificate;

(CA) .2 checking the validity of the Safety Management Certificate (SMC) and that a copy of the Document of Compliance (DOC) is on board;

(CA) .3 checking the validity of the International Load Line Certificate or International Load Line Exemption Certificate;

(CA) .4 checking the validity of the International Oil Pollution Prevention Certificate;

(CA) .5 checking the certificates of class, if the ship is classed with a classification society;

(CA) .6 checking, when appropriate, the validity of the International Certificate of Fitness for the Carriage of Dangerous Chemicals in Bulk or the Certificate of Fitness for the Carriage of Dangerous Chemicals in Bulk;

(CA) .7 checking, when appropriate, the validity of the International Certificate of Fitness for the Carriage of Liquefied Gases in Bulk;

(CA) .8 checking, when appropriate, the validity of the International Pollution Prevention Certificate for the Carriage of Noxious Liquid Substances in Bulk;

(CA) .9 checking that the ship's complement complies with the Minimum Safe Manning Document (SOLAS 74/00 reg.V/14) (SOLAS 74/88 reg.V/13(b));

(CA) .10 checking that the master, officers and ratings are certificated as required by the STCW Convention;

(CA) .11 checking whether any new equipment has been fitted and, if so, confirm that it has been approved before installation and that any changes are reflected in the appropriate certificate;

(CA) .12 confirming that the stability information, including damage stability, where applicable, and the damage control plans are on board (SOLAS 74/88/00 regs.II-1/22, 23 and 25);

- (CA) .13 confirming that the manoeuvring booklet is on board and that the manoeuvring information is displayed on the navigating bridge (SOLAS 74/88 reg.II-1/28);
- (CA) .14 checking by the log book entries that the testing and the emergency drills of the steering gear have been carried out (SOLAS 74/00 reg.V/26) (SOLAS 74/88 reg.V/19);
- (CA) .15 checking that the routine surveys of the boilers and other pressure vessels, as determined by the Administration, have been carried out as required and that safety devices, such as the boiler safety valves, have been tested;
- (CA) .16 checking that, as appropriate, the hull and machinery has been presented for survey in accordance with the continuous survey scheme approved by the Administration or a classification society;
- (CA) .17 confirming, when appropriate, that a complete file of the enhanced survey reports and the Condition Evaluation Report are on board\*;
- (CA) .18 confirming, for bulk carriers, that the loading/unloading booklet required in SOLAS regulation VI/7 is on board (SOLAS 74/97 reg.XII/8.1);
- (CA) .19 confirming, for bulk carriers with restrictions imposed with respect to the carriage of cargoes with a density of 1,780 kg/m<sup>3</sup> above, that a triangle is permanently marked at midship (SOLAS 74/97 reg.XII/8.3);
- (CA) .20 confirming, for bulk carriers, that the loading instrument is on board and functioning (SOLAS 74/97 reg.XII/11);
- (CA) .21 confirming, for bulk carriers of 150 m in length and upwards of single skin construction designed to carry solid bulk cargoes having a density of 1,780 kg/m<sup>3</sup> above constructed before 1 July 1999 have after the implementation date given in SOLAS 94/97 reg.XII/3 sufficient stability and strength to withstand flooding of the foremost cargo hold (SOLAS 74/97 reg.XII/3, 4, 5 and 6);
- (CA) .22 confirming approved Cargo Securing Manual for ships carrying cargo units including containers is on board (SOLAS 74/94 reg.VI/5.6);
- (CA) .23 confirming that the loading booklet for carriage of cargoes in bulk is on board (SOLAS 74/00 reg.VI/7);
- (CA) .24 confirming that asbestos was not used on board (SOLAS 74/00 reg.II-1/3-5);
- (CA) .25 examining the functionality of bilge well alarms to all cargo holds and conveyor tunnels (SOLAS 74/97 reg.XII/9).
- (CA)2.2.2 For the hull\*\*, machinery and equipment of cargo ships the annual survey should consist of:

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\* See the Guidelines on the Enhanced Programme of Inspections During Surveys of Bulk Carriers and Oil Tankers (resolution A.744(18)).

\*\* See also the Guidelines on the Enhanced Programme of Inspections During Surveys of Bulk Carriers (resolution A.744(18), annex A).

- (CA) .1 examining, in general and as far as can be seen, the hull and its closing appliances;
- (CA) .2 examining the anchoring and mooring equipment as far as can be seen;
- (CA) .3 examining the collision and the other watertight bulkheads as far as can be seen (SOLAS 74/88 regs.II-1/11 and 14);
- (CA) .4 examining and testing (locally and remotely) all the watertight doors in watertight bulkheads (SOLAS 74/88 reg.II-1/18);
- (CA) .5 examining each bilge pump and confirming that the bilge pumping system for each watertight compartment is satisfactory (SOLAS 74/88 reg.II-1/21);
- (CA) .6 confirming that the drainage from enclosed cargo spaces situated on the freeboard deck is satisfactory (SOLAS 74/88 reg.II-1/21);
- (CA) .7 confirming that the machinery, boilers and other pressure vessels, associated piping systems and fittings are installed and protected as to reduce to a minimum any danger to persons on board, due regard being given to moving parts, hot surfaces and other hazards (SOLAS 74/88 regs.II-1/26, 32, 33 and 34);
- (CA) .8 confirming that the normal operation of the propulsion machinery can be sustained or restored even though one of the essential auxiliaries becomes inoperative (SOLAS 74/88 reg.II-1/26);
- (CA) .9 confirming that means are provided so that the machinery can be brought into operation from the dead ship condition without external aid (SOLAS 74/88 reg.II-1/26);
- (CA) .10 carrying out a general examination of the machinery, the boilers, all steam, hydraulic, pneumatic and other systems and their associated fittings to see whether they are being properly maintained and with particular attention to the fire and explosion hazards (SOLAS 74/88 regs.II-1/26 and 27);
- (CA) .11 examining and testing the operation of main and auxiliary steering arrangements, including their associated equipment and control systems (SOLAS 74/88 reg.II-1/29);
- (CA) .12 confirming that the means of communication between the navigation bridge and steering gear compartment and the means of indicating the angular position of the rudder are operating satisfactorily (SOLAS 74/88 reg.II-1/29);
- (CA) .13 confirming that with ships having emergency steering positions there are means of relaying heading information and, when appropriate, supply visual compass readings to the emergency steering position (SOLAS 74/88 regs.II-1/29 and SOLAS 74/00 reg.V/19 or the SOLAS 74/88 text in force prior to 1 July 2002 reg.V/12 as appropriate);

- (CA) .14 confirming that the various alarms required for hydraulic power-operated, electric and electro-hydraulic steering gears are operating satisfactorily and that the re-charging arrangements for hydraulic power-operated steering gears are being maintained (SOLAS 74/88 regs.II-1/29 and 30);
- (CA) .15 examining the means for the operation of the main and auxiliary machinery essential for propulsion and the safety of the ship, including, when applicable, the means of remotely controlling the propulsion machinery from the navigating bridge and the arrangements to operate the main and other machinery from a machinery control room (SOLAS 74/88 reg.II-1/31);
- (CA) .16 confirming the operation of the ventilation for the machinery spaces (SOLAS 74/88 reg.II-1/35);
- (CA) .17 confirming that the measures to prevent noise in machinery spaces are effective (SOLAS 74/88 reg.II-1/36);
- (CA) .18 confirming that the engine room telegraph, the second means of communication between the navigation bridge and the machinery space and the means of communication with any other positions from which the engines are controlled are operating satisfactorily (SOLAS 74/88 reg.II-1/37);
- (CA) .19 confirming that the engineer's alarm is clearly audible in the engineers' accommodation (SOLAS 74/88 reg.II-1/38);
- (CA) .20 examining, as far as practicable, visually and in operation, the electrical installations, including the main source of power and the lighting systems (SOLAS 74/88 regs.II-1/40 and 41);
- (CA) .21 confirming, as far as practicable, the operation of the emergency source(s) of electrical power including their starting arrangements, the systems supplied and, when appropriate, their automatic operation (SOLAS 74/88 regs.II-1/43 and 44);
- (CA) .22 examining, in general, that the precautions provided against shock, fire and other hazards of electrical origin are being maintained (SOLAS 74/88 reg.II-1/45);
- (CA) .23 examining the arrangements for periodically unattended machinery spaces (SOLAS 74/88 regs.II-1/46 to 53) and, in particular, the random testing of alarm, automatic and shutdown functions;
- (CA) .24 confirming, as far as practicable, that no changes have been made in the structural fire protection, examining any manual and automatic fire doors and proving their operation, testing the means of closing the main inlets and outlets of all ventilation systems and testing the means of stopping power ventilation systems from outside the space served (SOLAS 74/00 regs.II-2/4.4, 5.2, 5.3.2, 5.3.2, 6.2, 6.3, 7.5.5, 7.7, 8.2, 8.3, 8.4, 9.2.1, 9.2.3, 9.3, 9.4.2, 9.5, 9.7.1, 9.7.2, 9.7.3, 9.7.5.2, 11.2, 11.3, 11.4, 11.5, 19.3.8, 19.3.10, 20.2.1 and 20.3) (SOLAS 74/88 regs.II-2/42 to 44, 46 to 50 and 52);

- (CA) .25 confirming that the means of escape from accommodation, machinery and other spaces are satisfactory ( SOLAS 74/00 regs. II-2/13.2, 13.3.1, 13.3.3, 13.4.2 and 13.6) (SOLAS 74/88 reg.II-2/45);
- (CA) .26 examining the arrangements for gaseous fuel for domestic purposes (SOLAS 74/00 reg.II-2/4.3) (SOLAS 74/88 reg.II-2/51);
- (CA) .27 examining visually the condition of any expansion joints in sea water systems.
- (CA)2.2.3 For the hull\*, machinery and equipment of cargo ships for the additional requirements for oil tankers the annual survey should consist of:
- (CA) .1 confirming, when appropriate, that the requisite arrangements to regain steering capability in the event of the prescribed single failure are being maintained (SOLAS 74/88 reg.II-1/29);
- (CA) .2 examining the cargo tank openings, including gaskets, covers, coamings and screens;
- (CA) .3 examining the cargo tank pressure/vacuum valves and devices to prevent the passage of flame (SOLAS 74/00 reg. II-2/11.6);
- (CA) .4 examining the devices to prevent the passage of flame on vents to all bunker, oily-ballast and oily-slop tanks and void spaces, as far as practicable;
- (CA) .5 examining the cargo tank venting, cargo tank purging and gas-freeing and other ventilation systems (SOLAS 74/00 reg. II-2/4.5.3, 4.5.4, 4.5.6 and 4.5.8) (SOLAS 74/88 reg.II-2/59);
- (CA) .6 examining the cargo, crude oil washing, ballast and stripping systems both on deck and in the cargo pump rooms and the bunker system on deck;
- (CA) .7 confirming that all electrical equipment in dangerous zones is suitable for such locations, is in good condition and is being properly maintained;
- (CA) .8 confirming that potential sources of ignition in or near the cargo pump room are eliminated, such as loose gear, combustible materials, etc., that there are no signs of undue leakage and that access ladders are in good condition;
- (CA) .9 examining all pump room bulkheads for signs of oil leakage or fractures and, in particular, the sealing arrangements of all penetrations of cargo pump room bulkheads;
- (CA) .10 examining, as far as practicable, the cargo, bilge, ballast and stripping pumps for undue gland seal leakage, verification of proper operation of electrical and mechanical remote operating and shutdown devices and operation of cargo pump room bilge system, and checking that pump foundations are intact;

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\* See also the Guidelines on the Enhanced Programme of Inspections During Surveys of Oil Tankers (resolution A.744(18), annex B).  
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- (CA) .11 confirming that the pump room ventilation system is operational, ducting intact, dampers are operational and screens clean;
- (CA) .12 verifying that installed pressure gauges on cargo discharge lines and level indicator systems are operational;
- (CA) .13 examining access to bow arrangement (SOLAS 74/00 reg.II-1/3-3);
- CA) .14 examining the towing arrangement for tankers of not less than 20,000 tonnes deadweight (SOLAS 74/00 reg.II-1/3-4);
- CA) .15 confirming that the corrosion prevention system fitted to dedicated ballast water tanks of oil tankers and bulk carriers is maintained (SOLAS 74/00 reg.II-1/3-2);
- CA) .16 examining the emergency lighting in all cargo pump rooms of tankers constructed after 1 July 2002 (SOLAS 74/00 reg.II-1/43).

(CA)2.2.4 For the hull, machinery and equipment of cargo ships for the additional requirements for chemical tankers and gas carriers the annual survey should consist of:

- (CA) .1 the provisions of (CA) 2.2.3.1.

(CA)2.2.5 For the hull, machinery and equipment of cargo ships the completion of the annual survey should consist of:

- (CA) .1 after a satisfactory survey, the Cargo Ship Safety Construction Certificate should be endorsed;
- (CA) .2 if a survey shows that the condition of a ship or its equipment is unsatisfactory, see part “General” section 4.8.

**(CIn)2.3 Intermediate surveys** - see part “General” section 4.3

(CIn)2.3.1 For the hull, machinery and equipment of cargo ships the examination of current certificates and other records should consist of:

- (CIn) .1 the provisions of (CA) 2.2.1.

(CIn)2.3.2 For the hull, machinery and equipment of cargo ships the intermediate survey should consist of:

- (CIn) .1 the provisions of (CA) 2.2.2;
- (CIn) .2 for ships over 5 years of age, an internal examination of representative spaces used for water ballast;
- (CIn) .3 for ships over 10 years of age, other than ships engaged in the carriage of dry cargoes only, an internal examination of selected cargo spaces;
- (CIn) .4 for ships over 15 years of age, engaged in the carriage of dry cargoes only, an internal examination of selected cargo spaces.

(CIn)2.3.3 For the hull, machinery and equipment of cargo ships for the additional requirements for oil tankers the intermediate survey should consist of:

- (CIn) .1 the provisions of (CA) 2.2.3;
- (CIn) .2 should there be any doubt as to its condition when examining the various piping systems, the piping may be required to be pressure tested, gauged or both. Particular attention is to be paid to repairs such as welded doublers;
- (CIn) .3 for ships over ten years of age an internal examination of selected cargo spaces;
- (CIn) .4 testing the insulation resistance of electrical circuits in dangerous zones such as cargo pump rooms and areas adjacent to cargo tanks but in cases where a proper record of testing is maintained consideration should be given to accepting recent readings.

(CIn)2.3.4 For the hull, machinery and equipment of cargo ships for the additional requirements for chemical tankers and gas carriers the intermediate survey should consist of:

- (CIn) .1 the provisions of (CA) 2.2.3.1.

(CIn)2.3.5 For the hull, machinery and equipment of cargo ships the completion of the intermediate survey should consist of:

- (CIn) .1 after a satisfactory survey, the Cargo Ship Safety Construction Certificate should be endorsed;
- (CIn) .2 if a survey shows that the condition of a ship or its equipment is unsatisfactory, see part "General" section 4.8.

**(CR)2.4 Renewal surveys** - see part "General" section 4.5

(CR)2.4.1 For the hull, machinery and equipment of cargo ships the examination of current certificates and other records should consist of:

- (CR) .1 the provisions of (CA) 2.2.1, except for the validity of the Cargo Ship Safety Construction Certificate.

(CR)2.4.2 For the hull, machinery and equipment of cargo ships the renewal survey should consist of:

- (CR) .1 the provisions of (CIn) 2.3.2;
- (CR) .2 examination of sea valves and their connections to the hull;
- (CR) .3 examination of anchoring and mooring equipment for which purpose the anchors should be lowered and raised using the windlass.

(CR)2.4.3 For the hull, machinery and equipment of cargo ships for the additional requirements for oil tankers the renewal survey should consist of:

(CR) .1 the provisions of (CIn) 2.3.3.

(CR)2.4.4 For the hull, machinery and equipment of cargo ships for the additional requirements for chemical tankers and gas carriers the renewal survey should consist of:

(CR) .1 the provisions of (CA) 2.2.3.1.

(CR)2.4.5 For the hull, machinery and equipment of cargo ships the completion of the renewal survey should consist of:

(CR) .1 after a satisfactory survey, the Cargo Ship Safety Construction Certificate should be issued.

**(B) 3 GUIDELINES FOR THE INSPECTION OF THE OUTSIDE OF THE SHIP'S BOTTOM OF CARGO SHIPS**

(CB)3.1 For the inspection of the outside of the ship's bottom of cargo ships the inspection should consist of:

(CB) .1 examination of the ship's shell including bottom and bow plating, keel, bilge keels, stem, stern frame and rudder;

(CB) .2 noting the clearances measured in the rudder bearings;

(CB) .3 examination of the propeller and shaft seals, as far as practicable;

(CB) .4 noting the clearance measured in the propeller shafts, as far as practicable;

(CB) .5 examination of sea chests and strainers;

(CB) .6 the survey of related items inspected at the same time (see part "General" section 5.1).

(CB)3.2 For the inspection of the outside of the ship's bottom of cargo ships the completion of the inspection should consist of:

(CB) .1 after a satisfactory survey, the Cargo Ship Safety Construction Certificate should be endorsed;

(CB) .2 if a survey shows that the condition of a ship or its equipment is unsatisfactory, see part "General" section 4.8.

**(R) 4 GUIDELINES FOR SURVEYS FOR THE CARGO SHIP SAFETY RADIO CERTIFICATE**

**(RI) 4.1 Initial surveys** - see part "General" section 4.1

(RI) 4.1.1 For the radio installations, including those used in life-saving appliances, of cargo ships the examination of plans and designs should consist of:

- (RI) .1 establishing the sea areas declared for operation, the equipment installed to fulfil the functional requirements for the sea areas of operation, the methods adopted to ensure the availability of the functional requirements and the arrangements for supply of an emergency source of energy (if any) (SOLAS 74/88 regs. II-1/43 and IV/1 to 15);
  - (RI) .2 establishing which radio equipment is to be surveyed and, if duplication of equipment is used as a means of ensuring the availability of the functional requirements, establishing which is the "basic equipment" and which the "duplicated equipment" (SOLAS 74/88 reg.IV/15) (Additional radiocommunications equipment provided other than for SOLAS compliance should be noted);
  - (RI) .3 confirming all SOLAS equipment complies with appropriate performance standards not inferior to those adopted by IMO (SOLAS 74/88 reg.IV/14);
  - (RI) .4 examining the plans for the provision and positioning of the radio installation including sources of energy and antennas (SOLAS 74/88 regs.II-1/43, IV/6 and 14);
  - (RI) .5 examining the plans for the provision and positioning of the radio life-saving appliances (SOLAS 74/88 reg.III/6).
- (RI) 4.1.2 For the radio installations, including radio life-saving appliances, of cargo ships the survey during construction and after installation should consist of:
- (RI) .1 examining the position, physical and electromagnetic protection and illumination of each radio installation (SOLAS 74/88 reg.IV/6);
  - (RI) .2 confirming the provision of equipment for the radio installation with due regard to the declared sea areas in which the ship will trade and the declared means of maintaining availability of functional requirements (SOLAS 74/88 regs.III/6, IV/7 to 11, 14 and 15);
  - (RI) .3 confirming the ability to initiate the transmission of ship-to-shore distress alerts by at least two separate and independent means, each using a different radiocommunication service, from the position from which the ship is normally navigated (SOLAS 74/88 regs.IV/4, 7 to 11);
  - (RI) .4 examining all antennas, including:
    - (RI) .4.1 visually checking all antennas, including INMARSAT antennas, and feeders for satisfactory siting and absence of defects (SOLAS 74/88 reg.IV/14);
    - (RI) .4.2 checking insulation and safety of all antennas;
  - (RI) .5 examining the reserve source of energy, including:
    - (RI) .5.1 checking there is sufficient capacity to operate the basic or duplicated equipment for 1 hour or 6 hours, as appropriate (SOLAS 74/88 reg.IV/13);

- (RI) .5.2 and if the reserve source of energy is a battery:
  - (RI) .5.2.1 checking its siting and installation (SOLAS 74/88 reg.IV/13);
  - (RI) .5.2.2 where appropriate, checking its condition by specific gravity measurement or voltage measurement;
  - (RI) .5.2.3 with the battery off charge, and the maximum required radio installation load connected to the reserve source of energy, checking the battery voltage and discharge current;
  - (RI) .5.2.4 checking that the charger(s) are capable of re-charging the reserve battery within 10 hours (SOLAS 74/88 reg.IV/13);
  - (RI) .5.2.5 checking that information of ship's position is provided continuously and automatically to all two-way communication equipment (SOLAS 74/88 reg.IV/18);
- (RI) .6 examining the VHF transceiver(s), including:
  - (RI) .6.1 checking for operation on channels 6, 13 and 16 (SOLAS 74/88 regs.IV/7 and 14);
  - (RI) .6.2 checking frequency tolerance, transmission line quality and radio frequency power output (SOLAS 74/88 reg.IV/14);
  - (RI) .6.3 checking for correct operation of all controls including priority of control units (SOLAS 74/88 reg.IV/14);
  - (RI) .6.4 checking that the equipment operates from the main, emergency (if provided) and reserve sources of energy (SOLAS 74/88 reg.IV/13);
  - (RI) .6.5 checking the operation of the VHF control unit(s) or portable VHF equipment provided for navigational safety (SOLAS 74/88 reg.IV/6);
  - (RI) .6.6 checking for correct operation by on-air contact with a coast station or other ship;
- (RI) .7 examining the VHF DSC controller and channel 70 DSC watch receiver, including:
  - (RI) .7.1 performing an off-air check confirming the correct Maritime Mobile Service Identity is programmed in the equipment (SOLAS 74/88 reg.IV/14);
  - (RI) .7.2 checking for correct transmission by means of a routine or test call to a coast station, other ship, on board duplicate equipment or special test equipment;
  - (RI) .7.3 checking for correct reception by means of a routine or test call from a coast station, other ship, on board duplicate equipment or special test equipment;
  - (RI) .7.4 checking the audibility of the VHF/DSC alarm;

- (RI) .7.5 checking that the equipment operates from the main, emergency (if provided) and reserve sources of energy (SOLAS 74/88 reg.IV/13);
- (RI) .8 examining the MF/HF radiotelephone equipment, including:
  - (RI) .8.1 checking that the equipment operates from the main, emergency (if provided) and reserve sources of energy (SOLAS 74/88 reg.IV/13);
  - (RI) .8.2 checking the antenna tuning in all appropriate bands;
  - (RI) .8.3 checking the equipment is within frequency tolerance on all appropriate bands (SOLAS 74/88 reg.IV/14);
  - (RI) .8.4 checking for correct operation by contact with a coast station and/or measuring transmission line quality and radio frequency output;
  - (RI) .8.5 checking receiver performance by monitoring known stations on all appropriate bands;
  - (RI) .8.6 if control units are provided outside the navigating bridge, checking the control unit on the bridge has first priority for the purpose of initiating distress alerts (SOLAS 74/88 regs.IV/9, 10, 11 and 14);
- (RI) .9 examining the HF radiotelex equipment, including:
  - (RI) .9.1 checking that the equipment operates from the main, emergency (if provided) and reserve sources of energy (SOLAS 74/88 reg.IV/13);
  - (RI) .9.2 confirming that the correct selective calling number is programmed in the equipment;
  - (RI) .9.3 checking correct operation by inspection of recent hard copy or by a test with a coast radio station (SOLAS 74/88 regs.IV/10 and 11);
- (RI) .10 examining the MF/HF DSC controller(s), including:
  - (RI) .10.1 checking that the equipment operates from the main, emergency (if provided) and reserve sources of energy (SOLAS 74/88 reg.IV/13);
  - (RI) .10.2 confirming that the correct Maritime Mobile Service Identity is programmed in the equipment;
  - (RI) .10.3 checking the off-air self-test programme;
  - (RI) .10.4 checking operation by means of a test call on MF and/or HF to a coast radio station if the rules of the berth permit the use of MF/HF transmissions (SOLAS 74/88 regs.IV/9, 10 and 11);
  - (RI) .10.5 checking the audibility of the MF/HF DSC alarm;

- (RI) .11 examining the MF/HF DSC watch receiver(s), including:
  - (RI) .11.1 confirming that only distress and safety DSC frequencies are being monitored (SOLAS 74/88 regs.IV/9 to 12);
  - (RI) .11.2 checking that a continuous watch is being maintained whilst keying MF/HF radio transmitters (SOLAS 74/88 reg.IV/12);
  - (RI) .11.3 checking for correct operation by means of a test call from a coast station or other ship;
- (RI) .12 examining the radiotelephone distress frequency watch receiver (SOLAS regs.IV/7 and 14), including:
  - (RI) .12.1 checking the mute/demute function;
  - (RI) .12.2 checking receiver sensitivity against known stations;
  - (RI) .12.3 checking the audibility of the loudspeaker;
- (RI) .13 examining the INMARSAT Ship Earth Station(s), including:
  - (RI) .13.1 checking that the equipment operates from the main, emergency (if provided) and reserve sources of energy, and that where an uninterrupted supply of information from the ship's navigational or other equipment is required ensuring such information remains available in the event of failure of the ship's main or emergency source of electrical power. (SOLAS 74/88 regs.IV/13 and 14);
  - (RI) .13.2 checking the distress function by means of an approved test procedure where possible (SOLAS 74/88 regs. IV/10, 12 and 14);
  - (RI) .13.3 checking for correct operation by inspection of recent hard copy or by test call;
- (RI) .14 if appropriate, examining the NAVTEX equipment (SOLAS 74/88 regs.IV/7, 12 and 14), including:
  - (RI) .14.1 checking for correct operation by monitoring incoming messages or inspecting recent hard copy;
  - (RI) .14.2 running the self-test programme if provided;
- (RI) .15 examining the Enhanced Group Call equipment (SOLAS 74/88 regs.IV/7 and 14), including:
  - (RI) .15.1 checking for correct operation and area by monitoring incoming messages or by inspecting recent hard copy;
  - (RI) .15.2 running the self-test programme if provided;

- (RI) .16 if appropriate, examining the radio equipment for receipt of maritime safety information by HF NBDP (SOLAS 74/88 regs.IV/7, 12 and 14) including:
  - (RI) .16.1 checking for correct operation by monitoring incoming messages or inspecting recent hard copy;
  - (RI) .16.2 running the self-test programme if provided;
- (RI) .17 examining the 406 MHz satellite EPIRB (SOLAS 74/88 regs.IV/7 and 14), including:
  - (RI) .17.1 checking position and mounting for float free operation;
  - (RI) .17.2 carrying out visual inspection for defects;
  - (RI) .17.3 carrying out the self-test routine;
  - (RI) .17.4 checking that the EPIRB ID is clearly marked on the outside of the equipment and, where possible, decoding the EPIRB identity number confirming it is correct;
  - (RI) .17.5 checking the battery expiry date;
  - (RI) .17.6 if provided, checking the hydrostatic release and its expiry date;
  - (RI) .17.7 checking the emission on operational frequencies, coding and registration on the 406 MHz signal without transmission of a distress call to the satellite;
  - (RI) .17.8 checking that the EPIRB has been subject to maintenance at intervals not exceeding five years at an approved shore-based maintenance facility (SOLAS 74/00 reg.IV/15.9);
  - (RI) .17.9 if possible, checking the emission on operational frequencies, coding and registration on the 121.5 MHz homing signal without transmission of a distress call to the satellite;
- (RI) .18 examining the INMARSAT 1.6 GHz satellite EPIRB (SOLAS 74/88 regs.IV/7 and 14);

(To be developed in due course when operational experience has been gained with this new equipment)

- (RI) .19 examining the VHF DSC EPIRB (SOLAS 74/88 regs.IV/8 and 14);

(To be developed in due course when operational experience has been gained with this new equipment)

- (RI) .20 examining the two-way VHF radiotelephone apparatus (SOLAS 74/88 reg.III/6), including:

- (RI) .20.1 checking for correct operation on Channel 16 and one other by testing with another fixed or portable VHF installation;
  - (RI) .20.2 checking the battery charging arrangements where re-chargeable batteries are used;
  - (RI) .20.3 checking the expiry date of primary batteries where used;
  - (RI) .20.4 where appropriate, checking any fixed installation provided in a survival craft;
  - (RI) .21 examining the radar transponder(s) (SOLAS 74/88 regs.III/6, IV/7 and 14), including:
    - (RI) .21.1 checking the position and mounting;
    - (RI) .21.2 monitoring response on ship's 9 GHz radar;
    - (RI) .21.3 checking the battery expiry date;
  - (RI) .22 examining the test equipment and spares carried to ensure carriage is adequate in accordance with the sea areas in which the ship trades and the declared options for maintaining availability of the functional requirements (SOLAS 74/88 reg.IV/15).
- (RI) 4.1.3 For the radio installations, including those used in life-saving appliances, the check that documentation, etc., has been placed on board should consist of:
- (RI) .1 checking for a valid radio licence issued by the flag Administration (ITU RR Art.24);
  - (RI) .2 checking the radio operator's certificates of competence (SOLAS 74/88 reg.IV/16 and ITU RR Art.56);
  - (RI) .3 checking the radio record (log) (SOLAS 74/88 reg.IV/17 and ITU RR App.11);
  - (RI) .4 checking the carriage of up-to-date ITU publications (ITU RR App.11);
  - (RI) .5 checking the carriage of operating manuals for all equipment (SOLAS 74/88 reg.IV/15);
  - (RI) .6 checking the carriage of service manuals for all equipment when at-sea maintenance is the declared option (SOLAS 74/88 reg.IV/15).
- (RI) 4.1.4 For the radio installations, including those used in life-saving appliances, of cargo ships the completion of the initial survey should consist of:
- (RI) .1 the surveyor preparing and forwarding a report of survey, indicating clearly the organisation he represents, to the relevant authorities detailing results of the survey and recording omissions and deficiencies who, if satisfied, should issue a Cargo Ship Safety Radio Certificate and the associated Record of Equipment (form R).

**(RP)4.2 Periodical surveys** - see part “General” section 4.4

(RP)4.2.1 For radio installations, including radio life-saving appliances, on cargo ships the examination of current certificates and other records should consist of:

- (RP) .1 checking the validity, as appropriate, of the Cargo Ship Safety Equipment Certificate, the Cargo Ship Safety Radio Certificate and the Cargo Ship Safety Construction Certificate or the Cargo Ship Safety Certificate;
- (RP) .2 checking the validity, where appropriate, of the Safety Management Certificate (SMC) and that a copy of the Document of Compliance (DOC) is on board;
- (RP) .3 checking the validity of the International Load Line Certificate or International Load Line Exemption Certificate;
- (RP) .4 checking the validity of the International Oil Pollution Prevention Certificate;
- (RP) .5 checking the certificates of class, if the ship is classed with a classification society;
- (RP) .6 checking, where appropriate, the validity of the International Certificate of Fitness for the Carriage of Dangerous Chemicals in Bulk or the Certificate of Fitness for the Carriage of Dangerous Chemicals in Bulk;
- (RP) .7 checking, when appropriate, the validity of the International Certificate of Fitness for the Carriage of Liquefied Gases in Bulk;
- (RP) .8 checking, when appropriate, the validity of the International Pollution Prevention Certificate for the Carriage of Noxious Liquid Substances in Bulk;
- (RP) .9 checking that the ship's complement complies with the Minimum Safe Manning Document (SOLAS 74/88 reg.V/13(b));
- (RP) .10 checking that adequate information is on board to enable the equipment to be properly operated and maintained;
- (RP) .11 checking that the master, officers and ratings are certificated as required by the STCW Convention;
- (RP) .12 confirming that any new equipment has been properly approved before installation and that no changes have been made such as would affect the validity of the certificate;
- (RP) .13 confirming that a record has been kept in the period since the last survey to the satisfaction of the Administration and as required by the Radio Regulations (SOLAS 74/88 reg.IV/17);
- (RP) .14 checking documentary evidence that the actual capacity of the battery has been proved in port within the last 12 months (SOLAS 74/88 reg.IV/13);

- (RP) .15 confirming that the provisions of (RI) 4.1.3 have been met.
- (RP)4.2.2 For the radio installations, including those used in life-saving appliances, of cargo ships the periodical survey should consist of:
- (RP) .1 the provisions of (RI) 4.1.2.
- (RP)4.2.3 For the radio installations, including those used in life-saving appliances, of cargo ships the completion of the periodical survey should consist of:
- (RP) .1 after a satisfactory survey, the Cargo Ship Safety Radio Certificate should be endorsed;
- (RP) .2 if a survey shows that the condition of a ship or its equipment is unsatisfactory, see part “General” section 4.8.
- (RR)4.3 Renewal surveys - see part “General” section 4.5**
- (RR)4.3.1 For the radio installations, including those used in life-saving appliances, of cargo ships the examination of current certificates and other records should consist of:
- (RR) .1 the provisions of (RP) 4.2.1, except for the validity of the Cargo Ship Safety Radio Certificate.
- (RR)4.3.2 For the radio installations, including those used in life-saving appliances, of cargo ships the renewal survey should consist of:
- (RR) .1 the provisions of (RI) 4.1.2.
- (RR)4.3.3 For the radio installations, including those used in life-saving appliances, of cargo ships the completion of the renewal survey should consist of:
- (RR) .1 after a satisfactory survey, issuing the Cargo Ship Safety Radio Certificate as per the provisions of (RI) 4.1.4.

**(P) 5 GUIDELINES FOR SURVEYS FOR THE PASSENGER SHIP CERTIFICATE**

- (PI) 5.1 Initial surveys - see part “General” section 4.1.**
- (PI) 5.1.1 For the hull, machinery and equipment of passenger ships the examination of plans and designs should consist of:
- (PI) .1 examining the subdivision and stability (SOLAS 74/88/95 regs.II-1/4 to 8, 8-1, 8-2, 8-3, 13 and 16);
- (PI) .2 examining the ballasting arrangements (SOLAS 74/88 reg.II-1/9);
- (PI) .3 examining the arrangement of the bulkheads, their construction and the openings therein, including the disposition and means of operation of the watertight doors (SOLAS 74/88 regs.II-1/10, 14, and 15);

- (PI) .4 examining the arrangement of the double bottoms (SOLAS 74/88 reg.II-1/12);
- (PI) .5 examining the arrangements for the openings in the shell plating below the margin line, the construction of the watertight doors, sidescuttles, watertight decks, trunks, etc., and the watertight integrity above the margin line (SOLAS 74/88 regs.II-1/17, 18, 19 and 20);
- (PI) .6 examining the plans for the bilge pumping (SOLAS 74/88 regs.II-1/21 and 39);
- (PI) .7 examining, when appropriate, the means of indicating the status of any bow doors and the leakage there from (SOLAS 74/88 reg.II-1/23-2);
- (PI) .8 examining the plans for the machinery installation (SOLAS 74/88 regs.II-1/26 to 36 and 54);
- (PI) .9 examining the plans for the electrical installation (SOLAS 74/88 regs.II-1/39, 40, 41, 42, 44 and 45);
- (PI) .10 checking, when appropriate, the provision of supplementary emergency lighting (SOLAS 74/88 reg.II-1/42-1);
- (PI) .11 examining the plans for the fire pumps, fire mains, hydrants, hoses and nozzles and the international shore connection (SOLAS 74/88 reg.II-1/39 and SOLAS 74/00 reg.II-2/10.2; FSSC chs.2 and 12) (SOLAS 74/88 reg.II-1/39 and regs.II-2/4 and 19);
- (PI) .12 checking the provision and specification of the fire extinguishers and the fireman's outfits (SOLAS 74/88 regs.II-2/6 and 17);
- (PI) .13 examining the plans for the fire extinguishing and special arrangements in the machinery spaces (SOLAS 74/88 reg.II-1/39 and regs.II-2/7 and 11);
- (PI) .14 examining the arrangements for oil fuel, lubricating oil and other flammable oils (SOLAS 74/00 reg.II-2/4.2.3) (SOLAS 74/88 reg.II-2/15);
- (PI) .15 examining the plans for the structural fire protection, including the means of escape (SOLAS 74/00 regs.II-2/4.4.4, 5.2, 5.3, 7.5, 7.8.2, 8.4, 8.5, 9, 10.6, 11, 13, 17, 20; FSSC ch.13 sect56ns 1 and 2) (SOLAS 74/88 regs.II-2/23 to 36);
- (PI) .16 examining the plans for the protection of special category spaces and other cargo spaces (SOLAS 74/88 regs.II-2/37, 38 and 39);
- (PI) .17 examining the plans for the fixed fire detection and alarm system, the crew alarm and the public address system or other effective means of communication (SOLAS 74/00 reg.II-2/12) (SOLAS 74/88 reg.II-2/40);
- (PI) .18 examining the plans for the special arrangements for the carriage of dangerous goods, when appropriate, including water supplies, electrical equipment and wiring, fire detection, bilge pumping and personnel protection (SOLAS 74/88 regs.II-2/41 and 54);

- (PI) .19 examining the provision and disposition of the survival craft and rescue boats and the arrangements for mustering passengers (SOLAS 74/00 regs.III/11 to 17, 21 and 24);
- (PI) .20 examining the design of the survival craft, including their equipment, launching and recovery appliances and embarkation and launching arrangements (SOLAS 74/88 regs.III/20 to 24, 36, 38 to 44 and 48);
- (PI) .21 examining the design of the rescue boats, including their equipment and launching and recovery appliances and arrangements (SOLAS 74/88 regs.III/16, 20, 47 and 48);
- (PI) .22 examining the provision, specification and stowage of two-way VHF radiotelephone apparatus and radar transponders (SOLAS 74/88 reg.III/6);
- (PI) .23 examining the provision, specification and stowage of the distress flares and the line-throwing appliance and the provision of on board communications equipment and the general alarm system (SOLAS 74/88 regs.III/6, 17, 35, 49 and 50);
- (PI) .24 examining the provision, specification and stowage of the lifebuoys, including those fitted with self-igniting lights, self-activating smoke signals and buoyant lines, lifejackets, immersion suits and thermal protective aids (SOLAS 74/88 regs.III/7, 21 and 31 to 37);
- (PI) .25 examining the plans for the lighting of the muster and embarkation stations and the alleyways, stairways and exits giving access to the muster and embarkation stations, including the supply from the emergency source of power (SOLAS 74/88 regs.II-1/42 and III/11);
- (PI) .26 examining the plans for the positioning of, and the specification for, the navigation lights, shapes and sound signalling equipment (International Regulations for Preventing Collisions at Sea (COLREG) in force regs.20 to 24, 27 to 30 and 33);
- (PI) .27 examining the plans relating to the bridge design and arrangement of navigational systems and equipment and bridge procedures (SOLAS 74/00 reg.V/15 );
- (PI) .28 checking the provision and specification of the following navigation equipment as appropriate: daylight signalling lamp, magnetic compass, transmitting heading device, gyro compass, gyro compass repeaters, radar installation(s), automatic identification system, electronic plotting aid, automatic tracking aid(s) or automatic radar plotting aid(s), echo-sounding device, speed and distance indicator, rudder angle indicator, propeller rate of revolution indicator, variable pitch propeller pitch and operational mode indicator, rate-of-turn indicator, heading or track control system, GNSS receiver, terrestrial radio navigation system and sound reception system, ECDIS including back-up arrangements, a pelorus or compass bearing device and means for correcting heading and bearings (SOLAS 74/00 reg.V/19);

- (PI) .29 checking the provision and specification of the voyage data recorder (SOLAS 74/00 reg.V/20);
  - (PI) .30 checking navigation bridge visibility (SOLAS 74/00 reg.V/22);
  - (PI) .31 checking the provision and specification of the pilot ladders and hoists/pilot transfer arrangements (SOLAS 74/00 reg.V/23);
  - (PI) .32 establishing the sea areas declared for operation, the equipment installed to fulfil the functional requirements for the sea areas of operation, the methods adopted to ensure the availability of the functional requirements and the arrangements for supply of an emergency source of energy (if any) (SOLAS 74/88 regs. II-1/42 and IV/1 to 15);
  - (PI) .33 establishing which radio equipment is to be surveyed and, if duplication of equipment is used as a means of ensuring the availability of the functional requirements, establishing which is the "basic equipment" and which the "duplicated equipment" (SOLAS 74/88 reg.IV/15) (Additional radiocommunication equipment provided other than for SOLAS compliance should be noted);
  - (PI) .34 confirming all SOLAS equipment complies with appropriate performance standards not inferior to those adopted by IMO (SOLAS 74/88 reg.IV/14);
  - (PI) .35 examining the plans for the provision and positioning of the radio installation including sources of energy and antennas. (SOLAS 74/88 regs.II-1/42, IV/6 and 14);
  - (PI) .36 examining the plans for the provision and positioning of the radio life-saving appliances (SOLAS 74/88 reg.III/6);
  - (PI) .37 if applicable, checking that a list of all limitations on the operation of a passenger ship is kept on board and kept updated.
- (PI) 5.1.2 For the hull, machinery and equipment of passenger ships the survey during construction and after installation should consist of:
- (PI) .1 examining the outside of the ship's bottom, including the bottom and bow plating, keel, bilge keels, stem, stern frame, the rudder, sea chests and strainers (SOLAS 74/88 reg.I/7(b)(i));
  - (PI) .2 confirming the arrangements for the subdivision, including the ship's stability in the damaged condition, and checking the subdivision load lines (SOLAS 74/88 regs.II-1/4 to 8, 13 and 16);
  - (PI) .3 checking the ballasting arrangements (SOLAS 74/88 reg.II-1/9);
  - (PI) .4 confirming the arrangement of the bulkheads, their construction and the openings therein, confirming that the collision bulkhead is watertight up to the freeboard deck, that the valves fitted on the pipes piercing the collision

bulkhead are operable from above the freeboard deck and that there are no doors, manholes, ventilation ducts or any other openings, confirming that the other bulkheads, as required for the ship's subdivision, are watertight up to the bulkhead deck and confirming the construction of the watertight doors and that they have been tested (SOLAS 74/88 regs.II-1/10, 14, 15 and 18);

- (PI) .5 confirming that the watertight integrity has been maintained where pipes, scuppers, etc., pass through sub-division watertight bulkheads (SOLAS 74/88 reg.II-1/15);
- (PI) .6 confirming that a diagram is provided on the navigating bridge showing the location of the watertight doors together with indicators showing whether the doors are open or closed and confirming that the watertight doors and their means of operation have been installed in accordance with the approved plans (SOLAS 74/88 reg.II-1/15);
- (PI) .7 testing the operation of the watertight doors both from the navigating bridge in the event of an emergency and locally at the door itself (SOLAS 74/88 reg.II-1/15) and, in particular, that:
- .7.1 they are operable locally from each side of the bulkhead;
  - .7.2 provided with devices giving an indication of whether the door is open or closed at all remote operating positions;
  - .7.3 provided with an audible alarm that is distinct from any other alarm in the area and, when appropriate, an intermittent visual signal;
  - .7.4 control handles are provided on each side of the bulkhead so that a person may hold both handles in the open position and pass safely through the watertight door without accidentally setting the power closing mechanism into operation;
- (PI) .8 confirming that the watertight doors and their indicating devices are operable in the event of a failure of the main and emergency sources of power (SOLAS 74/88 reg.II-1/15);
- (PI) .9 checking, when appropriate, any watertight doors, that are not required to be closed remotely, fitted in watertight bulkheads dividing 'tween deck spaces and confirming that a notice is affixed concerning their closure (SOLAS 74/88 reg.II-1/15);
- (PI) .10 confirming that a notice is affixed to any portable plates on bulkheads in machinery spaces concerning their closure and, if appropriate, testing any power operated watertight door fitted in lieu (SOLAS 74/88 reg.II-1/15);
- (PI) .11 confirming the arrangements for closing sidescuttles and their deadlights, also scuppers, sanitary discharges and similar openings and other inlets and discharges in the shell plating below the margin line (SOLAS 74/88 reg.II-1/17);

- (PI) .12 confirming that valves for closing the main and auxiliary sea inlets and discharges in the machinery spaces are readily accessible and indicators showing the status of the valves are provided (SOLAS 74/88 reg.II-1/17);
- (PI) .13 confirming that gangway, cargo and coaling ports fitted below the margin line may be effectively closed and that the inboard end of any ash or rubbish chutes are fitted with an effective cover (SOLAS 74/88 reg.II-1/17);
- (PI) .14 confirming by a hose or flooding test the watertightness of watertight decks and trunks, tunnels and ventilators (SOLAS 74/88 reg.II-1/19);
- (PI) .15 confirming the arrangements to maintain the watertight integrity above the margin line (SOLAS 74/88 reg.II-1/20);
- (PI) .16 confirming the arrangements for the bilge pumping and that each bilge pump and the bilge pumping system provided for each watertight compartment is working efficiently (SOLAS 74/88 reg.II-1/21);
- (PI) .17 confirming that the drainage system of enclosed cargo spaces situated on the freeboard deck is working efficiently (SOLAS 74/88 reg.II-1/21);
- (PI) .18 conducting an inclining test (SOLAS 74/88 reg.II-1/22);
- (PI) .19 checking, when appropriate, the means of indicating the status of any bow doors and any leakage therefrom (SOLAS 74/88 reg.II-1/23-2);
- (PI) .20 confirming that the machinery, boilers and other pressure vessels, associated piping systems and fittings are installed and protected as to reduce to a minimum any danger to persons on board, due regard being given to moving parts, hot surfaces and other hazards (SOLAS 74/88 reg.II-1/26);
- (PI) .21 confirming that the normal operation of the propulsion machinery can be sustained or restored even though one of the essential auxiliaries becomes inoperative (SOLAS 74/88 reg.II-1/26);
- (PI) .22 confirming that means are provided so that the machinery can be brought into operation from the dead ship condition without external aid (SOLAS 74/88 reg.II-1/26);
- (PI) .23 confirming that the boilers, all parts of the machinery, all steam, hydraulic, pneumatic and other systems and their associated fittings which are under internal pressure have been subjected to the appropriate tests, including a pressure test (SOLAS 74/88 reg.II-1/26);
- (PI) .24 confirming that means is provided to ensure that the safe speed is not exceeded where there is the risk of machinery overspeeding (SOLAS 74/88 reg.II-1/27);
- (PI) .25 confirming that, where practicable, means are provided to protect against overpressure in the parts of main, auxiliary and other machinery that are subject to internal pressure and may be subject to dangerous overpressure (SOLAS 74/88 reg.II-1/27);

- (PI) .26 confirming that, when required, crankcase explosion relief devices are fitted to internal combustion engines and that they are arranged so as to minimise the possibility of injury to personnel (SOLAS 74/88 reg.II-1/27);
- (PI) .27 confirming that main turbine propulsion machinery and, where applicable, main internal combustion propulsion machinery and auxiliary machinery are provided with automatic shut-off arrangements in the case of failures, such as lubricating oil supply failure, which could rapidly lead to a complete breakdown, serious damage or explosion (SOLAS 74/88 reg.II-1/27);
- (PI) .28 confirming and recording the ability of the machinery to reverse the direction of the thrust of the propeller in sufficient time and to bring the ship to rest within a reasonable distance, including the effectiveness of any supplementary means of manoeuvring or stopping the ship (SOLAS 74/88 reg.II- 1/28);
- (PI) .29 confirming that the main and auxiliary steering gear are so arranged that the failure of one of them does not render the other inoperative (SOLAS 74/88 reg.II-1/29);
- (PI) .30 confirming that, where appropriate, essential components of the steering gear are permanently lubricated or provided with lubrication fittings (SOLAS 74/88 reg.II-1/29);
- (PI) .31 confirming that relief valves are fitted to any part of a steering gear hydraulic system which can be isolated and in which pressure can be generated from the power source or from external forces and that these relief valves are set to a pressure not exceeding the design pressure (SOLAS 74/88 reg.II-1/29);
- (PI) .32 confirming that the main steering gear is capable of steering the ship at maximum ahead service speed and is capable of putting the rudder over from 35 degrees on one side to 35 degrees on the other side with the ship at its deepest seagoing draught and running ahead at maximum ahead service speed and, under the same conditions, from 35 degrees on either side to 30 degrees on the other side in not more than 28 seconds (SOLAS 74/88 reg.II-1/29);
- (PI) .33 confirming that the auxiliary steering gear is capable of steering the ship at navigable speed and of being brought speedily into action in an emergency and that it is capable of putting the rudder over from 15 degrees on one side to 15 degrees on the other side in not more than 60 seconds with the ship at its deepest seagoing draught and running ahead at one half of the maximum ahead service speed or 7 knots, whichever is the greater (SOLAS 74/88 reg.II-1/29);
- (PI) .34 confirming that the main or auxiliary steering gear power units restart automatically when power is restored after a power failure, that they are capable of being brought into operation from a position on the navigating bridge and that, in the event of a power failure to any one of the steering gear power units, an audible and visual alarm is given on the navigating bridge (SOLAS 74/88 reg.II-1/29);

- (PI) .35 confirming that, where the main steering gear comprises two or more identical power units and an auxiliary steering gear is not fitted, a defect can be isolated so that steering capability can be maintained or speedily regained after a single failure in its piping system or in one of the power units (SOLAS 74/88 reg.II-1/29);
- (PI) .36 confirming that the control systems for the main steering gear from both the navigating bridge and the steering gear compartment are operating satisfactorily (SOLAS 74/88 reg.II-1/29);
- (PI) .37 confirming that, where the main steering gear comprises two or more identical power units and an auxiliary steering gear is not fitted, the two independent control systems from the navigating bridge are operating satisfactorily (SOLAS 74/88 reg.II-1/29);
- (PI) .38 confirming that the control system for the auxiliary steering gear in the steering gear compartment and, if this gear is power operated, from the navigating bridge are operating satisfactorily and that the latter is independent of the control system for the main steering gear (SOLAS 74/88 reg.II-1/29);
- (PI) .39 confirming that the control system for any main and auxiliary steering gear control system operable from the navigating bridge is capable of being brought into operation from a position on the navigating bridge, that means are provided in the steering gear compartment for disconnecting it from the steering gear that it serves and that an audible and visual alarm is given on the navigating bridge in the event of a failure of electrical power supply (SOLAS 74/88 reg.II-1/29);
- (PI) .40 confirming that the electric power circuits and steering gear control system, together with their associated components, cables and pipes, are separated, as far as practicable, throughout their length (SOLAS 74/88 reg.II-1/29);
- (PI) .41 confirming that the means of communication between the bridge and the steering gear is operating satisfactorily and that, with ships having emergency steering positions, a telephone or other means of communication for relaying heading information and supplying visual compass readings to the emergency steering position are provided (SOLAS 74/88 regs.II-1/29 and V/12);
- (PI) .42 confirming that the angular position of the rudder is indicated independently of the steering control system on the navigating bridge if the main steering gear is power-operated and that this angular position is given in the steering gear compartment (SOLAS 74/88 reg.II-1/29, ch.V, reg.5/12);
- (PI) .43 confirming that with a hydraulic power-operated steering gear the audible and visual low-level alarms on the navigating bridge and in the machinery space for each hydraulic fluid reservoir are operating satisfactorily and that at least one power actuating system including the reservoir can be recharged from a position within the steering gear compartment by means of a fixed storage tank to which a contents gauge is fitted with fixed piping (SOLAS 74/88 reg.II-1/29);

- (PI) .44 confirming that the steering gear compartment is readily accessible, that it is separated, as far as practicable, from machinery spaces and is provided with suitable arrangements to ensure working access to steering gear machinery and controls under safe conditions (SOLAS 74/88 reg.II-1/29);
- (PI) .45 confirming that with electric and electro-hydraulic steering gear the means for indicating on the navigating bridge and at a main machinery control position that the motors are running and that the overload alarm and alarm for the loss of a phase in a three phase supply located at the main machinery control position are operating satisfactorily (SOLAS 74/88 reg.II-1/30);
- (PI) .46 confirming that the main and auxiliary machinery essential for propulsion and the safety of the ship are provided with the effective means for its operation and control (SOLAS 74/88 reg.II-1/31);
- (PI) .47 confirming that appropriate means are provided where it is intended that the propulsion machinery should be remotely controlled from the navigating bridge (SOLAS 74/88 reg.II-1/31);
- (PI) .48 confirming that arrangements to operate main and other machinery from a machinery control room are satisfactory (SOLAS 74/88 reg.II-1/31);
- (PI) .49 confirming that, in general, means are provided for manually overriding automatic controls and that a failure does not prevent the use of the manual override (SOLAS 74/88 reg.II-1/31);
- (PI) .50 confirming that oil-fired and exhaust gas boilers, unfired steam generators, steam pipe systems and air pressure systems are fitted with the appropriate safety features (SOLAS 74/88 regs.II-1/32, 33 and 34);
- (PI) .51 confirming the operation of the ventilation for the machinery spaces (SOLAS 74/88 reg.II-1/35);
- (PI) .52 confirming that the measures to prevent noise in machinery spaces are effective (SOLAS 74/88 reg.II-1/36);
- (PI) .53 confirming that the engine room telegraph giving visual indication of the orders and answers both in the machinery space and on the navigating bridge is operating satisfactorily (SOLAS 74/88, regulation II-1/37);
- (PI) .54 confirming that the second means of communication between the navigation bridge and machinery space is also operating satisfactorily and that appropriate means are provided to any other positions from which the engines are controlled (SOLAS 74/88 regulation II-1/37);
- (PI) .55 confirming that the engineer's alarm is clearly audible in the engineers' accommodation (SOLAS 74/88, regulation II-1/38);

- (PI) .56 confirming that precautions, taken to prevent any oil than may escape under pressure from any pump, filter or heater from coming into contact with heated surfaces, are efficient;
- (PI) .57 confirming that the means of ascertaining the amount of oil contained in any oil tank are in good working condition;
- (PI) .58 confirming that the devices provided to prevent overpressure in any oil tank or in any part of the oil system, including the filling pipes, are in good working condition;
- (PI) .59 confirming that forepeak tanks are not intended for carriage of oil fuel, lubrication oil and other flammable oils;
- (PI) .60 confirming that the electrical installations, including the main source of power and lighting systems, are installed in accordance with the approved plans (SOLAS 74/88 regs.II-1/40 and 41);
- (PI) .61 confirming that a self-contained emergency source of electrical power has been provided and that the appropriate systems are satisfactorily supplied (SOLAS 74/88 reg.II-1/42);
- (PI) .62 confirming that starting arrangements of each emergency generating set is satisfactory (SOLAS 74/88 reg.II-1/44);
- (PI) .63 checking, when appropriate, the disposition of and testing the supplementary emergency lighting (SOLAS 74/88 reg.II-1/42-1);
- (PI) .64 confirming that precautions have been provided against shock, fire and other hazards of electrical origin (SOLAS 74/88 reg.II-1/45);
- (PI) .65 confirming, when appropriate, that the arrangements for the machinery spaces being periodically unattended are satisfactory (SOLAS 74/88 reg.II-1/54);
- (PI) .66 examining the fire pumps and fire main and the disposition of the hydrants, hoses and nozzles and the international shore connection and checking that each fire pump, including the emergency fire pump, can be operated separately so that two jets of water are produced simultaneously from different hydrants at any part of the ship whilst the required pressure is maintained in the fire main (SOLAS 74/88 regs.II-2/4 and 19);
- (PI) .67 examining the provision and disposition of the fire extinguishers and the fireman's outfits (SOLAS 74/88 regs.II-2/6 and 17);
- (PI) .68 checking the operational readiness and maintenance of fire-fighting systems (SOLAS 74/00 reg.II-2/14) (SOLAS 74/88 regs.II-2/6 and 17);
- (PI) .69 examining the fixed fire fighting system for the machinery and cargo spaces, as appropriate, and confirming that the installation tests have been satisfactorily completed and that its means of operation are clearly marked (SOLAS 74/88 regs.II-2/7 and 53);

- (PI) .70 examining the fire extinguishing and special arrangements in the machinery spaces and confirming, as far as practicable and as appropriate, the operation of the remote means of control provided for the opening and closing of the skylights, the release of smoke, the closure of the funnel and ventilation openings, the closure of power operated and other doors, the stopping of ventilation and boiler forced and induced draft fans and the stopping of oil fuel and other pumps that discharge flammable liquids (SOLAS 74/88 regs.II-2/7 and 11);
- (PI) .71 examining the arrangements for oil fuel, lubricating oil and other flammable oils and confirming, as far as practicable and as appropriate, the operation of the remote means of closing the valves on the tanks that contain oil fuel, lubricating oil and other flammable oils (SOLAS 74/88 reg.II-2/15);
- (PI) .72 examining any fire detection and alarm system and confirming that installation tests have been satisfactorily completed; (SOLAS 74/88 regs.II-2/11, 12, 13, 14, 36 and 41);
- (PI) .73 confirming that all aspects of the installation of the structural fire protection, including the structure, fire integrity, protection of stairways and lifts, openings in 'A' and 'B' Class divisions, ventilation systems and windows and sidescuttles, and the use of combustible material are in accordance with the approved plans (SOLAS 74/00 regs.II-2/4.4.4, 5.2, 5.3, 7.5, 7.8.2, 8.4, 8.5, 9, 10.6, 11, 13, 17, 20 and FSSC ch.13 sections 1 and 2) (SOLAS 74/88 regs.II-2/23 to 35);
- (PI) .74 testing any manual and automatic fire doors, including the means of closing the openings in 'A' and 'B' Class divisions (SOLAS 74/88 regs.II-2/30 and 31);
- (PI) .75 testing the means of closing the main inlets and outlets of all ventilation smoke extraction systems and proving that the power ventilation is capable of being stopped from outside the space served (SOLAS 74/88 reg.II-2/32);
- (PI) .76 confirming that stairways and ladders are so arranged to provide a means of escape to the lifeboat and liferaft and liferaft embarkation deck from all passenger and crew spaces and from those spaces in which the crew is normally employed (SOLAS 74/00 reg.II- 2/13.7) and in particular that:
- (PI) .76.1 below the bulkhead deck there are two means of escape from each watertight compartment, one being independent of watertight doors;
- (PI) .76.2 above the bulkhead deck two means of escape from each vertical zone or similar such area, one leading directly to a stairway forming a vertical escape;
- (PI) .76.3 the radiotelegraph station, if provided, has direct access to the open deck or is provided with two means of access or egress, one of which is a porthole or window of sufficient size;
- (PI) .77 confirming that the means of escape from any special category spaces are generally in accordance with (PI) 5.1.2.76 (SOLAS 74/88 reg.II-2/28);

- (PI) .78 confirming that in the machinery spaces there are two widely separated means of escape leading to the lifeboat and liferaft embarkation decks, including, when from a space below the bulkhead deck, a continuous fire shelter (SOLAS 74/88 reg.II-2/28);
- (PI) .79 confirming the fire protection arrangements for special category spaces and other cargo spaces and testing, as appropriate, the operation of the means for closing the various openings (SOLAS 74/88 regs.II-2/37, 38 and 39);
- (PI) .80 confirming and testing, as appropriate, the fixed fire detection and alarm system, the special alarm and the public address system or other effective means of communication (SOLAS 74/88 reg.II-2/40);
- (PI) .81 examining, when appropriate, the special arrangements for carrying dangerous goods, including checking the electrical equipment and wiring and boundary insulation, the provision of protective clothing and portable appliances and the testing of the water supply, bilge pumping and any water spray system (SOLAS 74/88 regs.II-2/41 and 54);
- (PI) .82 checking the provision and disposition of the survival craft and rescue boats and the arrangements for mustering passengers (SOLAS 74/88 regs.III/11 to 16, 20 and 24);
- (PI) .83 examining each survival craft, including its equipment (SOLAS 74/88 regs.III/20, 21, 33, 34, 36 and 38 to 44);
- (PI) .84 examining the embarkation arrangements for each survival craft and the testing of each launching appliance, including overload tests, tests to establish the lowering speed and the lowering of each survival craft to the water with the ship at its lightest sea-going draught, checking the recovery of each lifeboat (SOLAS 74/88 regs.III/11, 12, 13, 15, 20 and 48);
- (PI) .85 deployment of 50% of the MES after installation (LSAC section 5.1 and MSC/Circ.809);
- (PI) .86 examining each rescue boat, including its equipment (SOLAS 74/00 regs.III/21 and 26.3; LSAC section 5.1 and MSC/Circ.809);
- (PI) .87 examining the embarkation and recovery arrangements for each rescue boat and testing each launching and recovery appliances, including overload tests, tests to establish the lowering and recovery speeds and ensuring that each rescue boat can be lowered to the water and recovered with the ship at its lightest sea-going draught (SOLAS 74/88 regs.III/14, 16, 20 and 48);
- (PI) .88 examining the arrangements for mustering passengers (SOLAS 74/88 reg.III/24);
- (PI) .89 testing that the engine of the rescue boat(s) and of each lifeboat, when so fitted, start satisfactorily and operate both ahead and astern;

- (PI) .90 confirming that there are posters or signs in the vicinity of survival craft and their launching stations (SOLAS 74/88 reg.III/9);
- (PI) .91 examining the provision and stowage and checking the operation of two-way VHF radiotelephone apparatus and radar transponders, (SOLAS 74/88 reg.III/6);
- (PI) .92 examining the provision and stowage of the distress flares and the line-throwing appliance, checking the provision and operation of on board communications equipment and testing the means of operation of the general alarm system (SOLAS 74/88 reg.III/6);
- (PI) .93 examining the provision, disposition and stowage of the lifebuoys, including those fitted with self-igniting lights, self-activating smoke signals and buoyant lines, lifejackets, immersion suits and thermal protective aids (SOLAS 74/88 regs.III/7, 21 and 31 to 37);
- (PI) .94 checking the lighting of the muster and embarkation stations and the alleyways, stairways and exits giving access to the muster and embarkation stations, including when supplied from the emergency source of power (SOLAS 74/88 regs.II-1/42 and III/11);
- (PI) .95 checking that means of rescue is provided on ro-ro passenger ships (SOLAS 74/00 reg.III/26.4);
- (PI) .96 checking that a helicopter pick-up area is provided on ro-ro passenger ships (SOLAS 74/00 reg.III/28);
- (PI) .97 checking that a decision support system is provided for the Master (SOLAS 74/00 reg. III/29);
- (PI) .98 checking the electromagnetic compatibility of electrical and electronic equipment on or in the vicinity of the bridge (SOLAS 74/00 reg.V/17);
- (PI) .99 examining the provision and positioning and checking the operation of, as appropriate, the navigation lights, shapes and sound signalling equipment (International Regulations for Preventing Collisions at Sea in force, regs.20 to 24, 27 to 30 and 33);
- (PI) .100 checking the provision and specification of a daylight signalling lamp (SOLAS 74/88 reg.V/11);
- (PI) .101 checking, as appropriate, the provision and operation of the following equipment (SOLAS 74/00 reg.V/19):
  - (PI) .101.1 the magnetic compass, including examining the siting, movement, illumination and a pelorus or compass bearing device (SOLAS 74/00 reg.V/19);

- (PI) .101.2 nautical charts and nautical publications necessary for the intended voyage are available and have been updated and where electronic systems are used (ECDIS), the electronic charts have been updated and the required back-up system is provided and updated (SOLAS 74/00 reg.V/19);
- (PI) .101.3 global navigation satellite receiver or terrestrial radionavigation system;
- (PI) .101.4 sound reception system, when bridge is totally enclosed;
- (PI) .101.5 means of communication to emergency steering position, where provided;
- (PI) .101.6 spare magnetic compass;
- (PI) .101.7 daylight signalling lamp;
- (PI) .101.8 echo sounding device, including examining the display for good access, viewing and lighting;
- (PI) .101.9 radar(s), including examining the waveguide and cable runs for routing and protection and the display unit confirming lighting, plotting facilities, correct operation of all controls, functions and the true-motion facility if provided;
- (PI) .101.10 electronic plotting aid, automatic tracking aid or automatic radar plotting aid as appropriate, using the appropriate test facilities;
- (PI) .101.11 speed and distance measuring device;
- (PI) .101.12 transmitting heading device providing heading information to radar, plotting aids and automatic identification system equipment and distance devices;
- (PI) .101.13 automatic identification system  
(to be developed when experience with equipment has been obtained);
- (PI) .101.14 heading or track control system;
- (PI) .102 checking for the provision and operation of the voyage data recorder (SOLAS 74/00 reg.V/20);
- (PI) .103 checking that the International Code of Signals is available (SOLAS 74/00 reg.V/21);
- (PI) .104 checking the provision and, as appropriate, the deployment or operation of the pilot ladders and hoists/pilot transfer arrangements (SOLAS 74/00 reg.V/23);

Note: The survey of the radio installation, including those used in life-saving appliances, should always be carried out by a qualified radio surveyor who has necessary knowledge of the requirements of the 1974 SOLAS Convention, the International Telecommunication Union's Radio Regulations and the associated performance standards for radio equipment. The radio survey should be carried out using suitable test equipment capable of performing all the relevant

measurements required by these guidelines. On the satisfactory completion of the survey, the radio surveyor should forward a report of the survey, which should also state the organisation he represents, to the authorities responsible for the issue of the ship's Passenger Ship Safety Certificate.

- (PI) .105 examining the position, physical and electromagnetic protection and illumination of each radio installation (SOLAS 74/88 reg.IV/6);
- (PI) .106 confirming the provision of equipment for the radio installation with due regard to the declared sea areas in which the ship will trade and the declared means of maintaining availability of functional requirements (SOLAS 74/88 regs.III/6, IV/7 to 11,14 and 15);
- (PI) .107 confirming the ability to initiate the transmission of ship-to-shore distress alerts by at least two separate and independent means, each using a different radiocommunication service, from the position from which the ship is normally navigated (SOLAS 74/88 regs.IV/4,7 to 11);
- (PI) .108 examining all antennas, including:
  - (PI) .108.1 visually checking all antennas, including INMARSAT antennas, and feeders for satisfactory siting and absence of defects (SOLAS 74/88 reg.IV/14);
  - (PI) .108.2 checking insulation and safety of all antennas;
- (PI) .109 examining the reserve source of energy, including:
  - (PI) .109.1 checking there is sufficient capacity to operate the basic or duplicated equipment for 1 hour or 6 hours, as appropriate (SOLAS 74/88 reg.IV/13);
  - (PI) .109.2 and, if the reserve source of energy is a battery:
    - (PI) .109.2.1 checking its siting and installation (SOLAS 74/88 reg.IV/13);
    - (PI) .109.2.2 where appropriate, checking its condition by specific gravity measurement or voltage measurement;
    - (PI) .109.2.3 with the battery off charge, and the maximum required radio installation load connected to the reserve source of energy, checking the battery voltage and discharge current;
    - (PI) .109.2.4 checking that the charger(s) are capable of re-charging the reserve battery within 10 hours (SOLAS 74/88 reg.IV/13);
- (PI) .110 examining the VHF transceiver(s), including:
  - (PI) .110.1 checking for operation on channels 6, 13 and 16 (SOLAS 74/88 regs.IV/7 and 14);
  - (PI) .110.2 checking frequency tolerance, transmission line quality and radio frequency power output (SOLAS 74/88 reg.IV/14);

- (PI) .110.3 checking for correct operation of all controls including priority of control units (SOLAS 74/88 reg.IV/14);
- (PI) .110.4 checking that the equipment operates from the main, emergency (if provided) and reserve sources of energy (SOLAS 74/88 reg.IV/13);
- (PI) .110.5 checking the operation of the VHF control unit(s) or portable VHF equipment provided for navigational safety (SOLAS 74/88 reg.IV/6);
- (PI) .110.6 checking for correct operation by on-air contact with a coast station or other ship;
- (PI) .111 examining the VHF DSC controller and channel 70 DSC watch receiver, including:
  - (PI) .111.1 performing an off-air check confirming the correct Maritime Mobile Service Identity is programmed in the equipment (SOLAS 74/88 reg.IV/14);
  - (PI) .111.2 checking for correct transmission by means of a routine or test call to a coast station, other ship, on board duplicate equipment or special test equipment;
  - (PI) .111.3 checking for correct reception by means of a routine or test call from a coast station, other ship, on board duplicate equipment or special test equipment;
  - (PI) .111.4 checking the audibility of the VHF/DSC alarm;
  - (PI) .111.5 checking that the equipment operates from the main, emergency (if provided) and reserve sources of energy (SOLAS 74/88 reg.IV/13);
- (PI) .112 examining the MF/HF radiotelephone equipment, including:
  - (PI) .112.1 checking that the equipment operates from the main, emergency (if provided) and reserve sources of energy (SOLAS 74/88 reg.IV/13);
  - (PI) .112.2 checking the antenna tuning in all appropriate bands;
  - (PI) .112.3 checking the equipment is within frequency tolerance on all appropriate bands (SOLAS 74/88 reg.IV/14);
  - (PI) .112.4 checking for correct operation by contact with a coast station and/or measuring transmission line quality and radio frequency output;
  - (PI) .112.5 checking receiver performance by monitoring known stations on all appropriate bands;
  - (PI) .112.6 if control units are provided outside the navigating bridge, checking the control unit on the bridge has first priority for the purpose of initiating distress alerts (SOLAS 74/88 regs.IV/9, 10, 11 and 14);

- (PI) .112.7 checking the correct operation of the radiotelephone alarm signal generating device on a frequency other than 2182 kHz;
- (PI) .113 examining the HF radiotelex equipment, including:
  - (PI) .113.1 checking that the equipment operates from the main, emergency (if provided) and reserve sources of energy (SOLAS 74/88 reg.IV/13);
  - (PI) .113.2 confirming that the correct selective calling number is programmed in the equipment;
  - (PI) .113.3 checking correct operation by inspection of recent hard copy or by a test with a coast radio station (SOLAS 74/88 regs.IV/10 and 11);
- (PI) .114 examining the MF/HF DSC controller(s), including:
  - (PI) .114.1 checking that the equipment operates from the main, emergency (if provided) and reserve sources of energy (SOLAS 74/88 reg.IV/13);
  - (PI) .114.2 confirming that the correct Maritime Mobile Service Identity is programmed in the equipment;
  - (PI) .114.3 checking the off-air self test programme;
  - (PI) .114.4 checking operation by means of a test call on MF and/or HF to a coast radio station if the rules of the berth permit the use of MF/HF transmissions (SOLAS 74/88 regs.IV/9 to 11);
  - (PI) .114.5 checking the audibility of the MF/HF DSC alarm;
- (PI) .115 examining the MF/HF DSC watch receiver(s), including:
  - (PI) .115.1 confirming that only distress and safety DSC frequencies are being monitored (SOLAS 74/88 regs.IV/9 to 12);
  - (PI) .115.2 checking that a continuous watch is being maintained whilst keying MF/HF radio transmitters (SOLAS 74/88 reg.IV/12);
  - (PI) .115.3 checking for correct operation by means of a test call from a coast station or other ship;
- (PI) .116 examining the radiotelephone distress frequency watch receiver (SOLAS regs.IV/7 and 14), including:
  - (PI) .116.1 checking the mute/demute function;
  - (PI) .116.2 checking receiver sensitivity against known stations;
  - (PI) .116.3 checking the audibility of the loudspeaker;
- (PI) .117 examining the INMARSAT ship earth station(s), including:

- (PI) .117.1 checking that the equipment operates from the main, emergency (if provided) and reserve sources of energy, and that where an uninterrupted supply of information from the ship's navigational or other equipment is required ensuring such information remains available in the event of failure of the ship's main or emergency source of electrical power. (SOLAS 74/88 regs.IV/13 and 14);
- (PI) .117.2 checking the distress function by means of an approved test procedure where possible (SOLAS 74/88 regs. IV/10, 12 and 14);
- (PI) .117.3 checking for correct operation by inspection of recent hard copy or by test call;
- (PI) .118 if appropriate, examining the NAVTEX equipment (SOLAS 74/88 regs.IV/7, 12 and 14), including:
  - (PI) .118.1 checking for correct operation by monitoring incoming messages or inspecting recent hard copy;
  - (PI) .118.2 running the self-test programme if provided;
- (PI) .119 examining the enhanced group call equipment (SOLAS 74/88 regs.IV/7 and 14), including:
  - (PI) .119.1 checking for correct operation and area by monitoring incoming messages or by inspecting recent hard copy;
  - (PI) .119.2 running the self-test programme if provided;
- (PI) .120 if appropriate, examining the radio equipment for receipt of maritime safety information by HF NBDP (SOLAS 74/88 regs.IV/7, 12 and 14) including:
  - (PI) .120.1 checking for correct operation by monitoring incoming messages or inspecting recent hard copy;
  - (PI) .120.2 running the self-test programme if provided;
- (PI) .121 examining the 406 MHz EPIRB (SOLAS 74/88 regs.IV/7 and 14), including:
  - (PI) .121.1 checking position and mounting for float free operation;
  - (PI) .121.2 carrying out visual inspection for defects;
  - (PI) .121.3 carrying out the self-test routine;
  - (PI) .121.4 checking that the EPIRB ID is clearly marked on the outside of the equipment and, where possible, decoding the EPIRB identity number confirming it is correct;
  - (PI) .121.5 checking the battery expiry date;

- (PI) .121.6 if provided, checking the hydrostatic release and its expiry date;
- (PI) .122 examining the INMARSAT 1.6 GHz satellite EPIRB (SOLAS 74/88 regs.IV/7 and 14);  
  
(to be developed in due course when operational experience has been gained with this new equipment)
- (PI) .123 examining the VHF DSC EPIRB (SOLAS 74/88 regs.IV/8 and 14);  
  
(to be developed in due course when operational experience has been gained with this new equipment)
- (PI) .124 examining the two-way VHF radiotelephone apparatus (SOLAS 74/88 reg.III/6), including:
  - (PI) .124.1 checking for correct operation on channel 16 and one other by testing with another fixed or portable VHF installation (SOLAS 74/88 reg.IV/14);
  - (PI) .124.2 checking the battery charging arrangements where re-chargeable batteries are used (SOLAS 74/88 reg.IV/14);
  - (PI) .124.3 checking the expiry date of primary batteries where used (SOLAS 74/88 reg.IV/14);
  - (PI) .124.4 where appropriate, checking any fixed installation provided in a survival craft (SOLAS 74/88 reg.IV/14);
- (PI) .125 examining the radar transponder(s) (SOLAS 74/88 reg.III/6 and regs.IV/7 and 14), including:
  - (PI) .125.1 checking the position and mounting;
  - (PI) .125.2 monitoring response on ship's 9 GHz radar;
  - (PI) .125.3 checking the battery expiry date;
- (PI) .126 examining the test equipment and spares carried to ensure carriage is adequate in accordance with the sea areas in which the ship trades and the declared options for maintaining availability of the functional requirements (SOLAS 74/88 reg.IV/15);
- (PI) .127 checking the distress panel installed at the conning position; or, where applicable, an additional EPIRB is placed near the conning position (SOLAS 74/88 reg.IV/6);
- (PI) .128 checking that positional information is provided continuously and automatically to all communications equipment included in the initial distress alert (SOLAS 74/88 reg.IV/6);

- (PI) .129 checking the distress alarm panel installed at the conning position and its visual and aural indications of received distress alerts (SOLAS 74/88 reg.IV/6);
- (PI) .130 checking the provision and operation of the means for two-way on-scene communication for search and rescue purposes and its operation on 121.5 MHz and 123.1 MHz from the position from which the ship is normally navigated (SOLAS 74/88 reg.IV/7).
- (PI) 5.1.3 For the hull, machinery and equipment of passenger ships the check that the required documentation has been placed on board should consist of:
- (PI) .1 confirming that the stability information and damage control plans have been provided (SOLAS 74/88 regs.II- 1/22 and 23);
- (PI) .2 confirming that the manoeuvring booklet has been provided and that the manoeuvring information has been displayed on the navigating bridge (SOLAS 74/88 reg.II-1/28);
- (PI) .3 confirming that the fire control plans are permanently exhibited or, alternatively, emergency booklets have been provided to each officer and that a duplicate of the plans or the emergency booklet are available in a prominently marked enclosure external to the ship's deckhouse (SOLAS 74/00 regs.II-2/15.2.4 and 15.3.2) (SOLAS 74/88 reg.II-2/20). The fire control plan is in the language required by the Administration;
- (PI) .4 confirming that the maintenance plans have been provided (SOLAS 74/88 regs.II- 1/14.2.2 and 14.3);
- (PI) .5 confirming that the training manuals and the fire safety operational booklets have been provided (SOLAS 74/88 regs.II- 1/15.2.3 and 16.2);
- (PI) .6 confirming, when appropriate, that the ship is provided with a document indicating compliance with the special requirements for carrying dangerous goods (SOLAS 74/00 reg.II-2/19.4) (SOLAS 74/88 regs.II- 2/41 and 54(3));
- (PI) .7 confirming that emergency instructions are available for each person on board, that the muster list is posted in conspicuous places and they are in a language understood by the persons on board (SOLAS 74/00 regs.III/8 and 53);
- (PI) .8 confirming that the training manual for the life-saving appliances has been provided (SOLAS 74/00 reg.III/35);
- (PI) .9 confirming that the checklist and instructions for MES , if provided, and on board maintenance of the life-saving appliances have been provided (SOLAS 74/00 reg.III/36);
- (PI) .10 confirming that a table or curve of residual deviations for the magnetic compass have been provided, and that a diagram of the radar installations shadow sectors is displayed (SOLAS 74/00 reg.V/19);

- (PI) .11 checking that operational and, where appropriate, maintenance manuals for all navigational equipment are provided (SOLAS 74/00 regs.V/16 and 19);
  - (PI) .12 checking that the charts and nautical publications necessary for the intended voyage are available and have been up-dated (SOLAS 74/00 regs.V/19 and 27);
  - (PI) .13 checking that the International Code of Signals is available where the ship is required to carry a radio installation (SOLAS 74/88 reg.V/21);
  - (PI) .14 confirming that a list showing the operational limitations imposed to the ship is kept on board (SOLAS 74/00 reg.V/30);
  - (PI) .15 checking that the life-saving signals to be used by ships, aircraft or persons in distress (SOLAS 74/00 reg.V/29);
  - (PI) .16 checking the carriage of operating manuals for all equipment (SOLAS 74/88 reg.IV/15);
  - (PI) .17 checking the carriage of service manuals for all equipment when at-sea maintenance is the declared option (SOLAS 74/88 reg.IV/15);
  - (PI) .18 checking for a valid radio licence issued by the flag Administration (ITU RR Art.24);
  - (PI) .19 checking the radio operators' certificates of competence (ITU RR Art.55);
  - (PI) .20 checking the emission on operational frequencies, coding and registration on the 406 MHz signal without transmission of a distress call to the satellite;
  - (PI) .21 checking the radio log (SOLAS 74/88 text in force prior to 1 February 1992 reg.IV/19 and ITU RR App.11);
  - (PI) .22 checking the carriage of up-to-date ITU publications (ITU RR App.11);
  - (PI) .23 checking that the EPIRB has been subject to maintenance at intervals not exceeding five years at an approved shore-based maintenance facility;
  - (PI) .24 if possible, checking the emission on operational frequencies, coding and registration on the 121.5 MHz homing signal without transmission of the satellite system.
- (PI) 5.1.4 For the hull, machinery and equipment of passenger ships the completion of the initial survey should consist of:
- (PI) .1 after a satisfactory survey, the Passenger Ship Safety Certificate and its associated Record of Equipment (Form P) should be issued.

**(PR) 5.2 Renewal surveys** - see part "General" section 4.5

- (PR) 5.2.1 For the hull, machinery and equipment of passenger ships the examination of current certificates and other records should consist of:

- (PR) .1 checking the validity of the International Load Line Certificate or International Load Line Exemption Certificate;
- (PR) .2 checking the validity of the Safety Management Certificate (SMC) and that a copy of the Document of Compliance (DOC) is on board;
- (PR) .3 checking the validity of the International Oil Pollution Prevention Certificate;
- (PR) .4 checking the certificates of class, if the ship is classed with a classification society;
- (PR) .5 checking, when appropriate, the validity of the International Pollution Prevention Certificate for the Carriage of Noxious Liquid Substances in Bulk;
- (PR) .6 checking that the ship's complement complies with the Minimum Safe Manning Document (SOLAS 74/88 reg.V/13(b));
- (PR) .7 checking that the master, officers and ratings are certificated as required by the STCW Convention;
- (PR) .8 checking whether any new equipment has been fitted and, if so, confirm that it has been approved before installation and that any changes are reflected in the appropriate certificate;
- (PR) .9 checking that the routine surveys of the boilers and other pressure vessels, as determined by the Administration, have been carried out as required and that safety devices, such as the boiler safety valves, have been tested;
- (PR) .10 checking that, as appropriate, the hull and machinery has been presented for survey in accordance with the continuous survey scheme approved by the Administration or a classification society;
- (PR) .11 confirming that the opening and the closing and locking of sidescuttles positioned below the margin line are being recorded in the log book (SOLAS 74/88 reg.II-1/17);
- (PR) .12 confirming that the closure of the cargo loading doors and the opening and closing of any doors at sea required for the operation of the ship or the embarking and disembarking of passengers are being recorded in the log book (SOLAS 74/88 reg.II-1/20-1);
- (PR) .13 confirming that the stability information and damage control plans are readily available (SOLAS 74/88 regs.II-1/22 and 23);
- (PR) .14 confirming from the log book entries that the openings required to be closed at sea are being kept closed and that the required drills and inspections of watertight doors, etc., are being carried out (SOLAS 74/88 regs.II- 1/24 and 25);

- (PR) .15 confirming that the manoeuvring booklet is readily available and that the manoeuvring information is displayed on the navigating bridge (SOLAS 74/88 reg.II-1/28);
- (PR) .16 confirming that the fire control plans are permanently exhibited or, alternatively, emergency booklets have been provided and that a duplicate of the plans or the emergency booklet are available in a prominently marked enclosure external to the ship's deckhouse (SOLAS 74/88 reg.II-2/20);
- (PR) .17 confirming that the maintenance plans have been provided (SOLAS 74/00 regs. II-2/14.2.2 and 14.3);
- (PR) .18 confirming that the training manuals and the fire safety operational booklets have been provided (SOLAS 74/00 regs. II-2/15.2.3 and 16.2);
- (PR) .19 checking whether any fire has occurred on board necessitating the operation of the fixed fire-extinguishing systems or the portable fire extinguishers since the last survey and the entries into the ship's log book;
- (PR) .20 checking, when appropriate, that the ship is provided with a document indicating compliance with the special requirements for carrying dangerous goods (SOLAS 74/00 reg.II-2/19.4) (SOLAS 74/88 reg.II-2/54(3));
- (PR) .21 confirming, when appropriate, that there is a special list, manifest or stowage plan for the carriage of dangerous goods (SOLAS 74/88 reg.VII/5);
- (PR) .22 confirming that emergency instructions are available for each person on board, that the muster list is posted in conspicuous places and they are in a language understood by the persons on board (SOLAS 74/00 regs.III/8 and 37);
- (PR) .23 checking that log-book entries are being made (SOLAS 74/00 regs.III/19 and 20) and in particular:
  - (PR) .23.1 the date when the last full muster of the passengers and crew for boat and fire drill took place;
  - (PR) .23.2 the records indicating that the lifeboat equipment was examined at that time and found to be complete;
  - (PR) .23.3 the last occasion when the lifeboats were swung out and when each one was lowered into the water;
  - (PR) .23.4 the records indicating that crew members have received the appropriate on board training;
- (PR) .24 confirming that the training manual and training aids for the life-saving appliances is on board (SOLAS 74/00 reg.III/35);
- (PR) .25 confirming that the instructions for on board maintenance of the life-saving appliances is on board (SOLAS 74/00 reg.III/36);

- (PR) .26 checking by the log book entries that the testing and the emergency drills of the steering gear have been carried out (SOLAS 74/00 reg.V/26);
  - (PR) .27 confirming that a table or curve of residual deviations for the magnetic compass and that a diagram of the radar installations shadow sectors is displayed (SOLAS 74/00 reg.V/19);
  - (PR) .28 checking that operational and, where appropriate, maintenance manuals for all navigational equipment are provided (SOLAS 74/00 reg.V/16);
  - (PR) .29 checking that the charts and nautical publications necessary for the intended voyage are available and have been up-dated (SOLAS 74/00 reg.V/27);
  - (PR) .30 checking that the compass deviation book is properly maintained (SOLAS 74/00 reg.V/19);
  - (R) .31 confirming that a list showing the operational limitations imposed to the ship is kept on board (SOLAS 74/00 reg.V/30);
  - (R) .32 checking that the life-saving signals to be used by ships, aircraft or persons in distress (SOLAS 74/00 reg.V/29).
  - (PR) .33 the provisions of (PI) 5.1.3.11 to (PI) 5.1.3.16;
  - (PR) .34 confirming that a record has been kept in the period since the last survey to the satisfaction of the Administration and as required by the Radio Regulations (SOLAS 74/88 reg.IV/17);
  - (PR) .35 checking documentary evidence that the actual capacity of the battery has been proved in port within the last 12 months (SOLAS 74/88 reg.IV/13);
  - (PR) .36 if applicable, checking that a list of all limitations on the operation of a passenger ship is kept on board and updated.
- (PR) 5.2.2 For the hull, machinery and equipment of passenger ships the renewal survey should consist of:
- (PR) .1 examining the outside of the ship's bottom, including the bottom and bow plating, keel, bilge keels, stem, stern frame, the rudder, sea chests and strainers, noting the clearance measured in the rudder bearings, examining the propeller and shaft seals, as far as practicable, and noting the clearance measured in the propeller shafts (SOLAS 74/88 reg.I/7)(b)(ii));
  - (PR) .2 examining the arrangements for the subdivision, including the ship's stability in the damaged condition, and checking the subdivision load lines (SOLAS 74/88 regs.II-1/4 to 8, 13 and 16);
  - (PR) .3 checking the ballasting arrangements (SOLAS 74/88 reg.II-1/9);
  - (PR) .4 examining the collision and other watertight bulkheads required for the ship's subdivision (SOLAS 74/88 regs.II-1/10, 14, 15 and 18);

- (PR) .5 confirming that the watertight integrity has been maintained where pipes, scuppers, etc., pass through sub-division watertight bulkheads (SOLAS 74/88 reg.II- 1/15);
- (PR) .6 confirming that a diagram is provided on the navigating bridge showing the location of the watertight doors together with indicators showing whether the doors are open or closed (SOLAS 74/88 reg.II-1/15);
- (PR) .7 testing the operation of the watertight doors both from the navigating bridge in the event of an emergency and locally at the door itself (SOLAS 74/88 reg.II-1/15) and, in particular, that:
  - (PR) .7.1 they are operable locally from each side of the bulkhead;
  - (PR) .7.2 provided with devices giving an indication of whether the door is open or closed at all remote operating positions;
  - (PR) .7.3 provided with an audible alarm that is distinct from any other alarm in the area and, when appropriate, an intermittent visual signal;
  - (PR) .7.4 control handles are provided on each side of the bulkhead so that a person may hold both handles in the open position and pass safely through the watertight door without accidentally setting the power closing mechanism into operation;
- (PR) .8 confirming that the watertight doors and their indicating devices are operable in the event of a failure of the main and emergency sources of power (SOLAS 74/88 reg.II-1/15);
- (PR) .9 checking, when appropriate, any watertight doors, that are not required to be closed remotely, fitted in watertight bulkheads dividing 'tween deck spaces and confirming that a notice is affixed concerning their closure (SOLAS 74/88 reg.II-1/15);
- (PR) .10 confirming that a notice is affixed to any portable plates on bulkheads in machinery spaces concerning their closure and, if appropriate, testing any power operated watertight door fitted in lieu (SOLAS 74/88 reg.II-1/15);
- (PR) .11 examining the arrangements for closing sidescuttles and their deadlights, also scuppers, sanitary discharges and similar openings and other inlets and discharges in the shell plating below the margin line (SOLAS 74/88 reg.II-1/17);
- (PR) .12 confirming that valves for closing the main and auxiliary sea inlets and discharges in the machinery spaces are readily accessible and indicators showing the status of the valves are provided (SOLAS 74/88 reg.II-1/17);
- (PR) .13 confirming that gangway, cargo and coaling ports fitted below the margin line may be effectively closed and that the inboard end of any ash or rubbish chutes are fitted with an effective cover (SOLAS 74/88 reg.II- 1/17);

- (PR) .14 examining the arrangements to maintain the watertight integrity above the margin line (SOLAS 74/88 reg.II-1/20);
- (PR) .15 examining the arrangements for the bilge pumping and confirming that each bilge pump and the bilge pumping system provided for each watertight compartment is working efficiently (SOLAS 74/88 reg.II-1/21);
- (PR) .16 confirming that the drainage system of enclosed cargo spaces situated on the freeboard deck is working efficiently (SOLAS 74/88 reg.II-1/21);
- (PR) .17 examining, when appropriate, the means of indicating the status of any bow doors and any leakage therefrom (SOLAS 74/88 reg.II-1/23-2);
- (PR) .18 confirming that the machinery, boilers and other pressure vessels, associated piping systems and fittings are being maintained so as to reduce to a minimum any danger to persons on board, due regard being given to moving parts, hot surfaces and other hazards (SOLAS 74/88 reg.II-1/26);
- (PR) .19 confirming that the normal operation of the propulsion machinery can be sustained or restored even though one of the essential auxiliaries becomes inoperative (SOLAS 74/88 reg.II-1/26);
- (PR) .20 confirming that means are provided so that the machinery can be brought into operation from the dead ship condition without external aid (SOLAS 74/88 reg.II-1/26);
- (PR) .21 examining, where practicable, the means provided to protect against overpressure in the parts of main, auxiliary and other machinery that are subject to internal pressure and may be subject to dangerous overpressure (SOLAS 74/88 reg.II-1/27);
- (PR) .22 examining, when appropriate, the crankcase explosion relief devices fitted to internal combustion engines and confirming that they are arranged so as to minimise the possibility of injury to personnel (SOLAS 74/88 reg.II-1/27);
- (PR) .23 confirming that the automatic shut-off arrangements fitted to the main turbine propulsion machinery and, where applicable, main internal combustion propulsion machinery and auxiliary machinery are being properly maintained (SOLAS 74/88 reg.II-1/27);
- (PR) .24 confirming, as far as practicable, the ability of the machinery to reverse the direction of the thrust of the propeller in sufficient time, including the effectiveness of any supplementary means of manoeuvring or stopping the ship (SOLAS 74/88 reg.II-1/28);
- (PR) .25 confirming that the main and auxiliary steering gear are being properly maintained, are arranged so that the failure of one does not render the other inoperative and that the auxiliary steering gear is capable of being brought speedily into action in an emergency (SOLAS 74/88 reg.II-1/29);

- (PR) .26 confirming that, where appropriate, essential components of the steering gear are permanently lubricated or provided with lubrication fittings (SOLAS 74/88 reg.II-1/29);
- (PR) .27 confirming that relief valves fitted to the steering gear hydraulic system which can be isolated and in which pressure can be generated from the power source or from external forces are being maintained and are set to a pressure not exceeding the design pressure (SOLAS 74/88 reg.II-1/29);
- (PR) .28 confirming that the main or auxiliary steering gear power units restart automatically when power is restored after a power failure, that they are capable of being brought into operation from a position on the navigating bridge and that, in the event of a power failure to any one of the steering gear power units, an audible and visual alarm is given on the navigating bridge (SOLAS 74/88 reg.II-1/29);
- (PR) .29 confirming that the control systems for the main steering gear from both the navigating bridge and the steering gear compartment are operating satisfactorily (SOLAS 74/88 reg.II-1/29);
- (PR) .30 confirming that, where the main steering gear comprises two or more identical power units and an auxiliary steering gear is not fitted, the two independent control systems from the navigating bridge are operating satisfactorily (SOLAS 74/88 reg.II-1/29);
- (PR) .31 confirming that the control system for the auxiliary steering gear in the steering gear compartment and, if this gear is power operated, from the navigating bridge are operating satisfactorily and that the latter is independent of the control system for the main steering gear (SOLAS 74/88 reg.II-1/29);
- (PR) .32 confirming that an audible and visual alarm is given on the navigating bridge in the event of a failure of electrical power supply (SOLAS 74/88 reg.II-1/29);
- (PR) .33 confirming that the means of communication between the bridge and the steering gear is operating satisfactorily and that, with ships having emergency steering positions, a telephone or other means of communication for relaying heading information and supplying visual compass readings to the emergency steering position are provided (SOLAS 74/00 regs.II-1/29 and V/19);
- (PR) .34 confirming that the angular position of the rudder is indicated independently of the steering control system on the navigating bridge if the main steering gear is power-operated and that this angular position is given in the steering gear compartment (SOLAS 74/00 reg.II-1/29, reg.V/19);
- (PR) .35 confirming that with a hydraulic power-operated steering gear the audible and visual low-level alarms on the navigating bridge and in the machinery space for each hydraulic fluid reservoir are operating satisfactorily and that at least one power actuating system including the reservoir can be recharged from a position within the steering gear compartment by means of a fixed storage tank to which a contents gauge is fitted with fixed piping (SOLAS 74/88 reg.II-1/29);

- (PR) .36 confirming that the steering gear compartment is readily accessible and is provided with suitable arrangements to ensure working access to steering gear machinery and controls under safe conditions (SOLAS 74/88 reg.II-1/29);
- (PR) .37 confirming that with electric and electro-hydraulic steering gear the means for indicating on the navigating bridge and at a main machinery control position that the motors are running and, as far as practicable, that the overload alarm and alarm for the loss of a phase in a three phase supply located at the main machinery control position are operating satisfactorily (SOLAS 74/88 reg.II-1/30);
- (PR) .38 confirming that the effective means of operation and control of the main and auxiliary machinery essential for propulsion and the safety of the ship are being maintained including, when appropriate, any means for remotely controlling the propulsion machinery from the navigating bridge (SOLAS 74/88 reg.II-1/31);
- (PR) .39 confirming that arrangements to operate main and other machinery from a machinery control room are satisfactory (SOLAS 74/88 reg.II-1/31);
- (PR) .40 confirming that the means provided for manually overriding automatic controls are being maintained and that a failure does not prevent the use of the manual override (SOLAS 74/88 reg.II-1/31);
- (PR) .41 confirming that the appropriate safety features fitted to the oil-fired and exhaust gas boilers, unfired steam generators, steam pipe systems and air pressure systems are being maintained (SOLAS 74/88 regs.II-I/32, 33 and 34);
- (PR) .42 confirming the operation of the ventilation for the machinery spaces (SOLAS 74/78 reg.II-I/35);
- (PR) .43 confirming that the measures to prevent noise in machinery spaces are effective (SOLAS 74/78 reg.II- I/36);
- (PR) .44 confirming that the engine room telegraph giving visual indication of the orders and answers both in the machinery space and on the navigating bridge is operating satisfactorily (SOLAS 74/88, reg.II-1/37);
- (PR) .45 confirming that the second means of communication between the navigation bridge and machinery space is also operating satisfactorily, including any appropriate means provided to any other positions from which the engines are controlled (SOLAS 74/88, reg.II-1/37);
- (PR) .46 confirming that the engineer's alarm is clearly audible in the engineers' accommodation (SOLAS 74/88, reg.II-1/38);
- (PR) .47 confirming that precautions, taken to prevent any oil that may escape under pressure from any pump, filter or heater from coming into contact with heated surfaces, are efficient;

- (PR) .48 confirming that the means of ascertaining the amount of oil contained in any oil tank are in good working condition;
- (PR) .49 confirming that the devices provided to prevent overpressure in any oil tank or in any part of the oil system, including the filling pipes, are in good working condition;
- (PR) .50 confirming that the electrical installations, including the main source of power and lighting systems, are being maintained (SOLAS 74/88 regs.II-1/40 and 41);
- (PR) .51 confirming that the self-contained emergency source of electrical power and its associated systems are operating satisfactorily (SOLAS 74/88 reg.II-1/42);
- (PR) .52 confirming that starting arrangements of each emergency generating set is satisfactory (SOLAS 74/88 reg.II-1/44);
- (PR) .53 checking, when appropriate, the disposition of and testing the supplementary emergency lighting (SOLAS 74/88 reg.II-1/42-1);
- (PR) .54 confirming that precautions provided against shock, fire and other hazards of electrical origin are being maintained (SOLAS 74/88 reg.II-1/45);
- (PR) .55 confirming, when appropriate, that the arrangements for the machinery spaces being periodically un- attended are satisfactory (SOLAS 74/88 reg.II-1/54);
- (PR) .56 examining the fire pumps and fire main and the disposition of the hydrants, hoses and nozzles and the international shore connection and checking that each fire pump can be operated separately so that two jets of water are produced simultaneously from different hydrants at any part of the ship whilst the required pressure is maintained in the fire main (SOLAS 74/00 reg.II-2/10.2; FSSC chs.2 and 12) (SOLAS 74/88 regs.II-2/4 and 19);
- (PR) .57 examining the provision and randomly examining the condition of the portable and non-portable fire extinguishers (SOLAS 74/00 reg.II-2/10.3; FSSC ch.4) (SOLAS 74/88 reg.II-2/6);
- (PR) .58 examining the fixed fire extinguishing system for the machinery spaces and confirming that its means of operation are clearly marked (SOLAS 74/00 regs.II-2/10.4 and 10.5; FSSC chs.2 and 12) (SOLAS 74/88 regs.II-2/5, 7, 9, 10 and 53);
- (PR) .59 examining the special arrangements in the machinery spaces and confirming, as far as practicable and as appropriate, the operation of the remote means of control provided for the opening and closing of the skylights, the release of smoke, the closure of the funnel and ventilation openings, the closure of power operated and other doors, the stopping of ventilation and boiler forced and induced draft fans and the stopping of oil fuel and other pumps that discharge flammable liquids (SOLAS 74/00 regs.II-2/5.2, 8.3 and 9.5) (SOLAS 74/88 reg.II-2/11);

- (PR) .60 examining the fire extinguishing arrangements in control stations, accommodation and service spaces (SOLAS 74/00 reg.II-2/10.6.1; FSSC ch.8) (SOLAS 74/88 reg.II-2/36);
- (PR) .61 examining the provision of fire extinguishing systems for the spaces containing flammable liquids and deep-fat cooking equipment in accommodation and service spaces (SOLAS 74/00 regs.II-2/10.6.3 and 10.6.4; FSSC chs.5, 6 and 7) (SOLAS 74/88 ch.II-2);
- (PR) .62 examining the arrangements for oil fuel, lubricating oil and other flammable oils and confirming, as far as practicable and as appropriate, the operation of the remote means of closing the valves on the tanks that contain oil fuel, lubricating oil and other flammable oils (SOLAS 74/00 reg.II-2/4.2) (SOLAS 74/88 reg.II-2/15);
- (PR) .63 examining and testing, as far as practicable, any fire detection and fire alarm arrangements in machinery spaces, if applicable, accommodation and service spaces and control spaces (SOLAS 74/00 reg.II-2/27 (except 7.5.5, 7.6 and 7.9); FSSC ch.9) (SOLAS 74/88 regs.II-2/11, 12, 13, 13-1, 14, 36 and 41);
- (PR) .64 confirming that the fire fighter's outfits and the emergency escape breathing devices – EEBD- are complete and in good condition and that the cylinders, including the spare cylinders, of the self-contained breathing apparatus, are suitably charged (SOLAS 74/00 regs.II-2/10.10, 13.3.4 and 13.4.3; FSSC ch.3) (SOLAS 74/88 reg.II- 2/17);
- (PR) .65 checking the operational readiness and maintenance of fire-fighting systems (SOLAS 74/00 reg.II-2/14) (SOLAS 74/88/91 reg.II- 2/21);
- (PR) .66 confirming, as far as practicable, that no changes have been made in the structural fire protection, including the structure, fire integrity, protection of stairways and lifts, openings in 'A' and 'B' Class divisions, ventilation systems and windows and sidescuttles, and the use of combustibile material (SOLAS 74/00 regs.II-2/5.2, 5.3, 6, 8.2, 8.5, 9.2.1, 9.2.2, 9.3, 9.4.1, 9.5, 9.6 (except 9.6.5), 9.7 and 11 (except 11.6)) (SOLAS 74/88 regs.II-2/11, 16, 18, 23 to 35 and 37);
- (PR) .67 confirming, as far as practicable, that no changes have been made in the structural fire protection in cargo spaces intended for the carriage of dangerous goods (SOLAS 74/00 regs.II-2/19.3.8 and 19.3.10) (SOLAS 74/88 regs.II-2/4, 54.2.8, 54.2.10 and 54.2.11);
- (PR) .68 examining and testing any manual and automatic fire doors including the means of closing the openings in 'A' and 'B' Class divisions (SOLAS 74/00 reg.II-2/9.4.1) (SOLAS 74/88 regs.II-2/30 and 31);
- (PR) .69 examining and testing the main inlets and outlets of all ventilation systems and proving that the power ventilation is capable of being stopped from outside the space served (SOLAS 74/00 reg.II-2/5.2.1) (SOLAS 74/88 regs.II-2/16 and 32);

- (PR) .70 confirming that the stairways and ladders, including the low-location lighting system, arranged to provide a means of escape to the lifeboat and liferaft and liferaft embarkation deck from all passenger and crew spaces and from those spaces in which the crew is normally employed are being maintained (SOLAS 74/00 regs.II-2/13.2, 13.3.1, 13.3.2 and 13.7; FSSC chs.11 and 13 (except paragraph 3)) (SOLAS 74/88 reg.II-2/28);
- (PR) .71 confirming that the means of escape from any special category spaces and ro-ro spaces are satisfactory (SOLAS 74/00 regs.II-2/13.5 and 13.6) (SOLAS 74/88 reg.II-2/28);
- (PR) .72 confirming that means of escape from the machinery spaces are satisfactory (SOLAS 74/00 reg.II-2/13.4.1) (SOLAS 74/88 reg.II-2/28);
- (PR) .73 examining the fire extinguishing arrangements including fire detection in cargo spaces for general cargo and dangerous goods and testing, as far as practicable and as appropriate, the operation of the means for closing the various openings (SOLAS 74/00 regs.II-2/7.6 and 10.7; FSSC ch.5) (SOLAS 74/88 reg.II-2/39);
- (PR) .74 examining the fire extinguishing arrangements including fire detection in vehicle, special category and ro-ro spaces and testing, as far as practicable and as appropriate, the operation of the means for closing the various openings (SOLAS 74/00 reg.II-2/20 (except 20.5); FSSC chs.5, 6, 7, 9 and 10) (SOLAS 74/88 regs.II-2/37, 38 and 38-1);
- (PR) .75 examining and testing, as appropriate and as far as practicable, the crew alarm and the public address system or other effective means of communication (SOLAS 74/00 regs. II-2/7.9 and 12; LSAC ch.7) (SOLAS 74/88 reg.II-2/40);
- (PR) .76 examining, when appropriate, the special arrangements for carrying dangerous goods, including checking the electrical equipment and wiring, fire detection, ventilation, the provision of personnel protection clothing and portable appliances and testing, as far as practicable, the water supply, bilge pumping and any water spray system (SOLAS 74/00 reg.II-2/19 (except 19.3.8, 19.3.10 and 19.4); FSSC chs.3, 4, 7, 9 and 10) (SOLAS 74/88 regs.II-2/41 and 54);
- (PR) .77 examining, when appropriate, the helicopter facilities (SOLAS 74/00 regs. II-2/18, III/28) (SOLAS 74/88 reg.II-2/18.8);
- (PR) .78 checking the requirement for passenger ships carrying more than 36 passengers constructed before 1 October 1994 (SOLAS 74/88/91 regs. II-2/41-1 and 41-2);
- (PR) .79 checking that emergency instructions are available for each person on board, the muster list is posted in conspicuous places and there are signs or posters in the vicinity of survival craft and their launching stations (SOLAS 74/96 regs.III/8, 9 and 37);
- (PR) .80 checking that the falls used in launching have been turned end for end in the previous 30 months and renewed in the past 5 years or have been subject to periodic inspection and been renewed within 4 years (SOLAS 74/96 reg. III/20);

- (PR) .81 examining each survival craft, including its equipment and, when fitted, the on-load release and hydrostatic lock, and for inflatable liferafts the hydrostatic release unit and float-free arrangements, including the date of servicing or replacement. Checking that the hand held flares are not out of date (SOLAS 74/96 regs.III/20, 21, 23, 24, 26, 34, 36 and 44; LSAC sections 2.3 to 2.5, 3.2 and 4.1 to 4.6);
- (PR) .82 examining the embarkation arrangements and launching appliances for each survival craft. Each lifeboat should be lowered to the embarkation position or, if the stowage position is the embarkation position, lowered a short distance and, if practicable, one of the survival craft should be lowered to the water. The operation of the launching appliances for davit launched liferafts should be demonstrated. A check that the thorough examination of launching appliances, including the dynamic testing of the winch brake, and servicing of lifeboat on-load release gear have been carried out (SOLAS 74/96 regs.III/11, 12, 13, 15, 16, 20, 21 and 23; LSAC sections 6.1 and 6.2);
- (PR) .83 rotational deployment of MES (SOLAS 74/88 reg. III/20.8.2 ; LSAC section 6.2.2.2);
- (PR) .84 examining each rescue boat, including its equipment (SOLAS 74/88 regs.III/17, 21, 26.3 and 34);
- (PR) .85 examining the embarkation and recovery arrangements for each rescue boat. If practicable, the rescue boat(s) should be lowered to the water and its recovery demonstrated while underway at 5 knots (SOLAS 74/88 regs.III/14, 16, 17, 20 and 21; LSAC section 6.1);
- (PR) .86 checking the arrangements for mustering passengers (SOLAS 74/96 regs.III/11, 24 and 25);
- (PR) .87 confirming that a means of rescue is provided on ro-ro passenger ships (SOLAS 74/00 regs.III/11, 26.4);
- (PR) .88 confirming that a helicopter pick-up area is provided on ro-ro passenger ships (SOLAS 74/00 reg.III/28);
- (PR) .89 confirming that a decision support system is provided for the Master (SOLAS 74/88 reg.III/29);
- (PR) .90 testing that the engine of the rescue boat(s) and of each lifeboat, when so fitted, start satisfactorily and operate both ahead and astern;
- (PR) .91 examining and checking the operation of two-way VHF radiotelephone apparatus and radar transponders (SOLAS 74/88 regs.III/6, IV/7 and 14);
- (PR) .92 examining the line-throwing appliance and checking that its rockets and the ship's distress signals are not out of date, and examining and checking the operation of on board communications equipment and the general alarm system (SOLAS 74/96 regs.III/6, 18 and 35; LSAC sections 3.1 and 7.1);

- (PR) .93 examining the provision, disposition, stowage and condition of the lifebuoys, including those fitted with self-igniting lights, self-activating smoke signals and buoyant lines, lifejackets, immersion suits, anti-exposure suits and thermal protective aids and that their associated batteries are not out of date (SOLAS 74/88 regs.III/7, 21, 22 and 31; LSAC sections 2.1 to 2.5 and 3.1 to 3.3);
- (PR) .94 checking the lighting of the muster and embarkation stations and the alleyways, stairways and exits giving access to the muster and embarkation stations, including when supplied from the emergency source of power (SOLAS 74/88 regs.II-1/42 and III/11);
- (PR) .95 checking that the required navigation lights, shapes and sound signalling equipment are in order (International Regulations for Preventing Collisions at Sea in force (COLREG), regs.20 to 24, 27 to 30 and 33);
- (PR) .96 checking that the following items of navigation equipment are in working order, as appropriate: daylight signalling lamp, magnetic compass, transmitting heading device, gyro-compass, gyro-compass repeaters, radar installation(s), automatic identification system, electronic plotting aid, automatic tracking aid(s) or automatic radar plotting aid(s), echo sounding device, speed and distance measuring device(s), rudder angle indicator, propeller rate of revolution indicator, variable pitch propeller pitch and operational mode indicator, rate-of-turn indicator, heading or track control system, GNSS receiver, terrestrial radionavigation system and sound reception system, means of communication with emergency steering position, ECDIS including back-up arrangements, a pelorus or compass bearing device and means of correcting heading and bearings. Items that cannot be checked with the ship in port should be verified from (SOLAS 74/00 reg. V/19);
- (PR) .97 checking the provision and specification of the voyage data recorder, where fitted (SOLAS 74/00 reg.V/20);
- (PR) .98 checking that the International Code of Signals is available (SOLAS 74/00 reg.V/21);
- (PR) .99 checking the provision and specification of the pilot ladders and hoists/pilot transfer arrangements (SOLAS 74/00 reg.V/17);
- (PR) .100 The survey of the radio installation, including those used in life-saving appliances, should always be carried out by a qualified radio surveyor who has necessary knowledge of the requirements the 1974 SOLAS Convention, the International Telecommunication Union's Radio Regulations and the associated performance standards for radio equipment. The radio survey should be carried out using suitable test equipment capable of performing all the relevant measurements required by these guidelines. On the satisfactory completion of the survey, the radio surveyor should forward a report of the survey, which should also state the organisation he represents, to the authorities responsible for the issue of the ship's Passenger Ship Safety Certificate.

(PR) .101 the provisions of (PI) 5.1.2.105 to (PI) 5.1.2.126;

(PR) .102 the provisions of (PI) 5.1.2.127 to (PI) 5.1.2.130.

(PR) 5.2.3 For the hull, machinery and equipment of passenger ships the completion of the renewal survey should consist of:

(PR) .1 after a satisfactory survey, the Passenger Ship Safety Certificate and its associated Record of Equipment (Form P) should be issued.

ANNEX 2

**SURVEY GUIDELINES UNDER THE 1966 LOAD LINE CONVENTION,  
AS MODIFIED BY THE 1988 PROTOCOL RELATING THERETO**

- (L) 1 **GUIDELINES FOR SURVEYS FOR THE INTERNATIONAL LOAD LINE CERTIFICATE OR INTERNATIONAL LOAD LINE EXEMPTION CERTIFICATE**
- (LI) 1.1 **Initial surveys** - see part "General" section 4.1
- (LI) 1.1.1 For the load line the examination of plans and designs should consist of:
- (LI) .1 examining the structural strength at the draft corresponding to the assigned freeboard (LLC 66/88 reg.1);
- (LI) .2 examining the intact stability, and, where applicable, the damaged stability information and the loading and ballasting information that is to be supplied to the master, and, where not dispensed by the Administration, inclining experimental data (LLC 66/88 reg.10);
- (LI) .3 determining the freeboard, including specifying and the consideration of the conditions of assignment for the freeboard (LLC 66/88 regs.11 to 45).
- (LI) 1.1.2 For the load line the survey during construction and after installation should consist of:
- (LI) .1 checking that, as far as its strength, the ship has been constructed in accordance with the approved plans (LLC 66/88 reg.1);
- (LI) .2 confirming that the deck line and load line mark are properly positioned (LLC 66/88 regs.4 to 9);
- (LI) .3 where not dispensed by the Administration, witnessing the inclining experiment (LLC 66/88 reg.10);
- (LI) .4 examining the superstructure end bulkheads and the openings therein (LLC 66/88 regs.11 and 12);
- (LI) .5 examining the means of securing the weathertightness of cargo hatchways, other hatchways and other openings on the freeboard and superstructure decks (LLC 66/88 regs. 13 to 18);
- (LI) .6 examining the ventilators and air pipes, including their coamings and closing appliances (LLC 66/88 regs.19 and 20);
- (LI) .7 examining the watertight integrity of the closures to any openings in the ship's side below the freeboard deck (LLC 66/88 reg.21);
- (LI) .8 examining the scuppers, inlets and discharges (LLC 66/88 reg.22);
- (LI) .9 examining the side scuttles and deadlights (LLC 66/88 reg.23);

- (LI) .10 examining the bulwarks including the provision of freeing ports, special attention being given to any freeing ports fitted with shutters (LLC 66/88 reg.24);
- (LI) .10.1 examining the guardrails, gangways, walkways and other means provided for the protection of the crew and for gaining access to and from crew's quarters and working spaces (LLC 66/88 reg.25);
- (LI) .10.2 examining, when applicable, the special requirements for ships permitted to sail with reduced freeboards (LLC 66/88 reg.26);
- (LI) .10.3 checking, when applicable, of the fittings and appliances for timber deck cargoes (LLC 66/88 regs.42 to 45).
- (LI) 1.1.3 For the load line the check that certificates, etc., have been placed on board should consist of:
  - (LI) .1 checking that the loading and ballasting information has been supplied to the master (LLC 66/88 reg.10).
- (LI) 1.1.4 For the load line the completion of the initial survey should consist of:
  - (LI) .1 after a satisfactory survey, the International Load Line Certificate or International Load Line Exemption Certificate should be issued.
- (LA)1.2 **Annual surveys** - see part "General" section 4.2
- (LA)1.2.1 For the load line the examination of current certificates and other records should consist of:
  - (LA) .1 checking the validity, as appropriate, of the Cargo Ship Safety Equipment Certificate, the Cargo Ship Safety Radio Certificate and the Cargo Ship Safety Construction Certificate or the Cargo Ship Safety Certificate;
  - (LA) .2 checking the validity of the Safety Management Certificate (SMC) and that a copy of the Document of Compliance (DOC) is on board;
  - (LA) .3 checking the validity of the International Load Line Certificate or International Load Line Exemption Certificate;
  - (LA) .4 checking the validity of the International Oil Pollution Prevention Certificate;
  - (LA) .5 checking the certificate of class, if the ship is classed with a classification society;
  - (LA) .6 checking, when appropriate, the validity of the International Certificate of Fitness for the Carriage of Dangerous Chemicals in Bulk or the Certificate of Fitness for the Carriage of Dangerous Chemicals in Bulk;

- (LA) .7 checking, when appropriate, the validity of the International Certificate of Fitness for the Carriage of Liquefied Gases in Bulk;
  - (LA) .8 checking, when appropriate, the validity of the International Pollution Prevention Certificate for the Carriage of Noxious Liquid Substances in Bulk;
  - (LA) .9 checking that the ship's complement complies with the Minimum Safe Manning Document (SOLAS 74/88 reg.V/14;
  - (LA) .10 checking that the master, officers and ratings are certificated as required by the STCW Convention;
  - (LA) .11 checking whether any new equipment has been fitted and, if so, confirm that it has been approved before installation and that any changes are reflected in the appropriate certificate;
  - (LA) .12 checking that the stability and, where applicable, the loading and ballasting information is available (LLC 66/88 reg.10).
- (LA)1.2.2 For the load line the annual survey should consist of:
- (LA) .1 checking, in general, that there has been no deterioration in the strength of the hull (LLC 66/88 reg.1);
  - (LA) .2 checking of the positions of the deck line and load line which, if necessary, are to be re-marked and re-painted (LLC 66/88 regs.4 to 9);
  - (LA) .3 checking that no alterations have been made to the hull or superstructures that would affect the calculations determining the position of the load lines (LLC 66/88 regs.11 to 45);
  - (LA) .4 examining the superstructure end bulkheads and the openings therein (LLC 66/88 regs.11 and 12);
  - (LA) .5 examining the means of securing the weathertightness of cargo hatchways, other hatchways and other openings on the freeboard and superstructure decks (LLC 66/88 regs.13 to 18);
  - (LA) .6 examining the ventilators and air pipes, including their coamings and closing appliances (LLC 66/88 regs.19 and 20);
  - (LA) .7 examining the watertight integrity of the closures to any openings in the ship's side below the freeboard deck (LLC 66/88 reg.21);
  - (LA) .8 examining the scuppers, inlets and discharges (LLC 66/88 reg.22);
  - (LA) .9 examining the side scuttles and deadlights (LLC 66/88 reg.23);
  - (LA) .10 examining the bulwarks including the provision of freeing ports, special attention being given to any freeing ports fitted with shutters (LLC 66/88 reg.24);

- (LA) .11 examining the guardrails, gangways, walkways and other means provided for the protection of the crew and for gaining access to and from crew's quarters and working spaces (LLC 66/88 reg.25);
  - (LA) .12 examining, when applicable, the special requirements for ships permitted to sail with reduced freeboards (LLC 66/88 reg.26);
  - (LA) .13 checking, when applicable, the fittings and appliances for timber deck cargoes (LLC 66/88 regs.42 to 45).
- (LA)1.2.3 For the load line the completion of the annual survey should consist of:
- (LA) .1 after a satisfactory survey, the International Load Line Certificate or International Load Line Exemption Certificate should be endorsed;
  - (LA) .2 if a survey shows that the condition of a ship or its equipment is unsatisfactory, see part "General" section 4.8.
- (LR)1.3 Renewal surveys - see part "General" section 4.5**
- (LR)1.3.1 For the load line the examination of current certificates and other records should consist of:
- (LR) .1 the provisions of (LA) 1.2.1, except for the validity of the International Load Line Certificate or International Load Line Exemption Certificate.
- (LR)1.3.2 For the load line the renewal survey should consist of:
- (LR) .1 the provisions of (LA) 1.2.2;
  - (LR) .2 examining the hull to ensure that its strength is sufficient for the draft corresponding to the freeboard assigned (LLC 66/88 reg.1).
- (LR)1.3.3 For the load line the completion of the renewal survey should consist of:
- (LR) .1 after a satisfactory survey, the International Load Line Certificate or International Load Line Exemption Certificate should be issued.

ANNEX 3

**SURVEY GUIDELINES UNDER THE 1973/78 MARPOL CONVENTION**

- (O) 1 **GUIDELINES FOR SURVEYS FOR THE INTERNATIONAL OIL POLLUTION PREVENTION CERTIFICATE**
- (OI) 1.1 **Initial surveys** - see part "General" section 4.1
- (OI) 1.1.1 For oil pollution prevention the examination of plans and designs should consist of:
- (OI) .1 examining the arrangements for the control of the discharge of oil and examining the plans and designs of the oil discharge monitoring and control system and oily-water separating and oil filtering equipment (MARPOL 73/78/90 Annex I regs.9 and 16);
- (OI) .2 examining the arrangements for operation in special areas (MARPOL 73/78/90 Annex I reg.10);
- (OI) .3 examining the arrangements for the segregation of oil and water ballast and the carriage of oil in the forepeak tanks (MARPOL 73/78/90 Annex I reg.14);
- (OI) .4 examining the sludge tank and standard discharge arrangements (MARPOL 73/78/90 Annex I regs.17 and 19).
- (OI) 1.1.2 For the oil pollution prevention for the additional requirements for oil tankers the examination of plans and designs should consist of:
- (OI) .1 examining the arrangements for the control of the discharge of oil and for the retention of oil on board (MARPOL 73/78/90 Annex I regs.9 and 15);
- (OI) .2 examining the arrangements for operation in special areas (MARPOL 73/78/90 Annex I reg.10);
- (OI) .3 examining the arrangements for the segregated ballast tanks, checking their capacity and ascertaining whether the draft and trim conditions will be met (MARPOL 73/78/90 Annex I reg.13);
- (OI) .4 examining for the arrangements for crude oil washing, including shadow diagrams and the Operations and Equipment Manual, checking that an inert gas system is to be fitted (MARPOL 73/78/90 Annex I regs.13 and 13B);
- (OI) .5 examining, as appropriate, the arrangements for the prevention of oil pollution in the event of collision or stranding (MARPOL 73/78/90 Annex I reg.13F);
- (OI) .6 examining the protective location of the segregated ballast spaces and the arrangements for minimising pollution due to side and bottom damages (MARPOL 73/78/90 Annex I regs.13E and 22 to 25);
- (OI) .7 examining the pumping, piping and discharge arrangements (MARPOL 73/78/90 Annex I reg.18);

(OI) .8 examining the shipboard oil pollution emergency plan (MARPOL 73/78/90 Annex I reg.26).

(OI) 1.1.3 For the oil pollution prevention the survey during construction and after installation should consist of:

(OI) .1 confirming the satisfactory installation and operation of, as appropriate, the oily-water separating equipment or the oily-water separating equipment fitted with either an oil discharge monitoring and control system (including the operation of the automatic and manual operation of the means provided to stop the discharge of effluent) or oil filtering equipment (including the satisfactory operation of the alarm) or other installation (MARPOL 73/78/90 Annex I regs.9 and 16);

(OI) .2 confirming, when applicable, that the oil content meter and its recording device are operable and that there is a sufficient supply of consumables for the recording device on board (MARPOL 73/78/90 Annex I regs.9 and 16);

(OI) .3 testing, where fitted, the automatic stopping device required for discharges in Special Areas (MARPOL 73/78/90 Annex I reg.10);

(OI) .4 confirming the segregation of the oil fuel and water ballast system (MARPOL 73/78/90 Annex I reg.14);

(OI) .5 confirming that the oily residue (sludge) tank and its discharge arrangements are satisfactory and, when the size of the sludge tank is approved on the basis of such installations, confirming the satisfactory operation of homogenizers, sludge incinerators or other recognised means for the control of sludge (MARPOL 73/78/90 Annex I reg.17);

(OI) .6 confirming the provision of the standard discharge connection (MARPOL 73/78/90 Annex I reg.19).

(OI) 1.1.4 For the oil pollution prevention for the additional requirements for oil tankers the survey during construction and after installation should consist of:

(OI) .1 confirming that the arrangements of slop tanks or cargo tanks designated as slop tanks and associated piping systems are satisfactory (MARPOL 73/78/90 Annex I regs.9 and 15);

(OI) .2 confirming the satisfactory installation and operation of the oil discharge monitoring and control system, including any audible or visual alarms, the automatic and manual means to stop the discharge of effluent, the starting interlock and the accuracy of the flow meter (MARPOL 73/78/90 Annex I regs.9 and 15);

(OI) .3 confirming that the oil content meter and its recording device are operable and that there is a sufficient supply of consumables for the recording device on board (MARPOL 73/78/90 Annex I regs.9 and 15);

- (OI) .4 confirming that the approved oil/water interface detectors are on board and are operational (MARPOL 73/78/90 Annex I regs.9 and 15);
- (OI) .5 confirming that the arrangements of pumps, pipes and valves are in accordance with the requirements for segregated ballast systems and that there are no cross-connections between the cargo and segregated ballast systems (MARPOL 73/78/90 Annex I reg.13);
- (OI) .6 where a portable spool piece is provided for the emergency discharge of segregated ballast by connecting the segregated ballast system to a cargo pump, confirming that non-return valves are fitted on the segregated ballast connections and that the spool piece is mounted in a conspicuous position in the pump room with a permanent notice restricting its use (MARPOL 73/78/90 Annex I reg.13);
- (OI) .7 testing ballast pipelines that pass through cargo tanks and those cargo pipelines that pass through ballast tanks to ensure there is no cross contamination (MARPOL 73/78/90 Annex I reg.13);
- (OI) .8 confirming that the crude oil washing system is installed in accordance with the approved plans (MARPOL 73/78/90 Annex I reg.13B) and, in particular:
  - (OI) .8.1 examining crude oil washing piping, pumps, valves and deck mounted washing machines for signs of leakage and to check that all anchoring devices for crude oil washing piping are intact and secure;
  - (OI) .8.2 carrying out pressure testing of the crude oil washing system to 1.5 times the working pressure;
  - (OI) .8.3 confirming in those cases where drive units are not integral with the tank washing machines, that the number of operational drive units specified in the Manual are on board;
  - (OI) .8.4 checking that, when fitted, steam heaters for water washing can be properly isolated during crude oil washing operations, either by double shut-off valves or by clearly identifiable blanks;
  - (OI) .8.5 checking that the prescribed means of communications between the deck watchkeeper and the cargo control position is operational;
  - (OI) .8.6 confirming that an overpressure relief device (or other approved arrangement) is fitted to the pumps supplying the crude oil washing system;
  - (OI) .8.7 verifying that flexible hoses for supply of oil to the washing machines on combination carriers are of an approved type, are properly stored and are in good condition;
- (OI) .9 verifying the effectiveness of the crude oil washing system (MARPOL 73/78/90 Annex I reg.13B) and, in particular:

- (OI) .9.1 checking tanks containing departure and/or arrival ballast water, as applicable, to confirm the effectiveness of the cleaning and stripping;
- (OI) .9.2 checking that the crude oil washing machines are operable and to observe the proper operation of the washing machines by means of the movement indicators and/or sound patterns or other approved methods;
- (OI) .9.3 checking the effectiveness of the stripping system in appropriate cargo tanks by observing the monitoring equipment and by hand-dipping or other approved means;
- (OI) .9.4 verifying by internal tank inspection after crude oil washing that the installation and operational procedures laid down in the Operations and Equipment Manual are satisfactory;
- (OI) .10 confirming that, where there is a crude oil washing system, an inert gas system has been installed and tested in accordance with the requirements of SOLAS 74/88 (see (EI) 1.1.4.2 in Annex 1);
- (OI) .11 confirming, as appropriate, that the arrangements for the prevention of oil pollution in the event of collision or stranding are in accordance with the approved plans (MARPOL 73/78/90 Annex I reg.13F);
- (OI) .12 confirming that the piping systems associated with the discharge of dirty ballast water or oil-contaminated water are satisfactory (MARPOL 73/78/90 Annex I reg.18);
- (OI) .13 confirming that the observation and discharge control positions for visually observing the discharge of oil-contaminated water, including the testing of the communication system between the two positions are satisfactory (MARPOL 73/78/90 Annex I reg.18);
- (OI) .14 confirming that the means of draining cargo pumps and cargo lines, including the provision of a stripping device and the connections for pumping to the slop or cargo tanks or ashore are satisfactory (MARPOL 73/78/90 Annex I reg.18);
- (OI) .15 confirming that the arrangements for the part flow system, where fitted, are satisfactory (MARPOL 73/78/90 Annex I reg.18);
- (OI) .16 confirming that closing devices installed in the cargo transfer system and cargo piping as appropriate are satisfactory (MARPOL 73/78/90 Annex I reg.24);
- (OI) .17 confirming that the subdivision and stability arrangements, in addition to the provision of (OI) 1.1.4.16, to prevent progressive flooding are satisfactory (MARPOL 73/78/90 Annex I reg.24).

(OI) 1.1.5 For the oil pollution prevention the check that the documentation has been placed on board cargo ships should consist of:

(OI) .1 confirming that certificates for type approval of oil pollution prevention equipment, such as oily-water separating equipment, oil filtering equipment, process units, oil content meters are available (MARPOL 73/78/90 Annex I reg.16);

(OI) .2 confirming that the Oil Record Book (Part I) has been provided (MARPOL 73/78/90 Annex I reg.20).

(OI) 1.1.6 For the oil pollution prevention the check that the documentation has been placed on board oil tankers should additionally consist of:

(OI) .1 confirming that, if applicable, a Dedicated Clean Ballast Tank Operation Manual has been provided (MARPOL 73/78/90 Annex I reg.13A);

(OI) .2 confirming that, if applicable, a Crude Oil Washing Operations and Equipment Manual has been provided (MARPOL 73/78/90 Annex I reg.13B);

(OI) .3 confirming that an operations manual for the oil discharge monitoring and control system has been provided (MARPOL 73/78/90 Annex I reg.15);

(OI) .4 confirming that the certificates for the type approval of oil pollution prevention equipment, such as oily-water separating equipment, oil filtering equipment, process units, oil content meters, oil/water interface detectors have been provided (MARPOL 73/78/90 Annex I regs.15 and 16);

(OI) .5 confirming that an Oil Record Book (Part II) has been provided (MARPOL 73/78/90 Annex I reg.20);

(OI) .6 confirming that the instructions for the operation of the part flow system have been provided or included in the ship's cargo and ballast handling manuals (MARPOL 73/78/90 Annex I reg.18(6)(e));

(OI) .7 confirming that the information and data concerning the loading and damage stability has been provided (MARPOL 73/78/90 Annex I reg.25);

(OI) .8 confirming that the shipboard oil pollution emergency plan has been provided (MARPOL Annex I reg.26).

(OI) 1.1.7 For the oil pollution prevention the completion of initial survey should consist of:

(OI) .1 after satisfactory survey, the International Oil Pollution Prevention Certificate should be issued.

**(OA)1.2 Annual surveys** - see part “General” section 4.2

(OA)1.2.1 For the oil pollution prevention the examination of current certificates and other records should consist of:

- (OA) .1 checking the validity, as appropriate, of the Cargo Ship Safety Equipment Certificate, the Cargo Ship Safety Radio Certificate and the Cargo Ship Safety Construction Certificate or the Cargo Ship Safety Certificate;
- (OA) .2 checking the validity of the International Load Line Certificate or International Load Line Exemption Certificate;
- (OA) .3 checking the validity of the International Oil Pollution Prevention Certificate;
- (OA) .4 checking the certificates of class, if the ship is classed with a classification society;
- (OA) .5 checking, when appropriate, the validity of the International Certificate of Fitness for the Carriage of Dangerous Chemicals in Bulk or the Certificate of Fitness for the Carriage of Dangerous Chemicals in Bulk;
- (OA) .6 checking, when appropriate, the validity of the International Certificate of Fitness for the Carriage of Liquefied Gases in Bulk;
- (OA) .7 checking, when appropriate, the validity of the International Pollution Prevention Certificate for the Carriage of Noxious Liquid Substances in Bulk;
- (OA) .8 checking that the ship's complement complies with the Minimum Safe Manning Document (SOLAS 74/88 reg.V/13(b));
- (OA) .9 checking that the master, officers and ratings are certificated as required by the STCW Convention;
- (OA) .10 checking whether any new equipment has been fitted and, if so, confirm that it has been approved before installation and that any changes are reflected in the appropriate certificate;
- (OA) .11 checking from the certificates for the type approval of the oil pollution prevention equipment, such as the oily-water separating equipment, oil filtering equipment, process units, oil content meters and oil/water interface detectors and sighting the records of the various oil discharge monitoring equipment, as applicable (MARPOL 73/78/90 Annex I reg.16);
- (OA) .12 checking whether the appropriate entries have been made in Part I of the Oil Record Book (MARPOL 73/78/90 Annex I reg.20).

(OA)1.2.2 For the oil pollution prevention the examination of current certificates and other records for oil tankers should additionally consist of:

- (OA) .1 confirming that the approved Dedicated Clean Ballast Tank Operation Manual, and/or the approved Operations and Equipment Manual for the Crude Oil Washing Systems, as appropriate, is/are on board (MARPOL 73/78/90 Annex I regs.13A and 13B);
- (OA) .2 confirming that, when appropriate, the approved operational procedures for existing oil tankers having special ballast arrangements are on board (MARPOL 73/78/90 Annex I reg.13D);
- (OA) .3 confirming, when appropriate, that a complete file of the enhanced survey reports and Condition Evaluation Report are on board (MARPOL 73/78, Annex I, regulation 13G);
- (OA) .4 confirming that the operations manual for the oil discharge monitoring and control system, is on board (MARPOL 73/78/90 Annex I reg.15);
- (OA) .5 checking whether the appropriate entries have been made in Part II of the Oil Record Book (MARPOL 73/78/90 Annex I reg.20);
- (OA) .6 confirming that the loading and stability information in an approved form, where applicable, is on board (MARPOL 73/78/90 Annex I reg.25).
- (OA) .7 confirming that the oil pollution emergency plan is on board (MARPOL 73/78/90 Annex I reg.26).

(OA)1.2.3 For the oil pollution prevention the annual survey should consist of:

- (OA) .1 examining externally the oily-water separating equipment or oil filtering equipment or process unit, where fitted, and confirming, as far as practicable, their satisfactory operation including, when appropriate, testing the alarm for the oil filtering equipment (MARPOL 73/78/90 Annex I regs.9 and 16);
- (OA) .2 examining externally the oil discharge monitoring and control system and confirming, as far as practicable, its satisfactory operation, including, where possible, the automatic and manual operation of the means provided to stop the discharge of effluent, observing that indicators and recording devices in the monitor are operable and verifying that a sufficient supply of consumables for the recorders are on board (MARPOL 73/78/90 Annex I regs.9 and 16);
- (OA) .3 testing, where fitted, the automatic stopping device required for discharge in special areas (MARPOL 73/78/90 Annex I reg.10);
- (OA) .4 confirming the segregation of oil fuel and water ballast systems (MARPOL 73/78/90 Annex I reg.14);

- (OA) .5 checking that the arrangement of oily residue (sludge) tank and its discharge arrangements are satisfactory and confirming that, where applicable, homogenizers, sludge incinerators or other recognised means for the control of sludge are satisfactory (MARPOL 73/78/90 Annex I reg.17);
- (OA) .6 confirming that a standard discharge connection is provided (MARPOL 73/78/90 Annex I reg.19).
- (OA)1.2.4 For oil pollution prevention the annual survey of the additional requirements for oil tankers should consist of:
- (OA) .1 examining the oil discharge monitoring and control system and its associated equipment (MARPOL 73/78/90 Annex I regs.9 and 15) and, in particular:
- (OA) .1.1 examining externally the system and equipment;
- (OA) .1.2 confirming, as far as practicable, the satisfactory operation of the oil discharge monitoring and control system including the oil content meter and, where applicable, the automatic and manual means provided to stop the discharge of effluent and the starting interlock;
- (OA) .1.3 observing that indicators and recording devices are operable and verifying that sufficient supply of consumables for the recorders are on board;
- (OA) .1.4 testing, as far as practicable, any audible or visual alarms fitted to the oil discharge monitoring and control system;
- (OA) .2 examining, as far as practicable, the oil/water interface detectors (MARPOL 73/78/90 Annex I regs.9 and 15);
- (OA) .3 confirming that no cross connections have been fitted between the cargo and segregated ballast systems (MARPOL 73/78/90 Annex I reg.13);
- (OA) .4 where a portable spool piece is provided for the emergency discharge of segregated ballast by connecting the segregated ballast system to a cargo pump, confirming that non-return valves are fitted on the segregated ballast connections and that the spool piece is mounted in a conspicuous position in the pump room with a permanent notice restricting its use (MARPOL 73/78/90 Annex I reg.13);
- (OA) .5 confirming by sighting that there has been no contamination with oil in the segregated ballast tanks (MARPOL 73/78/90 Annex I reg.13);
- (OA) .6 confirming, as far as practicable, that the dedicated clean ballast tank arrangement remains satisfactory (MARPOL 73/78/90 Annex I reg.13A);
- (OA) .7 confirming by sighting that there has been no contamination with oil in the dedicated clean ballast tanks (MARPOL 73/78/90 Annex I reg.13A);

- (OA) .8 confirming, as far as practicable, that the crude oil washing system remains satisfactory (MARPOL 3/78/90 Annex I reg.13B) and in particular:
- (OA) .8.1 examining externally the crude oil washing piping, pumps, valves and deck mounted washing machines for signs of leakage and checking that all anchoring devices for crude oil washing piping are intact and secure;
- (OA) .8.2 confirming, in those cases where drive units are not integral with the tank cleaning machines, that the number of operational drive units as specified in the Manual are on board;
- (OA) .8.3 checking that, when fitted, steam heaters for water washing can be properly isolated during crude oil washing operations, either by double shut-off valves or clearly identifiable blanks;
- (OA) .8.4 checking that the prescribed means of communications between the deck watchkeeper and the cargo control position is operational;
- (OA) .8.5 confirming that an overpressure relief device (or other approved arrangement) is fitted to the pumps supplying the crude oil washing systems;
- (OA) .8.6 confirming that flexible hoses for supply of oil to the washing machines on combination carriers, are of an approved type, are properly stored and are in good condition;
- (OA) .9 verifying, as far as practicable, the effectiveness of the crude oil washing system (MARPOL 73/78/90 Annex I reg.13B) and, in particular:
- (OA) .9.1 checking tanks containing departure and/or arrival ballast water, as applicable, to confirm the effectiveness of the cleaning and stripping;
- (OA) .9.2 checking, as far as practicable, that the crude oil washing machines are operable and, when the survey is carried out during crude oil washing operations, observing the proper operation of the washing machines by means of the movement indicators and/or sound patterns or other approved methods;
- (OA) .9.3 checking, as far as practicable, the effectiveness of the stripping system in appropriate cargo tanks by observing the monitoring equipment and by hand-dipping or other approved means;
- (OA) .10 confirming that on those existing tankers operating with special ballast arrangements, the arrangements are as approved and are satisfactory (MARPOL 73/78/90 Annex I reg.13D);
- (OA) .11 confirming, as appropriate and as practicable, that the arrangements for the prevention of oil pollution in the event of collision or stranding are approved and are satisfactory (MARPOL 73/78/90 Annex I regs.13F and 13G)\*;

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\* See also the Guidelines on the Enhanced Programme of Inspections During Surveys of Oil Tankers (resolution A.744(18), annex B).

- (OA) .12 examining the piping systems associated with the discharge of dirty or oil-contaminated water including the part flow system, if fitted (MARPOL 73/78/90 Annex I reg.18);
- (OA) .13 testing the communication system between the observation and discharge control positions (MARPOL 73/78/90 Annex I reg.18);
- (OA) .14 examining the means of draining cargo pumps and cargo lines, including the stripping device and the connections for pumping to the slop or cargo tanks or ashore (MARPOL 73/78/90 Annex I reg.18).

(OA)1.2.5 For the oil pollution prevention the completion of the annual survey should consist of:

- (OA) .1 after a satisfactory survey, the International Oil Pollution Prevention Certificate should be endorsed;
- (OA) .2 if a survey shows that the condition of a ship or its equipment is unsatisfactory, see part “General” section 4.8.

(OIn)1.3 **Intermediate surveys** - see part “General” section 4.3

(OIn)1.3.1 For the oil pollution prevention the examination of current certificates and other records should consist of:

- (OIn) .1 the provisions of (OA) 1.2.1.

(OIn)1.3.2 For the oil pollution prevention the examination of current certificates and other records for oil tankers should additionally consist of:

- (OIn) .1 the provisions of (OA) 1.2.2.

(OIn)1.3.3 For oil pollution prevention the intermediate survey should consist of:

- (OIn) .1 the provisions of (OA) 1.2.3;
- (OIn) .2 examining the oily-water separating equipment or oil filtering equipment or process unit, where fitted, including associated pumps, piping and fittings for wear and corrosion (MARPOL 73/78/90 Annex I regs.9 and 16);
- (OIn) .3 examining the oil content meter (15 ppm alarm and bilge monitor) for obvious defects, deterioration or damage and checking the record of calibration of the meter when done in accordance with the manufacturer's operation and instruction manual (MARPOL 73/78/90 Annex I regs.9 and 16).

(OIn)1.3.4 For oil pollution prevention the intermediate survey of the additional requirements for oil tankers should consist of:

- (OIn) .1 the provisions of (OA) 1.2.4;

- (OIn) .2 examining the oil discharge monitoring and control system and the oil content meter for obvious defects, deterioration or damage, and to check the record or calibration of the meter when done in accordance with the manufacturer's operation and instruction manual (MARPOL 73/78/90 Annex I regs.9 and 15);
  - (OIn) .3 confirming the satisfactory operation of the oil/water interface detectors (MARPOL 73/78/90 Annex I regs.9 and 15);
  - (OIn) .4 for the crude oil washing system (MARPOL 73/78/90 Annex I reg.13B):
    - (OIn) .4.1 examining the crude oil washing piping outside the cargo tanks. If upon examination there is any doubt as to its condition, the piping may be required to be pressure tested, gauged or both. Particular attention should be paid to any repairs such as welded doublers;
    - (OIn) .4.2 confirming the satisfactory operation of the isolation valves to steam heaters for washing water, when fitted;
    - (OIn) .4.3 examining at least two selected cargo tanks for the express purpose of verifying the continued effectiveness of the installed crude oil washing and stripping systems. If the tank cannot be gas-freed for the safe entry of the surveyor, an internal examination should not be conducted. In this case this examination may be conducted in conjunction with the internal examination of cargo tanks required in (CIn) 2.3.3.3 in Annex 1;
  - (OIn) .5 examining the manual and/or remote operation of the individual tank valves (or other similar closing devices) to be kept closed at sea (MARPOL 73/78/90 Annex I reg.24).
- (OIn)1.3.5 For the oil pollution prevention the completion of the intermediate survey should consist of:
- (OIn) .1 after a satisfactory survey, the International Oil Pollution Prevention Certificate should be endorsed;
  - (OIn) .2 if a survey shows that the condition of a ship or its equipment is unsatisfactory, see part "General" section 4.8.
- (OR)1.4 Renewal surveys - see part "General" section 4.5**
- (OR)1.4.1 For the oil pollution prevention the examination of current certificates and other records should consist of:
- (OR) .1 the provisions of (OA) 1.2.1, except for the validity of the International Oil Pollution Prevention Certificate.
- (OR)1.4.2 For the oil pollution prevention the examination of current certificates and other records for tankers should additionally consist of:
- (OR) .1 the provisions of (OA) 1.2.2.

(OR)1.4.3 For oil pollution prevention the renewal survey should consist of:

- (OR) .1 the provisions of (OIn) 1.3.3;
- (OR) .2 confirming, if necessary by simulated test or equivalent, the satisfactory operation of the oily-water separating equipment or oil filtering equipment (MARPOL 73/78/90 Annex I regs.9 and 16);
- (OR) .3 confirming, if necessary by simulated test or equivalent, the satisfactory operation of the oil discharge monitoring and control system including where practicable the automatic and manual operation of the means provided to stop the discharge of effluent (MARPOL 73/78/90 Annex I regs.9 and 16);
- (OR) .4 confirming the satisfactory operation of the alarm for the oil filtering system (MARPOL 73/78/90 Annex I regs.9 and 16);
- (OR) .5 confirming the satisfactory operation of homogenizers, sludge incinerators or other recognized means for the control of sludge when the size of oily residue (sludge) tank is approved on the basis of such installations (MARPOL 73/78/90 Annex I reg.17).

(OR)1.4.4 For oil pollution prevention the renewal survey of the additional requirements for oil tankers should consist of:

- (OR) .1 the provisions of (OIn) 1.3.4;
- (OR) .2 confirming that the arrangements of slop tanks or cargo tanks designated as slop tanks and associated piping systems are satisfactory (MARPOL 73/78/90 Annex I regs.9 and 15);
- (OR) .3 confirming, if necessary by simulated test or equivalent, the satisfactory operation of the oil discharge monitoring and control system and its associated equipment, including the oil/water interface detectors (MARPOL 73/78/90 Annex I regs.9 and 15);
- (OR) .4 confirming that the arrangements of pumps, pipes and valves are in accordance with the requirements for SBT systems (MARPOL 73/78/90 Annex I reg.13);
- (OR) .5 confirming that the arrangements of pumps, pipes and valves are in accordance with the Revised Specifications for Oil Tankers with Dedicated Clean Ballast Tanks (MARPOL 73/78/90 Annex I reg.13A);
- (OR) .6 confirming that the crude oil washing system is in accordance with the requirements for such systems (MARPOL 73/78/90 Annex I reg.13A) and, in particular:
  - (OR) .6.1 carrying out pressure testing of the crude oil washing system to at least the working pressure;
  - (OR) .6.2 examining the cargo tanks for the express purpose of verifying the continued effectiveness of the installed crude oil washing and stripping systems;

- (OR) .6.3 examining internally, when fitted, the isolation valves for any steam heaters;
- (OR) .7 verifying, by internal tank inspection or by another alternative method acceptable to the Administration, the effectiveness of the crude oil washing system. If the tank cannot be gas-freed for the safe entry of the surveyor, an internal inspection should not be conducted. An acceptable alternative would be satisfactory results during the surveys required by (OA) 1.2.4.9 (MARPOL 73/78/90 Annex I reg.13B);
- (OR) .8 confirming that there is no leakage from those ballast pipelines passing through cargo tanks and those cargo pipelines passing through ballast tanks (MARPOL 73/78/90 Annex I regs.13, 13A and 13B);
- (OR) .9 confirming that the pumping, piping and discharge arrangements are satisfactory (MARPOL 73/78/90 Annex I reg.18) and, in particular:
- (OR) .9.1 confirming that the piping systems associated with the discharge of dirty ballast water or oil contaminated water are satisfactory;
- (OR) .9.2 confirming that the means of draining cargo pumps and cargo lines, including the stripping device and the connections for pumping to the slop or cargo tanks or ashore are satisfactory;
- (OR) .9.3 confirming that the arrangements for the part flow system, where fitted, are satisfactory;
- (OR) .10 confirming that closing devices installed in the cargo transfer system and cargo piping as appropriate are satisfactory (MARPOL 73/78/90 Annex I reg.24);
- (OR) .11 confirming, as appropriate and as practicable, that the arrangements for the prevention of oil pollution in the event of collision or stranding are satisfactory (MARPOL 73/78/90 Annex I regs.13F and 13G).
- (OR)1.4.5 For the oil pollution prevention the completion of the renewal survey should consist of:
- (OR) .1 after a satisfactory survey, the International Oil Pollution Prevention Certificate should be issued.

(N) **2 GUIDELINES FOR SURVEYS FOR THE INTERNATIONAL POLLUTION PREVENTION CERTIFICATE FOR THE CARRIAGE OF NOXIOUS SUBSTANCES IN BULK**

(NI) **2.1 Initial surveys** - see part "General" section 4.1

(NI) 2.1.1 For the carriage of noxious liquid substances in bulk the examination of plans and designs (as applicable to the cargoes the ship is to be certified to carry) should consist of:

- (NI) .1 drawing up the list of Annex II (appendix II) substances it is proposed the ship will be certified to carry (MARPOL 73/78/90 Annex II reg.11 or reg.12A);

- (NI) .2 examining the pumping system (MARPOL 73/78/90 Annex II reg.5A);
  - (NI) .3 examining the stripping system (MARPOL 73/78/90 Annex II reg.5A);
  - (NI) .4 examining the tank washing system and equipment (MARPOL 73/78/90 Annex II P & A Standards);
  - (NI) .5 examining the underwater discharge arrangements (MARPOL 73/78/90 Annex II P & A Standards);
  - (NI) .6 examining the ventilation equipment for residue removal (MARPOL 73/78/90 Annex II P & A Standards);
  - (NI) .7 examining the heating system for solidifying and high viscosity substances (MARPOL 73/78/90 Annex II P & A Standards);
  - (NI) .8 examining the Procedures and Arrangements Manual (including cargo carriage requirements to meet Annex II regulations) (MARPOL 73/78/90 Annex II P & A Standards).
- (NI) 2.1.2 For the carriage of noxious liquid substances in bulk the survey during construction and after installation (as applicable to the cargoes the ship is to be certified to carry) should consist of:
- (NI) .1 confirming that the pumping and stripping systems are satisfactory and that portable pipes or bends in sufficient number, if required, are on board (MARPOL 73/78/90 Annex II reg.5A);
  - (NI) .2 conducting the water test for assessing the stripping quantity (MARPOL 73/78/90 Annex II reg.5A and P & A Standards App.A);
  - (NI) .3 confirming that the tank washing machines provided on board are in working order, are those described in the Procedures and Arrangements Manual and are installed in accordance with the approved plans (MARPOL 73/78/90 Annex II P & A Standards);
  - (NI) .4 confirming that the wash water heating system, if required, is installed in accordance with the approved plans (MARPOL 73/78/90 Annex II P & A Standards);
  - (NI) .5 confirming that the number and position of tank cleaning openings for portable machines are in accordance with the approved plans (MARPOL 73/78/90 Annex II P & A Standards);
  - (NI) .6 confirming that the underwater discharge outlet(s) are in accordance with the approved plans (MARPOL 73/78/90 Annex II P & A Standards);
  - (NI) .7 confirming that means are provided in the common discharge piping to isolate openings provided above the waterline (MARPOL 73/78/90 Annex II P & A Standards);

- (NI) .8 verifying by actual test that the discharge rate of the pumps, where a variable rate type is used, can be controlled as specified in the Procedures and Arrangements Manual (MARPOL 73/78/90 Annex II P & A Standards);
- (NI) .9 verifying that means for restricting the discharge flow of fixed rate pumps to the specified rates have been fitted (MARPOL 73/78/90 Annex II P & A Standards);
- (NI) .10 confirming the satisfactory operation of the recording device, as fitted, and verifying by an actual flow test that it has an accuracy of +/- 15% or better (MARPOL 73/78/90 Annex II P & A Standards);
- (NI) .11 confirming that the ventilation equipment for residue removal is installed in accordance with the approved plan and is in working order and that the pressure in the driving medium for portable fans for ventilation equipment for residue removal can be achieved to give the required fan capacity (MARPOL 73/78/90 Annex II P & A Standards);
- (NI) .12 confirming that the heating system for solidifying and high viscosity substances is installed in accordance with the approved plan (MARPOL 73/78/90 Annex II P & A Standards).

(NI) 2.1.3 For the carriage of noxious liquid substances in bulk the check that the required documentation has been placed on board cargo ships (as applicable to the cargoes the ship is to be certified to carry) should consist of:

- (NI) .1 confirming that the Procedures and Arrangements Manual has been provided (MARPOL 73/78/90 Annex II regs.5, 5A and 8);
- (NI) .2 confirming that the Cargo Record Book has been provided (MARPOL 73/78/90 Annex II reg.9);
- (NI) .3 confirming that the oil discharge monitor is certified for oil-like substances as may be listed on the Oil Pollution Prevention Certificate (MARPOL 73/78/90 Annex II reg.14).

(NI) 2.1.4 For the carriage of noxious liquid substances in bulk the completion of initial survey should consist of:

- (NI) .1 after satisfactory survey, the International Certificate for the Carriage of Noxious Liquid Substances in Bulk should be issued.

(NA)2.2 **Annual surveys** - see part "General" section 4.2

(NA)2.2.1 For the carriage of noxious liquid substances in bulk the examination of current certificates and other records should consist of:

- (NA) .1 checking the validity, as appropriate, of the Cargo Ship Safety Equipment Certificate, the Cargo Ship Safety Radio Certificate and the Cargo Ship Safety Construction Certificate or the Cargo Ship Safety Certificate;

- (NA) .2 checking the validity of the International Load Line Certificate or International Load Line Exemption Certificate;
  - (NA) .3 checking the validity of the International Oil Pollution Prevention Certificate;
  - (NA) .4 checking the certificates of class, if the ship is classed with a classification society;
  - (NA) .5 checking, when appropriate, the validity of the International Certificate of Fitness for the Carriage of Liquefied Gases in Bulk;
  - (NA) .6 checking the validity of the International Pollution Prevention Certificate for the Carriage of Noxious Liquid Substances in Bulk;
  - (NA) .7 checking that the ship's complement complies with the Minimum Safe Manning Document (SOLAS 74/88 reg.V/13(b));
  - (NA) .8 checking that the master, officers and ratings are certificated as required by the STCW Convention;
  - (NA) .9 checking whether any new equipment has been fitted and, if so, confirm that it has been approved before installation and that any changes are reflected in the appropriate certificate;
  - (NA) .10 confirming that the Procedures and Arrangements Manual is on board (MARPOL 73/78/90 Annex II regs.5, 5A and 8);
  - (NA) .11 confirming that the Cargo Record Book is being correctly used (MARPOL 73/78/90 Annex II reg.9);
  - (NA) .12 confirming that the oil discharge monitor is certified for oil-like substances as may be listed on the Oil Pollution Prevention Certificate (MARPOL 73/78/90 Annex II reg.14);
  - (NA) .13 sighting the records of the recording device, as fitted, when category B cargoes are carried (MARPOL 73/78/90 Annex II P & A Standards).
- (NA)2.2.2 For the carriage of noxious liquid substances in bulk the annual survey should consist of:
- (NA) .1 examining externally and confirming that the pumping and piping systems, including a stripping system if fitted, and associated equipment remain as approved (MARPOL 73/78/90 Annex II reg.5A);
  - (NA) .2 examining externally the tank washing piping and confirming that the type, capacity, number, and arrangement of the tank washing machines are as approved (MARPOL 73/78/90 Annex II P & A Standards);
  - (NA) .3 examining externally the wash water heating system (MARPOL 73/78/90 Annex II P & A Standards);

- (NA) .4 examining externally, as far as practicable, the underwater discharge arrangements (MARPOL 73/78/90 Annex II P & A Standards);
- (NA) .5 confirming that the means of controlling the rate of discharge of the residue is as approved (MARPOL 73/78/90 Annex II P & A Standards);
- (NA) .6 confirming that the flow rate indicating device is operable (MARPOL 73/78/90 Annex II P & A Standards);
- (NA) .7 confirming that the ventilation equipment for residue removal is as approved (MARPOL 73/78/90 Annex II P & A Standards);
- (NA) .8 examining externally, as far as is accessible, the heating system required for solidifying and high viscosity substances (MARPOL 73/78/90 Annex II P & A Standards);
- (NA) .9 confirming that any cargo tank high-level alarms are operable;
- (NA) .10 examining any additional requirements listed on the International Certificate for the Carriage of Noxious Liquids in Bulk.

(NA)2.2.3 For the carriage of noxious liquid substances in bulk the completion of annual survey should consist of:

- (NA) .1 after satisfactory survey, the International Certificate for the Carriage of Noxious Liquid Substances in Bulk should be endorsed;
- (NA) .2 if a survey shows that the condition of a ship or its equipment is unsatisfactory, see part “General” section 4.8.

(NIn)2.3 **Intermediate surveys** - see part “General” section 4.3

(NIn)2.3.1 For the carriage of noxious liquid substances in bulk the examination of current certificates and other records should consist of:

- (NIn) .1 the provisions of (NA) 2.2.1.

(NIn)2.3.2 For the carriage of noxious liquid substances in bulk the intermediate survey should consist of:

- (NIn) .1 the provisions of (NA) 2.2.2;
- (NIn) .2 verifying from the cargo record book that the pumping and stripping arrangements have been emptying the tanks efficiently and are all in working order (MARPOL 73/78/90 Annex II reg.5A and 9);
- (NIn) .3 confirming, if possible, that the discharge outlet(s) are in good condition (MARPOL 73/78/90 Annex II P & A Standards);

- (NIn) .4 confirming the satisfactory operation of the recording device, as fitted, and verifying by an actual flow test that it has an accuracy of +/- 15% or better (MARPOL 73/78/90 Annex II P & A Standards);
- (NIn) .5 confirming that the ventilation equipment for residue removal is satisfactory and that the pressure in the driving medium for portable fans for ventilation equipment for residue removal can be achieved to give the required fan capacity (MARPOL 73/78/90 Annex II P & A Standards).
- (NIn)2.3.3 For the carriage of noxious liquid substances in bulk the completion of intermediate survey should consist of:
- (NIn) .1 after satisfactory survey, the International Certificate for the Carriage of Noxious Liquid Substances in Bulk should be endorsed;
- (NIn) .2 if a survey shows that the condition of a ship or its equipment is unsatisfactory, see part "General" section 4.8.
- (NR)2.4 Renewal surveys** - see part "General" section 4.4
- (NR)2.4.1 For the carriage of noxious liquid substances in bulk the examination of current certificates and other records should consist of:
- (NR) .1 the provisions of (NA) 2.2.1, except for the validity of the International Certificate for the Carriage of Noxious Liquid Substances in Bulk.
- (NR)2.4.2 For the carriage of noxious liquid substances in bulk the renewal survey should consist of:
- (NR) .1 the provisions of (NIn) 2.3.2;
- (NR) .2 confirming that the pumping and stripping systems are satisfactory and that portable pipes or bends in sufficient number, if required, are on board (MARPOL 73/78/90 Annex II reg.5A);
- (NR) .3 conducting the water test for assessing the stripping quantity (MARPOL 73/78/90 Annex II reg.5A and P & A Standards App.A);
- (NR) .4 confirming that the tank washing machines provided on board are in working order, are those described in the Procedures and Arrangements Manual and are installed in accordance with the approved plans (MARPOL 73/78/90 Annex II P & A Standards);
- (NR) .5 confirming that the wash water heating system, if required, is installed in accordance with the approved plans (MARPOL 73/78/90 Annex II P & A Standards);
- (NR) .6 confirming that the number and position of tank cleaning openings for portable machines are in accordance with the approved plans (MARPOL 73/78/90 Annex II P & A Standards);

- (NR) .7 confirming that the underwater discharge outlet(s) are in good condition and are in accordance with the approved plans (MARPOL 73/78/90 Annex II P & A Standards);
  - (NR) .8 confirming that means are provided in the common discharge piping to isolate openings provided above the waterline (MARPOL 73/78/90 Annex II P & A Standards);
  - (NR) .9 verifying by actual test that the discharge rate of the pumps, where a variable rate type is used, can be controlled as specified in the Procedures and Arrangements Manual (MARPOL 73/78/90 Annex II P & A Standards);
  - (NR) .10 verifying that means for restricting the discharge flow of fixed rate pumps to the specified rates are still fitted (MARPOL 73/78/90 Annex II P & A Standards);
  - (NR) .11 confirming that the ventilation equipment for residue removal is installed in accordance with the approved plan and is in working order (MARPOL 73/78/90 Annex II P & A Standards);
  - (NR) .12 confirming that the heating system for solidifying and high viscosity substances is installed in accordance with the approved plan (MARPOL 73/78/90 Annex II P & A Standards).
- (NR)2.4.3 For the carriage of noxious liquid substances in bulk the completion of renewal survey should consist of:
- (NR) .1 after satisfactory survey, the International Certificate for the Carriage of Noxious Liquid Substances in Bulk should be issued.

ANNEX 4

**SURVEY GUIDELINES UNDER THE MANDATORY CODES**

**(D) 1 GUIDELINES FOR THE SURVEYS FOR THE INTERNATIONAL CERTIFICATE OF FITNESS FOR THE CARRIAGE OF DANGEROUS CHEMICALS IN BULK AND THE CERTIFICATE OF FITNESS FOR THE CARRIAGE OF DANGEROUS CHEMICALS IN BULK**

**(DI) 1.1 Initial surveys – see part “General” section 4.1**

(DI) 1.1.1 For compliance with the International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk the examination of plans and designs of the structure, equipment, fittings, arrangements and materials should consist of:

- (DI) .1 determining the products that it is intended that the ship will be permitted to carry and noting the corresponding minimum special requirements (IBC Code 83/90/00, ch.17) and any other special requirements (IBC Code 83/90/00, ch.15);
- (DI) .2 examining the plans for the ship type, location of the cargo tanks, cargo containment, materials of construction, cargo temperature control, cargo tank vent systems, environmental control, electrical installations, fire protection and fire extinction, instrumentation and the provision, specification and stowage of the equipment for personnel protection (IBC Code 83/90/00, chs.2, 4, 6, 7, 8, 9, 10, 11, 13 and 14);
- (DI) .3 examining the plans for the freeboard and intact stability, discharges below the bulkhead deck and survival capability (IBC Code 83/90/00, ch.2);
- (DI) .4 examining the plans for the ship arrangements (IBC Code 83/90/00, ch.3);
- (DI) .5 examining the plans for the cargo transfer (IBC Code 83/90/00, ch.5);
- (DI) .6 examining the plans for the mechanical ventilation in the cargo area (IBC Code 83/90/00, ch.12);
- (DI) .7 the provisions of (NI) 2.1.1 in Annex 3.

(DI) 1.1.2 For compliance with the International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk the survey during construction and after installation of the structure, equipment, fittings, arrangements and materials should consist of:

- (DI) .1 confirming that tanks containing cargo or residues of cargo are suitably segregated from accommodation, service and machinery spaces and from drinking water and stores for human consumption, that cargo piping does not pass through any accommodation, service or machinery space other than cargo pump rooms or pump rooms and that cargoes are not to be carried in either the fore or the aft peak tank (IBC Code 83/90/00, ch.3);

- (DI) .2 examining the air intakes and openings into the accommodation, service and machinery spaces in relation to the cargo piping and vent systems and their entrances, air inlets and openings in relation to the cargo area (IBC Code 83/90/00, ch.3);
- (DI) .3 examining the arrangements of the cargo pump rooms (IBC Code 83/90/00, ch.3);
- (DI) .4 examining the accesses to spaces in the cargo area (IBC Code 83/90/00, ch.3);
- (DI) .5 examining the bilge and ballast arrangements and confirming that pumps and pipelines are identified (IBC Code 83/90/00, ch.3);
- (DI) .6 examining, when applicable, the bow or stern loading and unloading arrangements with particular reference to the air inlets and entrances to the accommodation, machinery and service spaces, the electrical equipment, fire-fighting arrangements and means of communication and testing the remote shut down for the cargo pumps (IBC Code 83/90/00, ch.3);
- (DI) .7 confirming that the cargo tank types are arranged and installed in accordance with the approved plans, internally examining the cargo tanks, water ballast tanks and other spaces in the cargo area and pressure testing the boundaries (IBC Code 83/90/00, ch.4);
- (DI) .8 examining the cargo transfer arrangements and confirming that any hoses are suitable for their intended purpose and, where appropriate, type-approved or marked with date of testing (IBC Code 83/90/00, ch.5);
- (DI) .9 examining and testing any cargo heating and cooling systems (IBC Code 83/90/00, ch.7);
- (DI) .10 confirming that the cargo tank vent systems have been installed in accordance with the approved plans (IBC Code 83/90/00, ch.8);
- (DI) .11 confirming that high-level alarms, or overflow control systems or spill valves or other equivalent means provided to control possible liquid rising in the venting system, are operating satisfactorily (IBC Code 83/90/00, ch.8);
- (DI) .12 confirming that suitable provision is made for drainage of vent lines and that no shut-off valves or other means of stoppage, including spectacle or blank flanges, are fitted either to the individual vents or to the header, if the vents are combined or either above or below pressure/vacuum relief valves with closed vent systems (IBC Code 83/90/00, ch.8);
- (DI) .13 confirming that suitable provisions are made for primary and secondary means (or alternative measures) for controlled tank venting (MSC.102(73), MEPC.79(43), chapter 8)

- (DI) .14 examining the location of the vent outlets in respect of the height above the weather deck or the fore and aft gangway, from the nearest air intakes or openings to accommodation, service and machinery spaces and ignition sources and confirming that any high velocity vents are of the approved type (IBC Code 83/90/00, ch.8);
- (DI) .15 examining the arrangements for the environmental control, including the means of storing or generating and drying an inert gas (IBC Code 83/90/00, ch.9);
- (DI) .16 examining the electrical installations and confirming that, when appropriate, special materials have been used and that the electrical equipment installed in hazardous locations, as permitted, is certified by a recognised authority for the cargoes to be carried (IBC Code 83/90/00, ch.10);
- (DI) .17 confirming that independent cargo tanks are electrically bonded to the hull and that all gasketed cargo pipe joints and hose connections are electrically bonded (IBC Code 83/90/00, ch.10);
- (DI) .18 examining the arrangements for the fire protection and fire extinction (IBC Code 83/90/00, ch.11);
- (DI) .19 examining the fixed fire fighting system for the cargo pump room and confirming that the installation tests have been satisfactorily completed and that its means of operation are clearly marked (IBC Code 83/90/00, ch.11);
- (DI) .20 checking the deck foam system for the cargo area, including the supplies of foam concentrate, and testing that the minimum number of jets of water at the required pressure in the fire main is obtained, see (EI) 1.1.3.1 in Annex 1, when the system is in operation (IBC Code 83/90/00, ch.11);
- (DI) .21 confirming that suitable portable fire extinguishing equipment for the cargoes to be carried is provided in the cargo area (IBC Code 83/90/00, ch.11);
- (DI) .22 examining, and confirming the satisfactory operation of, the arrangements for the mechanical ventilation of spaces in the cargo area normally entered during cargo handling operations (IBC Code 83/90/00, ch.12) and checking in particular that:
  - (DI) .22.1 it may be controlled from outside the space;
  - (DI) .22.2 warning notices concerning its use have been posted;
  - (DI) .22.3 it is of the extraction type, with extraction from below the floor plates, unless the space houses electrical motors driving cargo pumps when it should be of the positive pressure type;

- (DI) .22.4 the ducting does not pass through accommodation, machinery and service spaces and that the exhaust ducts are clear of the ventilation inlets and openings to such spaces;
- (DI) .22.5 the electric motors driving ventilation fans are positioned outside the ventilation ducts and the ventilation fans and the ducts, in way of the fans only, are of non-sparking construction in hazardous locations;
- (DI) .23 examining, and confirming the satisfactory operation of, the arrangements for the mechanical ventilation of spaces normally entered other than those covered by (DI) 1.1.2.21 (IBC Code 83/90/00, ch.12);
- (DI) .24 confirming that double bottoms, cofferdams, duct keels, pipe tunnels, hold spaces and other spaces where cargo may accumulate are capable of being efficiently ventilated to ensure a safe environment when entry into the space is necessary and that, when appropriate, permanent ducting is provided and any ventilation fans comply with (DI) 1.1.2.22.5 (IBC Code 83/90/00, ch.12);
- (DI) .25 examining the intrinsically safe systems and circuits used for measurement, monitoring, control and communication purposes in all hazardous locations (IBC Code 83/90/00, ch.13);
- (DI) .26 checking the provision of equipment for personnel protection (IBC Code 83/90/00, ch.14) and in particular that:
  - (DI) .26.1 suitable protective clothing is available for the crew engaged in loading and discharging operations and that suitable storage is provided;
  - (DI) .26.2 the required safety equipment and associated breathing apparatus and air supplies and, when appropriate, emergency-escape respiratory and eye protection are provided and are properly stowed;
  - (DI) .26.3 medical first-aid equipment, including stretchers and oxygen resuscitation equipment are provided;
  - (DI) .26.4 arrangements have been made for the antidotes for the cargoes actually carried to be on board;
  - (DI) .26.5 decontamination arrangements and eyewashes are operational;
  - (DI) .26.6 the required gas detection instruments are on board and that arrangements have been made for the supply of the appropriate vapour detection tubes;
  - (DI) .26.7 the stowage for cargo samples is satisfactory;
- (DI) .27 the provisions of (NI) 2.1.2 in Annex 3.
- (DI) 1.1.3 For compliance with the International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk the check that all the required documentation has been placed on board the ship should consist of:

- (DI) .1 confirming that a loading and stability information booklet, containing details of typical service and ballast conditions, provisions for evaluating other conditions of loading, a summary of the ship's survival capabilities and sufficient information to ensure that the ship is loaded and operated in a safe and seaworthy manner is available on board (IBC Code 83/90/00, ch.2);
  - (DI) .2 confirming that damage survival capability information is supplied on the basis of loading information for all anticipated conditions of loading and variations in draught and trim (IBC Code 83/90/00, ch.2);
  - (DI) .3 confirming that a table giving the filling ratios for the cargo tanks at various densities has been provided (IBC Code 83/90/00, ch.16);
  - (DI) .4 confirming that a copy of the International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk, or the equivalent national regulations, has been provided (IBC Code 83/90/00, ch.16);
  - (DI) .5 confirming that information relating to the chemical and physical properties of the products to be carried has been provided together with the measures to be taken in an accident have been provided (IBC Code 83/90/00, ch.16);
  - (DI) .6 confirming that a manual covering procedures for cargo transfer, tank cleaning, gas freeing, ballasting, etc., has been provided (IBC Code 83/90/00, ch.16);
  - (DI) .7 the provisions of (NI) 2.1.3 in Annex 3.
- (DI) 1.1.4 For compliance with the International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk the completion of the initial survey should consist of:
- (DI) .1 after a satisfactory survey the International Certificate of Fitness for the Carriage of Dangerous Chemicals in Bulk should be issued.
- (DA)1.2 **Annual surveys** - see part "General" section 4.2
- (DA)1.2.1 For compliance with the International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk and the Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk the examination of current certificates and other records should consist of:
- (DA) .1 checking the validity, as appropriate, of the Cargo Ship Safety Equipment Certificate, the Cargo Ship Safety Radio Certificate and the Cargo Ship Safety Construction Certificate or the Cargo Ship Safety Certificate;
  - (DA) .2 checking the validity of the Safety Management Certificate (SMC) and that a copy of the Document of Compliance (DOC) is on board;
  - (DA) .3 checking the validity of the International Load Line Certificate or International Load Line Exemption Certificate;

- (DA) .4 checking the validity of the International Oil Pollution Prevention Certificate;
- (DA) .5 checking the certificates of class, if the ship is classed with a classification society;
- (DA) .6 checking, when appropriate, the validity of the International Certificate of Fitness for the Carriage of Dangerous Chemicals in Bulk or the Certificate of Fitness for the Carriage of Dangerous Chemicals in Bulk;
- (DA) .7 checking that the ship's complement complies with the Minimum Safe Manning Document (SOLAS 74/88, reg.V/13(b));
- (DA) .8 checking that the master, officers and ratings are certificated as required by the STCW Convention;
- (DA) .9 checking whether any new equipment has been fitted and, if so, confirm that it has been approved before installation and that any changes are reflected in the appropriate certificate;
- (DA) .10 confirming that the loading and stability information booklet, containing details of typical service and ballast conditions, provisions for evaluating other conditions of loading, a summary of the ship's survival capabilities and sufficient information to ensure that the ship is loaded and operated in a safe and seaworthy manner is available on board (IBC Code 83/90/00, ch.2) (No BCH Code 85/90/00 reference);
- (DA) .11 confirming that damage survival capability information is supplied on the basis of loading information for all anticipated conditions of loading and variations in draught and trim (IBC Code 83/90/00, ch.2) (No BCH Code 85/90/00 reference);
- (DA) .12 confirming that a table giving the filling ratios for the cargo tanks at various densities has been provided (IBC Code 83/90/00, ch.16) (BCH Code 85/90/00, ch.III G);
- (DA) .13 confirming that a copy of the International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk or the Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk, or the equivalent national regulations, has been provided (IBC Code 83/90/00, ch.16) (BCH Code 85/90/00, ch.V);
- (DA) .14 confirming that information relating to the chemical and physical properties of the products to be carried has been provided together with the measures to be taken in an accident have been provided (IBC Code 83/90/00, ch.16) (BCH Code 85/90/00, ch.V);
- (DA) .15 confirming that a manual covering procedures for cargo transfer, tank cleaning, gas freeing, ballasting, etc., has been provided (IBC Code 83/90/00, ch.16) (BCH Code 85/90/00, ch.V);

- (DA) .16 confirming that the Procedures and Arrangements Manual is on board (IBC Code 83/90/00, ch.16A) (BCH Code 85/90/00, ch.VA);
- (DA) .17 confirming that the Shipboard marine pollution emergency plan is on board (MARPOL 73/78 – 02, Annex II reg.16);
- (DA) .18 confirming that the Cargo Record Book is on board and being correctly used (MARPOL 73/78 – 91/97/02, Annex II reg.9);
- (DA)1.2.2 For compliance with the International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk and the Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk the annual survey of the structure, equipment, fittings, arrangements and materials should consist of:
- (DA) .1 confirming that wheelhouse doors and windows, sidescuttles and windows in superstructure and deckhouse ends facing the cargo area are in a satisfactory condition (IBC Code 83/90/00, ch.3) (BCH Code 85/90/00, ch.IIC);
- (DA) .2 confirming that potential sources of ignition in or near the cargo pump room are eliminated, such as loose gear, combustible materials, etc., that there are no signs of undue leakage and that access ladders are in a satisfactory condition (IBC Code 83/90/00, ch.3) (BCH Code 85/90/00, ch.IIC);
- (DA) .3 confirming that removable pipe lengths or other approved equipment necessary for cargo separation are available in the pump room and are in a satisfactory condition (IBC Code 83/90/00, ch.3) (BCH Code 85/90/00, ch.IIC);
- (DA) .4 examining all pump room bulkheads for signs of cargo leakage or fractures and, in particular, the sealing arrangements of all penetrations of pump room bulkheads (IBC Code 83/90/00, ch.3) (BCH Code 85/90/00, ch.IIC);
- (DA) .5 confirming that the remote operation of the cargo pump bilge system is satisfactory (IBC Code 83/90/00, ch.3) (BCH Code 85/90, ch.IIC);
- (DA) .6 examining the bilge and ballast arrangements and confirming that pumps and pipelines are identified (IBC Code 83/90/00, ch.3) (No BCH Code 85/90/00 reference);
- (DA) .7 confirming, when applicable, that the bow or stern loading and unloading arrangements are in order and testing the means of communication and the remote shut down for the cargo pumps (IBC Code 83/90/00, ch.3) (No BCH Code 85/90/00 reference);
- (DA) .8 examining the cargo transfer arrangements and confirming that any hoses are suitable for their intended purpose and, where appropriate, type-approved or marked with date of testing (IBC Code 83/90/00, ch.5) (BCH Code 85/90/00, ch.IID);

- (DA) .9 examining, when applicable, the cargo heating or cooling systems, including any sampling arrangements, and confirming that the means for measuring the temperature and associated alarms are operating satisfactorily (IBC Code 83/90/00, ch.7) (BCH Code 85/90/00, ch.IIF);
- (DA) .10 examining, as far as practicable, the cargo tank vent system, including the pressure/vacuum valves and secondary means to prevent over- or under pressure and devices to prevent the passage of flame (IBC Code 83/90/00 MSC 102(73), MEPC.79(43), ch.8) (BCH Code 85/90/00 and MEPC 80(43), ch.IIE);
- (DA) .11 examining the gauging devices, high-level alarms and valves associated with overflow control (IBC Code 83/90/00, ch.8) (BCH Code 85/90/00, ch.IIE);
- (DA) .12 confirming that arrangements for sufficient gas to be carried or generated to compensate for normal losses and that the means provided for monitoring ullage spaces are satisfactory (IBC Code 83/90/00, ch.9) (BCH Code 85/90/00, ch.IIH);
- (DA) .13 confirming that arrangements are made for sufficient medium to be carried where drying agents are used on air inlets to cargo tanks (IBC Code 83/90/00, ch.9) (BCH Code 85/90/00, ch.IIH);
- (DA) .14 confirming that all electrical equipment in dangerous zones is suitable for such locations, is in satisfactory condition and has been properly maintained (IBC Code 83/90/00, ch.10) (BCH Code 85/90/00, ch.IIB);
- (DA) .15 examining the fixed fire-fighting system for the cargo pump room and the deck foam system for the cargo area and confirming that their means of operation are clearly marked (IBC Code 83/90/00, ch.11) (BCH Code 85/90/00, ch.IIE);
- (DA) .16 confirming that the condition of the portable fire extinguishing equipment for the cargoes to be carried in the cargo area is satisfactory (IBC Code 83/90/00, ch.11) (BCH Code 85/90/00, ch.IIE);
- (DA) .17 examining, as far as practicable, and confirming the satisfactory operation of, the arrangements for the ventilation of spaces normally entered during cargo handling operations and other spaces in the cargo area (IBC Code 83/90/00, ch.12) (BCH Code 85/90/00, ch.IIA);
- (DA) .18 confirming, as far as practicable, that the intrinsically safe systems and circuits used for measurement, monitoring, control and communication purposes in all hazardous locations are being properly maintained (IBC Code 83/90/00, ch.13) (BCH Code 85/90/00, ch.IIC);
- (DA) .19 examining the equipment for personnel protection (IBC Code 83/90/00, ch.14) (BCH Code 85/90/00, ch.IIF) and in particular that:

- (DA) .19.1 the protective clothing for crew engaged in loading and discharging operations and its stowage is in a satisfactory condition;
  - (DA) .19.2 the required safety equipment and associated breathing apparatus and associated air supplies and, when appropriate, emergency-escape respiratory and eye protection are in a satisfactory condition and are properly stowed;
  - (DA) .19.3 medical first-aid equipment, including stretchers and oxygen resuscitation equipment are in a satisfactory condition:
  - (DA) .19.4 arrangements have been made for the antidotes for the cargoes actually carried to be on board;
  - (DA) .19.5 decontamination arrangements and eyewashes are operational;
  - (DA) .19.6 the required gas detection instruments are on board and that arrangements have been made for the supply of the appropriate vapour detection tubes;
  - (DA) .19.7 the arrangements for the stowage of cargo samples are satisfactory;
  - (DA) .20 the provisions of (NA) 2.2.2 in Annex 3.
- (DA)1.2.3 For compliance with the International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk and the Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk the completion of the annual survey should consist of:
- (DA) .1 after a satisfactory survey the International Certificate of Fitness for the Carriage of Dangerous Chemicals in Bulk or the Certificate of Fitness for the Carriage of Dangerous Chemicals in Bulk should be endorsed;
  - (DA) .2 if a survey shows that the condition of a ship or its equipment is unsatisfactory - see part “General” section 4.8.
- (DIn)1.3 **Intermediate surveys** - see part “General” section 4.3
- (DIn)1.3.1 For compliance with the International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk and the Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk the examination of current certificates and other records should consist of:
- (DIn) .1 the provisions of (DA) 1.2.1.
- (DIn)1.3.2 For compliance with the International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk and the Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk the intermediate survey of the structure, equipment, fittings, arrangements and materials should consist of:
- (DIn) .1 the provisions of (DA) 1.2.2;

- (DIn) .2 examination of vent line drainage arrangements (IBC Code 83/90/00, ch.8) (BCH Code 85/90/00, ch.IIE);
- (DIn) .3 confirmation, where applicable, that pipelines and independent cargo tanks are electrically bonded to the hull (IBC Code 83/90/00, ch.10) (BCH Code 85/90/00, ch.IIIB);
- (DIn) .4 generally examining the electrical equipment and cables in dangerous zones such as cargo pump rooms and areas adjacent to cargo tanks to check for defective equipment, fixtures and wiring. The insulation resistance of the circuits should be tested and in cases where a proper record of testing is maintained, consideration should be given to accepting recent readings (IBC Code 83/90/00, ch.10) (BCH Code 85/90/00, ch.IIIB);
- (DIn) .5 confirmation that spares are provided for cargo area mechanical ventilation fans (IBC Code 83/90/00, ch.12) (BCH Code 85/90/00, ch.IIIA);
- (DIn) .6 the provisions of (NIn) 2.3.2 in Annex 3.

(DIn)1.3.3 For compliance with the International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk and the Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk the completion of the intermediate survey should consist of:

- (DIn) .1 after a satisfactory survey the International Certificate of Fitness for the Carriage of Dangerous Chemicals in Bulk or the Certificate of Fitness for the Carriage of Dangerous Chemicals in Bulk should be endorsed;
- (DIn) .2 if a survey shows that the condition of a ship or its equipment is unsatisfactory - see part "General" section 4.8.

**(DR)1.4 Renewal surveys** - see part "General" section 4.4

(DR)1.4.1 For compliance with the International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk and the Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk the examination of current certificates and other records should consist of:

- (DR) .1 the provisions of (DA) 1.2.1, except the International Certificate of Fitness for the Carriage of Dangerous Chemicals in Bulk or the Certificate of Fitness for the Carriage of Dangerous Chemicals in Bulk.

(DR)1.4.2 For compliance with the International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk and the Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk the renewal survey of the structure, equipment, fittings, arrangements and materials should consist of:

- (DR) .1 the provisions of (DIn) 1.3.3.
- (DR) .2 the provisions of (NR) 2.4.2 in Annex 3.

(DR)1.4.3 For compliance with the International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk and the Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk the completion of the renewal survey should consist of:

(DR) .1 after a satisfactory survey the International Certificate of Fitness for the Carriage of Dangerous Chemicals in Bulk or the Certificate of Fitness for the Carriage of Dangerous Chemicals in Bulk should be issued.

**(G) 2 GUIDELINES FOR SURVEYS FOR THE INTERNATIONAL CERTIFICATE OF FITNESS FOR THE CARRIAGE OF LIQUEFIED GASES IN BULK**

**(GI) 2.1 Initial surveys** - see part "General" section 4.1.

(GI) 2.1.1 For compliance with the International Code for the Construction and Equipment of Ships Carrying Liquefied Gases in Bulk the examination of plans and designs of the structure, equipment, fittings, arrangements and materials should consist of:

(GI) .1 determining the products that it is intended that the ship will be permitted to carry and noting the corresponding minimum special requirements (IGC Code 83/90/00, ch.19);

(GI) .2 examining the plans for the ship type, cargo containment, control of vapour space within the cargo tanks, vapour detection, gauging, personnel protection, filling limits for cargo tanks and other special requirements (IGC Code 83/90/00, chs.2, 4, 6, 13, 14, 15, and 17);

(GI) .3 examining the plans for the freeboard and intact stability, discharges below the bulkhead deck and survival capability (IGC Code 83/90/00, ch.2);

(GI) .4 examining the plans for the ship arrangements (IGC Code 83/90/00, ch.3);

(GI) .5 examining the plans for the process pressure vessels and liquid, vapour and pressure piping systems (IGC Code 83/90/00, chs.5 and 6);

(GI) .6 examining the plans for the cargo pressure/temperature control (IGC Code 83/90/00, ch.7);

(GI) .7 examining the plans for the cargo tank ventilation systems (IGC Code 83/90/00, ch.8);

(GI) .8 examining the plans for the environmental control (IGC Code 83/90/00, ch.9);

(GI) .9 examining the plans for the electrical installations (IGC Code 83/90/00, ch.10);

(GI) .10 examining the plans for the fire protection and fire extinction (IGC Code 83/90/00, ch.11);

- (GI) .11 examining the plans for the mechanical ventilation in the cargo area (IGC Code 83/90/00, ch.12);
- (GI) .12 examining the plans for the instrumentation (gauging, gas detection) (IGC Code 83/90/00, ch.13);
- (GI) .13 examining, when applicable, the plans for the use of cargo as fuel (IGC Code 83/90/00, ch.16);
  
- (GI) 2.1.2 For compliance with the International Code for the Construction and Equipment of Ships Carrying Liquefied Gases in Bulk the survey during construction and after installation of the structure, equipment, fittings, arrangements and materials should consist of:
  - (GI) .1 confirming that the segregation in the cargo area and the arrangement of the accommodation, service and machinery spaces are in accordance with the approved plans (IGC Code 83/90/00, ch.3);
  - (GI) .2 examining the arrangements of the cargo pump rooms and cargo compressor rooms (IGC Code 83/90/00, ch.3);
  - (GI) .3 confirming that the manually operated emergency shutdown system together with the automatic shutdown of the cargo pumps and compressors are satisfactory (IGC Code 83/90/00, ch.3);
  - (GI) .4 examining the arrangement of the cargo control room (IGC Code 83/90/00, ch.3);
  - (GI) .5 examining the accesses to spaces in the cargo area (IGC Code 83/90/00, ch.3);
  - (GI) .6 confirming the arrangements for the air locks (IGC Code 83/90/00, ch.3);
  - (GI) .7 examining the bilge, ballast and oil fuel arrangements (IGC Code 83/90/00, ch.3);
  - (GI) .8 examining, when applicable, the bow or stern loading and unloading arrangements with particular reference to the air inlets and entrances to the accommodation, machinery and service spaces, the electrical equipment, fire-fighting arrangements and means of communication between the cargo control room and the shore location (IGC Code 83/90/00, ch.3);
  - (GI) .9 confirming that the cargo tanks are arranged and installed in accordance with the approved plans, internally examining the cargo tanks, water ballast tanks and other spaces in the cargo area, ensuring that the appropriate non-destructive and pressure testing are carried out (IGC Code 83/90/00, ch.4);
  - (GI) .10 examining the cargo and process piping, including the expansion arrangements, insulation from the hull structure, pressure relief and drainage arrangements and carrying out a leak detection test (IGC Code 83/90/00, ch.5);

- (GI) .11 confirming that the cargo system valving arrangements are in accordance with the approved plans (IGC Code 83/90/00, ch.5);
- (GI) .12 confirming that any liquid and vapour hoses are suitable for their intended purpose and, where appropriate, type-approved or marked with date of testing (IGC Code 83/90/00, ch.5);
- (GI) .13 examining the arrangements for the cargo pressure/temperature control including, when fitted, any refrigeration system and confirming that any associated alarms are satisfactory (IGC Code 83/90/00, ch.7);
- (GI) .14 confirming that the cargo tank vent systems, including, when appropriate, any additional pressure relieving system for liquid level control and vacuum pressure systems, have been installed in accordance with the approved plans (IGC Code 83/90/00, ch.8);
- (GI) .15 examining the arrangements for the environmental control, including the means of storing or generating and drying an inert gas (IGC Code 83/90/00, ch.9);
- (GI) .16 examining the electrical installations with particular reference to the certified safe type equipment fitted in gas-dangerous spaces and zones (IGC Code 83/90/00, ch.10);
- (GI) .17 examining the arrangements for the fire protection and fire extinction (IGC Code 83/90/00, ch.11);
- (GI) .18 examining the fixed fire-fighting system for the cargo pump room and confirming that the installation tests have been satisfactorily completed and that its means of operation is clearly marked (IGC Code 83/90/00, ch.11);
- (GI) .19 examining the fire water main with particular reference to the provision of hydrants and isolation arrangements, checking that the two jets of water reach all areas of the cargo and containment area at the required pressure and testing the remote means of starting one main fire pump (IGC Code 83/90/00, ch.11);
- (GI) .20 examining and testing the water spray system for cooling, fire protection and crew protection and confirming that its means of operation is clearly marked (IGC Code 83/90/00, ch.11);
- (GI) .21 examining the dry chemical powder fire-extinguishing system for the cargo area, seeing that the fixed piping has been properly installed and has been proved clear and confirming that its means of operation is clearly marked (IGC Code 83/90/00, ch.11);
- (GI) .22 examining the carbon dioxide system for the cargo compressor and pump rooms and confirming that the installation tests have been satisfactorily completed and that its means of operation is clearly marked (IGC Code 83/90/00, ch.11);

- (GI) .23 confirming the provision and examining the disposition of the fire fighter's outfits (IGC Code 83/90/00, ch.11);
- (GI) .24 examining, and confirming the satisfactory operation of, the arrangements for the mechanical ventilation of spaces in the cargo area normally entered during cargo handling operations (IGC Code 83/90/00, ch.12) and checking in particular that:
  - (GI) .24.1 it may be controlled from outside the space;
  - (GI) .24.2 warning notices concerning its use have been posted;
  - (GI) .24.3 is fixed and is of the negative pressure type, permitting extraction from either the upper or lower parts of the space or from both the upper and lower parts when appropriate, for cargo compressor and pump rooms and for cargo control rooms when considered to be gas-dangerous spaces;
  - (GI) .24.4 is of the positive pressure type for spaces containing electric motors driving cargo compressors or pumps and other gas-safe spaces within the cargo area, except those containing inert gas generators;
  - (GI) .24.5 exhaust ducts are clear of the ventilation inlets and openings to accommodation spaces, service spaces, control stations and other gas-safe spaces;
  - (GI) .24.6 intakes are arranged to minimize the recycling or hazardous vapours;
  - (GI) .24.7 ducts from gas-dangerous spaces are not led through accommodation, service and machinery spaces and control stations, except when (GI) 2.1.2.30 applies;
  - (GI) .24.8 the electric motors driving ventilation fans are positioned outside the ventilation ducts when the carriage of flammable products is intended and the ventilation fans and the ducts, in way of the fans only, are of non-sparking construction in gas-dangerous spaces;
- (GI) .25 examining, and confirming the satisfactory operation of, the arrangements for the mechanical ventilation of spaces normally entered other than those covered by (GI) 2.1.2.24 (IGC Code 83/90/00, ch.12);
- (GI) .26 examining, and testing as appropriate, the liquid level indicators, overflow control, pressure gauges, high pressure and, when applicable, low pressure alarms, and temperature indicating devices for the cargo tanks (IGC Code 83/90/00, ch.13);
- (GI) .27 examining, and testing as appropriate, the gas detection equipment (IGC Code 83/90/00, ch.13);
- (GI) .28 confirming that two sets of portable gas detection equipment suitable for the cargoes to be carried and a suitable instrument for measuring oxygen levels have been provided (IGC Code 83/90/00, ch.13);

- (GI) .29 checking the provision of equipment for personnel protection (IGC Code 83/90/00, ch.14) and in particular that:
  - (GI) .29.1 two complete sets of safety equipment each permitting personnel to enter and work in a gas-filled space are provided and are properly stowed;
  - (GI) .29.2 the requisite supply of compressed air is provided and examining, when applicable, the arrangements for any special air compressor and low-pressure air line system;
  - (GI) .29.3 medical first-aid equipment, including stretchers and oxygen resuscitation equipment and antidotes, when available, for the products to be carried are provided;
  - (GI) .29.4 respiratory and eye protection suitable for emergency escape purposes are provided;
  - (GI) .29.5 decontamination arrangements and eyewashes are operational;
  - (GI) .29.6 when applicable, personnel are protected against the effects of a major cargo release by a special suitably designed and equipped space within the accommodation area;
  - (GI) .29.7 when applicable, the cargo control room is of the gas-safe type;
  - (GI) .30 examining, when applicable, the arrangements for the use of cargo as fuel and testing that the gas supply to the machinery space is cut off should the exhaust ventilation not be functioning correctly and that the master gas fuel valve may be remotely closed from within the machinery space (IGC Code 83/90/00, ch.16).
- (GI) 2.1.3 For compliance with the International Code for the Construction and Equipment of Ships Carrying Liquefied Gases in Bulk the check that all the required documentation has been placed on board the ship should consist of:
  - (GI) .1 confirming that a loading and stability information booklet, containing details of typical service and ballast conditions, provisions for evaluating other conditions of loading, a summary of the ship's survival capabilities and sufficient information to ensure that the ship is loaded and operated in a safe and seaworthy manner is available on board (IGC Code 83/90/00, ch.2);
  - (GI) .2 confirming that damage survival capability information is supplied on the basis of loading information for all anticipated conditions of loading and variations in draught and trim (IGC Code 83/90/00, ch.2);
  - (GI) .3 confirming that necessary information for the safe carriage of the products to be carried has been provided (IGC Code 83/90/00, ch.18);

- (GI) .4 confirming that a copy of the International Code for the Construction and Equipment of Ships Carrying Liquefied Gases in Bulk, or the equivalent national regulations, has been provided (IGC Code 83/90/00, ch.18).
- (GI) 2.1.4 For compliance with the International Code for the Construction and Equipment of Ships Carrying Liquefied Gases in Bulk the completion of the initial survey should consist of:
- (GI) .1 after a satisfactory survey the International Certificate of Fitness for the Carriage of Liquefied Gases in Bulk should be issued.
- (GA)2.2 **Annual surveys** - see part "General" section 4.2.
- (GA)2.2.1 For compliance with the International Code for the Construction and Equipment of Ships Carrying Liquefied Gases in Bulk the examination of current certificates and other records should consist of:
- (GA) .1 checking the validity, as appropriate, of the Cargo Ship Safety Equipment Certificate, the Cargo Ship Safety Radio Certificate and the Cargo Ship Safety Construction Certificate or the Cargo Ship Safety Certificate;
- (GA) .2 checking the validity of the Safety Management Certificate (SMC) and that a copy of the Document of Compliance (DOC) is on board;
- (GA) .3 checking the validity of the International Load Line Certificate or International Load Line Exemption Certificate;
- (GA) .4 checking the validity of the International Oil Pollution Prevention Certificate;
- (GA) .5 checking the certificates of class, if the ship is classed with a classification society;
- (GA) .6 checking the validity of the International Certificate of Fitness for the Carriage of Liquefied Gases in Bulk;
- (GA) .7 checking that the ship's complement complies with the Minimum Safe Manning Document (SOLAS 74/88 reg.V/13(b));
- (GA) .8 checking that the master, officers and ratings are certificated as required by the STCW Convention;
- (GA) .9 checking whether any new equipment has been fitted and, if so, confirm that it has been approved before installation and that any changes are reflected in the appropriate certificate;
- (GA) .10 confirming that the loading and stability information booklet, containing details of typical service and ballast conditions, provisions for evaluating other conditions of loading, a summary of the ship's survival capabilities and sufficient information to ensure that the ship is loaded and operated in a safe and seaworthy manner is available on board (IGC Code 83/90/00, ch.2);

- (GA) .11 confirming that damage survival capability information is supplied on the basis of loading information for all anticipated conditions of loading and variations in draught and trim (IGC Code 83/90/00, ch.2);
- (GA) .12 confirming that necessary information for the safe carriage of the products to be carried has been provided (IGC Code 83/90/00, ch.18);
- (GA) .13 confirming that a copy of the International Code for the Construction and Equipment of Ships Carrying Liquefied Gases in Bulk, or the equivalent national regulations, has been provided (IGC Code 83/90/00, ch.18).
- (GA)2.2.2 For compliance with the International Code for the Construction and Equipment of Ships Carrying Liquefied Gases in Bulk the annual survey of the structure, equipment, fittings, arrangements and materials should consist of:
- (GA) .1 confirming that any special arrangements to survive conditions of damage are in order (IGC Code 83/90/00, ch.2);
- (GA) .2 confirming that the wheelhouse doors and windows, sidescuttles and windows in superstructure and deckhouse ends in the cargo area are in a satisfactory condition (IGC Code 83/90/00, ch.3);
- (GA) .3 examining the cargo pump rooms and cargo compressor rooms (IGC Code 83/90/00, ch.3);
- (GA) .4 confirming that the manually operated emergency shutdown system together with the automatic shutdown of the cargo pumps and compressors are satisfactory (IGC Code 83/90/00, ch.3);
- (GA) .5 examining the cargo control room (IGC Code 83/90/00, ch.3);
- (GA) .6 examining the gas detection arrangements for cargo control rooms and the measures taken to exclude ignition sources where such spaces are not gas-safe (IGC Code 83/90/00, ch.3);
- (GA) .7 confirming the arrangements for the air locks are being properly maintained (IGC Code 83/90/00, ch.3);
- (GA) .8 examining, as far as practicable, the bilge, ballast and oil fuel arrangements (IGC Code 83/90/00, ch.3);
- (GA) .9 examining, when applicable, the bow or stern loading and unloading arrangements with particular reference to the electrical equipment, fire-fighting arrangements and means of communication between the cargo control room and the shore location (IGC Code 83/90/00, ch.3);
- (GA) .10 confirming that the sealing arrangements at the gas domes are satisfactory (IGC Code 83/90/00, ch.4);
- (GA) .11 confirming that portable or fixed drip trays or deck insulation for cargo leakage is in order (IGC Code 83/90/00, ch.4);

- (GA) .12 examining the cargo and process piping, including the expansion arrangements, insulation from the hull structure, pressure relief and drainage arrangements (IGC Code 83/90/00, ch.5);
- (GA) .13 confirming that the cargo tank and interbarrier space pressure and relief valves, including safety systems and alarms, are satisfactory (IGC Code 83/90/00, ch.5);
- (GA) .14 confirming that any liquid and vapour hoses are suitable for their intended purpose and, where appropriate, type-approved or marked with date of testing (IGC Code 83/90/00, ch.5);
- (GA) .15 examining the arrangements for the cargo pressure/temperature control including, when fitted, any refrigeration system and confirming that any associated alarms are satisfactory (IGC Code 83/90/00, ch.7);
- (GA) .16 examining the cargo, bunker, ballast and vent piping systems, including vent masts and protective screens, as far as practicable (IGC Code 83/90/00, ch.8);
- (GA) .17 confirming that arrangements are made for sufficient inert gas to be carried to compensate for normal losses and that means are provided for monitoring the spaces (IGC Code 83/90/00, ch.9);
- (GA) .18 confirming that any air-drying system and any interbarrier and hold space purging inert gas system are satisfactory (IGC Code 83/90/00, ch.9);
- (GA) .19 confirming that electrical equipment in gas-dangerous spaces and zones is in a satisfactory condition and is being properly maintained (IGC Code 83/90/00, ch.10);
- (GA) .20 examining the arrangements for the fire protection and fire extinction and testing the remote means of starting one main fire pump (IGC Code 83/90/00, ch.11);
- (GA) .21 examining the fixed fire-fighting system for the cargo pump room and confirming that its means of operation is clearly marked (IGC Code 83/90/00, ch.11);
- (GA) .22 examining the water spray system for cooling, fire protection and crew protection and confirming that its means of operation is clearly marked (IGC Code 83/90/00, ch.11);
- (GA) .23 examining the dry chemical powder fire-extinguishing system for the cargo area and confirming that its means of operation is clearly marked (IGC Code 83/90/00, ch.11);
- (GA) .24 examining the fixed installation for the gas-dangerous spaces and confirming its means of operation is clearly marked (IGC Code 83/90/00, ch.11);

- (GA) .25 confirming the provision and examining the condition of the fire fighter's outfits (IGC Code 83/90/00, ch.11);
- (GA) .26 examining, as far as practicable, and confirming the satisfactory operation of, the arrangements for the mechanical ventilation of spaces in the cargo area normally entered during cargo handling operations (IGC Code 83/90/00, ch.12);
- (GA) .27 examining, and confirming the satisfactory operation of, the arrangements for the mechanical ventilation of spaces normally entered other than those covered by (GI) 2.1.2.24 (IGC Code 83/90/00, ch.12);
- (GA) .28 examining, and testing as appropriate and as far as practicable, the liquid level indicators, overflow control, pressure gauges, high pressure and, when applicable, low pressure alarms, and temperature indicating devices for the cargo tanks (IGC Code 83/90/00, ch.13);
- (GA) .29 examining, and testing as appropriate, the gas detection equipment (IGC Code 83/90/00, ch.13);
- (GA) .30 confirming that two sets of portable gas detection equipment suitable for the cargoes to be carried and a suitable instrument for measuring oxygen levels have been provided (IGC Code 83/90/00, ch.13);
- (GA) .31 checking the provision of equipment for personnel protection (IGC Code 83/90/00, ch.14) and in particular that:
  - (GA) .31.1 two complete sets of safety equipment each permitting personnel to enter and work in a gas-filled space are provided and are properly stowed;
  - (GA) .31.2 the requisite supply of compressed air is provided and examining, when applicable, the arrangements for any special air compressor and low-pressure air line system;
  - (GA) .31.3 medical first-aid equipment, including stretchers and oxygen resuscitation equipment and antidotes, when available, for the products to be carried are provided;
  - (GA) .31.4 respiratory and eye protection suitable for emergency escape purposes are provided;
  - (GA) .31.5 decontamination arrangements and eyewashes are operational;
  - (GA) .31.6 examining, when applicable, the arrangements to protect personnel against the effects of a major cargo release by a special suitably designed and equipped space within the accommodation area;
- (GA) .32 examining, when applicable, the arrangements for the use of cargo as fuel and testing, as far as practicable, that the gas supply to the machinery space is cut off should the exhaust ventilation not be functioning correctly and that master

gas fuel valve may be remotely closed from within the machinery space (IGC Code 83/90/00, ch.16).

(GA)2.2.3 For compliance with the International Code for the Construction and Equipment of Ships Carrying Liquefied Gases in Bulk the completion of the annual survey should consist of:

(GA) .1 after a satisfactory survey the International Certificate of Fitness for the Carriage of Liquefied Gases in Bulk should be endorsed;

(GA) .2 if a survey shows that the condition of a ship or its equipment is unsatisfactory - see part "General" section 4.8.

(GIn)2.3 **Intermediate surveys** - see part "General" section 4.3.

(GIn)2.3.1 For compliance with the International Code for the Construction and Equipment of Ships Carrying Liquefied Gases in Bulk the examination of current certificates and other records should consist of:

(GIn) .1 the provisions of (GA) 2.2.1.

(GIn)2.3.2 For compliance with the International Code for the Construction and Equipment of Ships Carrying Liquefied Gases in Bulk the intermediate survey of the structure, equipment, fittings, arrangements and materials should consist of:

(GIn) .1 the provisions of (GA) 2.2.2;

(GIn) .2 confirming, where applicable, that pipelines and independent cargo tanks are electrically bonded to the hull (IGC Code 83/90/00, ch.10);

(GIn) .3 generally examining the electrical equipment and cables in dangerous zones such as cargo pump rooms and areas adjacent to cargo tanks to check for defective equipment, fixtures and wiring. The insulation resistance of the circuits should be tested and in cases where a proper record of testing is maintained consideration should be given to accepting recent readings (IGC Code 83/90/00, ch.10);

(GIn) .4 confirming that spares are provided for cargo area mechanical ventilation fans (IGC Code 83/90/00, ch.12);

(GIn) .5 confirming that the heating arrangements, if any, for steel structures are satisfactory.

(GIn)2.3.3 For compliance with the International Code for the Construction and Equipment of Ships Carrying Liquefied Gases in Bulk the completion of the intermediate survey should consist of:

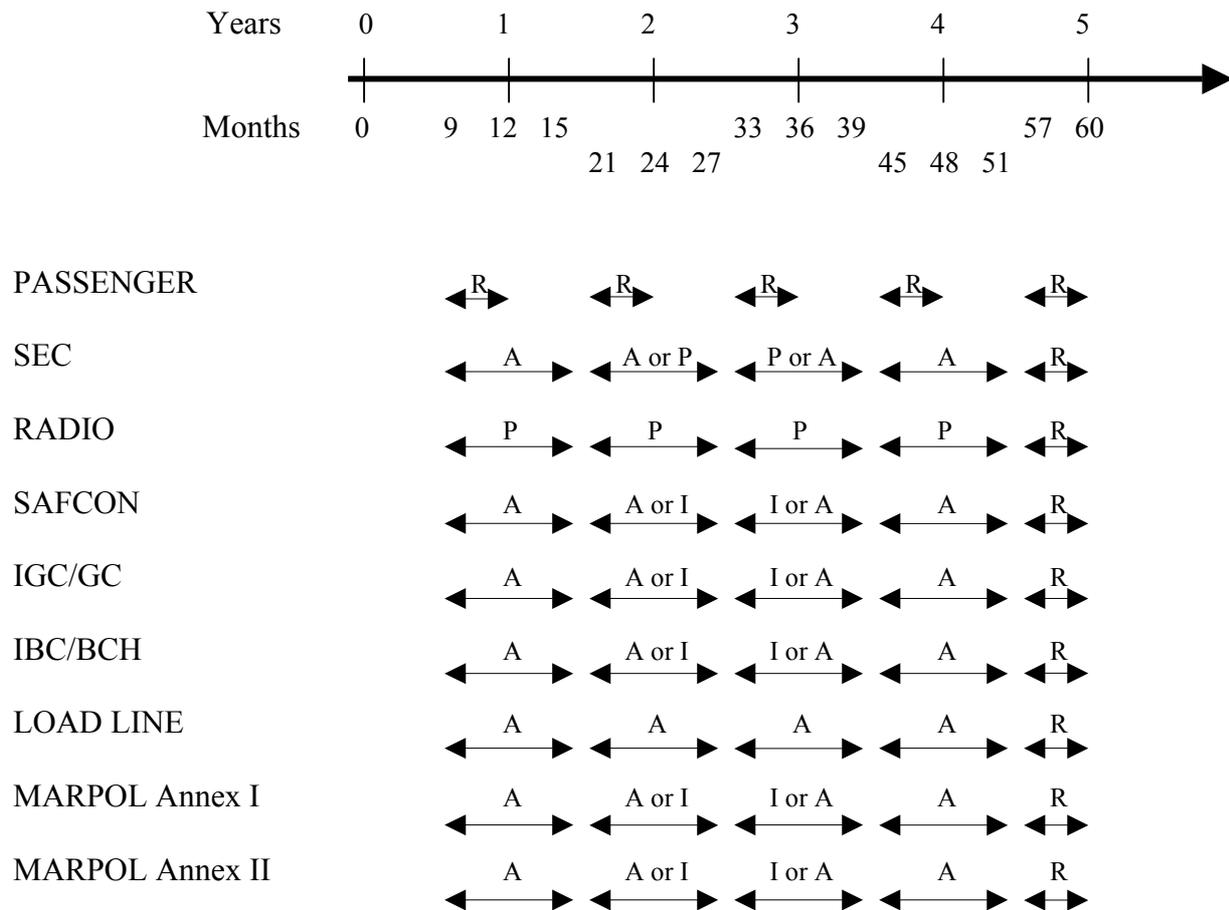
(GIn) .1 after a satisfactory survey the International Certificate of Fitness for the Carriage of Liquefied Gases in Bulk should be endorsed;

- (GIn) .2 if a survey shows that the condition of a ship or its equipment is unsatisfactory - see part “General” section 4.8.
- (GR)2.4 Renewal surveys** - see part “General” section 4.4.
- (GR)2.4.1 For compliance with the International Code for the Construction and Equipment of Ships Carrying Liquefied Gases in Bulk the examination of current certificates and other records should consist of:
- (GR) .1 the provisions of (GA) 2.2.1, except the International Certificate of Fitness for the Carriage of Liquefied Gases in Bulk.
- (GR)2.4.2 For compliance with the International Code for the Construction and Equipment of Ships Carrying Liquefied Gases in Bulk the renewal survey of the structure, equipment, fittings, arrangements and materials should consist of:
- (GR) .1 the provisions of (GIn) 2.3.3;
- (GR) .2 examining the insulation and means of support of the cargo tanks and confirming that the secondary barrier remains effective (IGC Code 83/90/00, ch.4).
- (GR)2.4.3 For compliance with the International Code for the Construction and Equipment of Ships Carrying Liquefied Gases in Bulk the completion of the renewal survey should consist of:
- (GR) .1 after a satisfactory survey the International Certificate of Fitness for the Carriage of Liquefied Gases in Bulk should be issued.

APPENDIX

THE HARMONIZED SYSTEM OF SURVEY AND CERTIFICATION

DIAGRAMMATIC ARRANGEMENT



Code of types of survey:

- R - Renewal
- P - Periodical
- I - Intermediate
- A - Annual

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**ANNEX 20****DRAFT ASSEMBLY RESOLUTION****HUMAN ELEMENT VISION, PRINCIPLES AND GOALS FOR THE ORGANIZATION**

THE ASSEMBLY,

RECALLING Article 15(j) of the Convention on the International Maritime Organization concerning the functions of the Assembly in relation to regulations and guidelines concerning maritime safety and the prevention and control of marine pollution from ships,

RECALLING ALSO resolution A.680(17), by which it invited Governments to encourage those responsible for the management and operation of ships to take appropriate steps to develop, implement and assess safety and pollution prevention management in accordance with the Guidelines on management for the safe operation of ships and for pollution prevention,

RECALLING FURTHER that resolution A.742(18), concerning guidelines on procedures for the control of operational requirements related to the safety of ships and pollution prevention, acknowledges the close relationship between the human element and safety,

BEARING IN MIND resolution A.772(18), concerning fatigue factors in manning and safety, which aims at increasing awareness of the complexity of fatigue and encourages all parties involved in ship operations to take these factors into account when making operational decisions,

ACKNOWLEDGING the need for increased focus on human-related activities in the safe operation of ships, and the need to achieve and maintain high standards of safety, security and environmental protection for the purpose of significantly reducing maritime casualties,

ACKNOWLEDGING ALSO that human element issues have been assigned high priority on the work programme of the Organization because of the prominent role of the human element in maritime casualties,

HAVING CONSIDERED the recommendations made by the Maritime Safety Committee at its seventy-seventh session and by the Marine Environment Protection Committee at its [forty-ninth] session,

1. ADOPTS the human element vision, principles and goals for the Organization, set out in the Annex to the present resolution;

2. INVITES Governments to bring this resolution to the attention of their representatives who attend meetings of the Organization for appropriate action, and to encourage those responsible for the operation and design of ships to take the relevant principles into account when making design and operational decisions;
3. REQUESTS the Maritime Safety Committee and the Marine Environment Protection Committee to consider proposals for new or revised instruments or procedures relating to safety of life at sea, security and protection of the marine environment, taking into account the annexed human element vision, principles and goals;
4. REQUESTS ALSO the Maritime Safety Committee and the Marine Environment Protection Committee to keep the annexed vision, principles and goals under review and take action as appropriate;
5. REVOKES resolution A.850(20).

## ANNEX

### **HUMAN ELEMENT VISION, PRINCIPLES AND GOALS FOR THE ORGANIZATION**

#### **VISION**

To significantly enhance maritime safety, security and the quality of the marine environment by addressing human element issues to improve performance.

#### **PRINCIPLES**

- a) The human element is a complex multi-dimensional issue that affects maritime safety, security and marine environmental protection. It involves the entire spectrum of human activities performed by ships' crews, shore-based management, regulatory bodies, recognized organizations, shipyards, legislators, and other relevant parties, all of whom need to co-operate to address human element issues effectively.
- b) The Organization, when developing regulations, should honour the seafarer by seeking and respecting the opinions of those that do the work at sea.
- c) Effective remedial action following maritime casualties requires a sound understanding of human element involvement in accident causation. This is gained by a thorough investigation and systematic analysis of casualties for contributory factors and the causal chain of events.
- d) In the process of developing regulations, it should be recognized that adequate safeguards must be in place to ensure that a single human or organizational error will not cause an accident through the application of these regulations.
- e) Rules and regulations addressing the seafarers directly should be simple, clear and comprehensive.
- f) Crew endurance, defined as the ability to maintain performance within safety limits, is a function of many complex and interacting variables including individual capabilities, management policies, cultural factors, experience, training, job skills, and work environment.
- g) Dissemination of information through effective communication is essential to sound management and operational decisions.
- h) Consideration of human element matters should aim at decreasing the possibility of human and organizational error as far as possible.

## GOALS

- a) To have in place a structured approach for the proper consideration of human element issues for use in the development of regulations and guidelines by all committees and sub-committees.
- b) To conduct a comprehensive review of selected existing IMO instruments from the human element perspective.
- c) To promote and communicate, through human element principles, a maritime safety culture, security consciousness and heightened marine environment awareness.
- d) To provide a framework to encourage the development of non-regulatory solutions and their assessment based upon human element principles.
- e) To have in place a system to discover and to disseminate to maritime interests studies, research and other relevant information on the human element, including findings from marine and non-marine incident investigations.
- f) To provide material to educate seafarers so as to increase their knowledge and awareness of the impact of human element issues on safe ship operations, to help them do the right thing.
- g) To provide a framework for understanding the very complex system of interrelated human element factors, incorporating operational objectives, personal endurance concerns, organizational policies and practices, and environmental factors, to allow for the identification and management of risk factors in a holistic and systematic manner.

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**ANNEX 21****DRAFT ASSEMBLY RESOLUTION****WIDER ACCEPTANCE OF THE PROTOCOL OF 1988 RELATING TO THE  
INTERNATIONAL CONVENTION ON LOAD LINES, 1966**

THE ASSEMBLY,

RECALLING Article 15(j) of the Convention on the International Maritime Organization concerning the functions of the Assembly in relation to regulations and guidelines concerning maritime safety,

RECALLING ALSO that the International Conference on Load Lines adopted, on 5 April 1966, the International Convention on Load Lines, 1966 (hereinafter referred to as the "Convention"), which entered into force on 21 July 1968,

RECALLING FURTHER that the International Conference on the Harmonized System of Survey and Certification adopted, on 11 November 1988, the Protocol of 1988 relating to the International Convention on Load Lines, 1966 (hereinafter referred to as the "Protocol"), which entered into force on 3 February 2000,

NOTING that the Maritime Safety Committee, at its seventy-seventh session, adopted amendments to Annex B to the Protocol, which, on condition that it is deemed accepted on 1 July 2004 in accordance with paragraph 2(f)(ii)(bb) of article VI thereof, will enter into force on 1 January 2005 in accordance with paragraph 2(g)(ii) of the same article,

NOTING ALSO that the Committee, at its seventy-sixth session, acknowledged that the amendments would not, upon entry into force, affect the Convention and recognized that, as a consequence and on the basis of the Protocol status at MSC 76, the amendments would only apply to approximately 60% of the world's merchant fleet, i.e. to those ships flying the flags of States Parties to the Protocol,

NOTING WITH CONCERN that such a situation might lead to an undesirable two-tier system where ships would be subjected to different safety regimes depending on whether the flag Administration is a Contracting Government to the Convention or is a Party to the Protocol as well,

BEING CONVINCED that a single and universal regulatory regime relating to load lines would contribute substantially to enhancing maritime safety globally,

URGES all Contracting Governments to the Convention that have not yet become Party to the Protocol to do so at the earliest possible opportunity by applying article IV thereof.

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## ANNEX 22

## WORK PROGRAMMES OF THE SUB-COMMITTEES

## SUB-COMMITTEE ON BULK LIQUIDS AND GASES (BLG)

|     |  | <b>Target completion date/number of sessions needed for completion</b> | <b>Reference</b>  |
|-----|--|--|---|
| 1   | <b>Evaluation of safety and pollution hazards of chemicals and preparation of consequential amendments</b>                               | Continuous   | BLG 1/20, section 3;<br>BLG 8/18, section 6   |
| 2   | Casualty analysis (co-ordinated by FSI)  | Continuous   | MSC 70/23,<br>paragraphs 9.17<br>and 20.4;<br>BLG 8/18, section 13                  |
| H.1 | Environmental and safety aspects of alternative tanker designs under MARPOL 73/78 regulation I/13F                                       |  | BLG 3/18,<br>paragraph 15.7   |
|     | .1 assessment of alternative tanker designs, if any (as necessary)   | Continuous   | BLG 1/20, section 16;<br>BLG 4/18,<br>paragraph 15.3                                |
| H.2 | <b>Requirements for protection of personnel involved in the transport of cargoes containing toxic substances in all types of tankers</b> | 2005   | BLG 1/20, section 12;<br>BLG 8/18, section 9<br>and paragraph<br>15.4.2.1           |
| H.3 | Oil tagging systems  | 2 sessions   | MEPC 45/20,<br>paragraph 17.4;<br>BLG 8/18, section 10<br>and paragraph<br>15.4.3.1 |

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**Notes:** 1 "H" means a high priority item and "L" means a low priority item. However, within the high and low priority groups, items have not been listed in any order of priority.

2 Items printed in bold letters have been selected for the provisional agenda for BLG 9, shown in annex 23.

**Sub-Committee on Bulk Liquids and Gases (BLG) (continued)**

|     |  | <b>Target completion date/number of sessions needed for completion</b> | <b>Reference</b>                                |
|-----|--|--|---|
| H.4 | <b>Revision of the fire protection requirements of the IBC, IGC, BCH and GC Codes</b> (in co-operation with FP as necessary) | 2004   | MSC 74/24, paragraph 18.5; BLG 8/18, section 11 |
| H.5 | <b>Consideration of IACS unified interpretations</b>   | 2004   | MSC 76/23, paragraph 20.3; BLG 8/18, section 14 |

**SUB-COMMITTEE ON DANGEROUS GOODS, SOLID CARGOES AND CONTAINERS (DSC)**

|     |   | <b>Target completion date/number of sessions needed for completion</b> | <b>Reference</b>   |
|-----|---|--|--|
| 1   | <b>Harmonization of the IMDG Code with the UN Recommendations on the Transport of Dangerous Goods</b>                       | Continuous   | MSC 63/23, paragraph 10.6  |
| 2   | <b>Reports on incidents involving dangerous goods or marine pollutants in packaged form on board ships or in port areas</b> | Continuous   | CDG 45/22, section 11 and paragraph 20.2   |
| 3   | <b>Amendments to the BC Code, including evaluation of properties of solid bulk cargoes</b>                                  | Continuous   | BC 34/17, section 3; DSC 2/16, paragraph 16.2.5.1                                |
| 4   | <b>Casualty analysis (co-ordinated by FSI)</b>  | Continuous   | MSC 70/23, paragraphs 9.17 and 20.4  |
| H.1 | <b>Amendments to the IMDG Code* and supplements</b>   | 2003   | DSC 3/15, paragraph 12.6; DSC 7/15, section 12                                   |
| H.2 | <b>Review of Annex III of MARPOL 73/78</b>  | 2003   | DSC 3/15, paragraph 12.6; DSC 6/15, paragraph 12.2; MEPC 48/21, paragraph 18.3.1 |

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2 Items printed in bold letters have been selected for the provisional agenda for DSC 8, shown in annex 23.

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\* As adopted by resolution MSC.122(75).  
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**Sub-Committee on Dangerous Goods, Solid Cargoes and Containers (DSC) (continued)**

|     |  | <b>Target completion date/number of sessions needed for completion</b> | <b>Reference</b>  |
|-----|--|--|---|
| H.3 | <b>Cargo securing manual</b>   | 2003   | DSC 5/13, paragraph 10.5; MSC 73/21, paragraph 18.8; DSC 7/15, section 12   |
| H.4 | <b>Review of the BC Code</b>   | 2004   | DSC 3/15, paragraph 12.7; DSC 7/15, section 12; MSC 76/23, paragraph 20.12  |
| H.5 | <b>Development of a manual on loading and unloading of solid bulk cargoes for terminal representatives</b> | 2003   | MSC 72/23, paragraph 21.17; DSC 7/15, section 9; MSC 76/23, paragraph 20.10 |
| H.6 | <b>Measures to enhance maritime security</b>   | 2004   | MSC 75/24, paragraph 22.9; DSC 7/15, section 11                             |
| H.7 | <b>Guidance on serious structural deficiencies in containers</b>   | 2004   | MSC 75/24, paragraph 22.15; DSC 7/15, section 10                            |
| H.8 | <b>Ship/terminal interface improvement for bulk carriers</b>   | 2003   | MSC 76/23, paragraph 20.12.1  |
| H.9 | <b>Alternate hold loading ban for bulk carriers (co-ordinated by DE)</b>                                   | 2004   | MSC 76/23, paragraph 20.12.2  |

**SUB-COMMITTEE ON FIRE PROTECTION (FP)**

|     |   | <b>Target completion date/number of sessions needed for completion</b> | <b>Reference</b>   |
|-----|---|--|--|
| 1   | <b>Analysis of fire casualty records</b>  | Continuous   | FSI 8/19, section 11;<br>FP 47/16, section 4                       |
| .1  | <b>revision of the fire casualty record</b>   | 2004   | MSC 75/24, paragraph 22.18;<br>FP 47/16, paragraph 4.16            |
| H.1 | <b>Unified interpretations of SOLAS chapter II-2, the FSS Code and related fire test procedures</b> | 2004   | FP 43/18, paragraphs 5.7, 7.25 and 5.3.5.1;<br>FP 47/16, section 3 |
| H.2 | <b>Large passenger ship safety</b>  | 2004   | MSC 74/24, paragraph 21.4;<br>FP 47/16, section 7                  |
| H.3 | <b>Revision of the fishing vessel Safety Code and Voluntary Guidelines</b><br>(co-ordinated by SLF) | 2004   | MSC 74/24, paragraph 21.5;<br>FP 47/16, section 6                  |
| H.4 | <b>Performance testing and approval standards for fire safety systems</b>                           | 2005   | MSC 74/24, paragraph 21.12;<br>FP 47/16, section 8                 |
| H.5 | <b>Revision of the gas concentration limit on sulphur dioxide for floor coverings</b>               | 2004   | MSC 75/24, paragraph 22.21;<br>FP 47/16, section 10                |

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**Notes:** 1 "H" means a high priority item and "L" means a low priority item. However, within the high and low priority groups, items have not been listed in any order of priority.

2 Items printed in bold letters have been selected for the provisional agenda for FP 48, shown in annex 23.

**Sub-Committee on Fire Protection (FP) (continued)**

|      |  | <b>Target completion date/number of sessions needed for completion</b> | <b>Reference</b>  |
|------|--|--|---|
| H.6  | <b>Review of the OSV Guidelines</b><br>(co-ordinated by DE)  | 2006   | MSC 75/24,<br>paragraph 22.4;<br>FP 47/16,<br>paragraph 13.3.3.1              |
| H.7  | <b>Use of directional sound for passenger evacuation</b>   | 2004   | MSC 75/24,<br>paragraph 22.19;<br>FP 47/16, section 11                        |
| H.8  | <b>Review of the 2000 HSC Code and amendments to the DSC Code and the 1994 HSC Code</b>                            | 2005   | MSC 76/23,<br>paragraphs 8.19<br>and 20.4;<br>FP 47/16,<br>paragraph 13.3.3.2 |
| H.9  | <b>Consideration of IACS unified interpretations</b>   | 2004   | MSC 76/23,<br>paragraph 20.3;<br>FP 47/16, section 12                         |
| H.10 | <b>Amendments to resolution A.754(18) relating to performance criteria for fire doors</b>                          | 2005   | MSC 77/26,<br>paragraph 23.12   |
| H.11 | <b>Amendments to the procedure for the preparation of specimens of sealants and mastics (resolution A.653(16))</b> | 2005   | MSC 77/26,<br>paragraph 23.13   |
| L.1  | <b>Recommendation on evacuation analysis for new and existing passenger ships</b>                                  | 2005   | MSC 73/21,<br>paragraph 4.16;<br>FP 47/16,<br>paragraph 13.3.3.3              |
| L.2  | Smoke control and ventilation  | 2 sessions   | FP 39/19, section 9;<br>FP 46/16, section 4                                   |

**SUB-COMMITTEE ON FLAG STATE IMPLEMENTATION (FSI)**

|   |   | <b>Target completion date/number of sessions needed for completion</b> | <b>Reference</b>  |
|---|---|--|---|
| 1 | <b>Mandatory reports under MARPOL 73/78</b>   | Continuous   | MSC 70/23, paragraph 20.12.1; FSI 11/23, section 3                    |
| 2 | <b>Casualty statistics and investigations</b>   | Continuous   | MSC 68/23, paragraphs 7.16 to 7.24; FSI 11/23, section 4              |
| 3 | <b>Regional co-operation on port State control</b>  | Continuous   | FSI 11/23, section 5  |
| 4 | <b>Reporting procedures on port State control detentions and analysis and evaluation of reports</b> | Continuous   | MSC 71/23, paragraph 20.16; FSI 11/23, section 6                      |
| 5 | <b>Responsibilities of Governments and measures to encourage flag State compliance</b>              | Continuous   | MSC 68/23, paragraphs 7.2 to 7.8; FSI 11/23, section 7                |
| 6 | <b>Comprehensive analysis of difficulties encountered in the implementation of IMO instruments</b>  | Continuous   | MSC 69/22, paragraph 20.28; FSI 8/19, section 4; FSI 11/23, section 8 |
| 7 | <b>Review of the Survey Guidelines under the HSSC (resolution A.746(18))</b>                        | Continuous   | MSC 72/23, paragraph 21.27; FSI 11/23, paragraphs 9.17 and 20.5.3     |

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2 Items printed in bold letters have been selected for the provisional agenda for FSI 12, shown in annex 23.

**Sub-Committee on Flag State Implementation (FSI) (continued)**

|   | <b>Target completion date/number of sessions needed for completion</b> | <b>Reference</b>  |
|---|--|---|
| H.1 <b>PSC on seafarers' working hours</b>  | 2005   | MSC 70/23, paragraph 20.12.3; FSI 7/14, paragraphs 7.11 to 7.13; MSC 71/23, paragraph 13.13; FSI 11/23, paragraph 20.5.2    |
| H.2 <b>Illegal, unregulated and unreported (IUU) fishing and implementation of resolution A.925(22)</b> | 2005   | MSC 72/23, paragraph 21.28; FSI 10/17, section 11; MSC 75/24, paragraphs 13.11 and 22.25.3; FSI 11/23, section 11           |
| H.3 <b>Development of provisions on transfer of class</b>   | 2004   | MSC 74/24, paragraph 2.13.15.2; FSI 10/17, paragraphs 14.2 and 14.10.4.1; MSC 75/24, paragraph 22.24; FSI 11/23, section 14 |
| H.4 <b>Consideration of IACS unified interpretations</b>  | 2004   | MSC 76/23, paragraph 20.3; FSI 11/23, section 17  |
| H.5 <b>PSC officer training for bulk carriers</b>   | 2004   | MSC 76/23, paragraph 20.18; FSI 11/23, section 18   |
| H.6 <b>Measures to enhance maritime security</b>  | 2004   | MSC 76/23, paragraph 20.60.2; FSI 11/23, section 19   |

**Sub-Committee on Flag State Implementation (FSI) (continued)**

|  | <b>Target completion date/number of sessions needed for completion</b> | <b>Reference</b>  |
|--|--|---|
| H.7 <b>Unique IDs for companies and registered owners</b>  | 2005   | FSI 11/23, paragraphs 22.6 and 20.5.4.1; MSC 77/26, paragraph 23.17.1 |
| H.8 <b>Marking the ship's plans, manuals and other documents with the IMO ship identification number</b> | 2005   | FSI 11/23, paragraphs 22.8 and 20.5.4.2; MSC 77/26, paragraph 23.17.2 |
| H.9 <b>Review of reporting requirements* for reception facilities</b>                                    | 2005   | FSI 11/23, paragraph 20.5.4.3   |

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\* Subject to approval by the MEPC.  
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**SUB-COMMITTEE ON RADIOCOMMUNICATIONS AND SEARCH AND RESCUE (COMSAR)**

|   |   | <b>Target completion date/number of sessions needed for completion</b> | <b>Reference</b>                         |
|---|---|--|--|
| 1 | <b>Global Maritime Distress and Safety System (GMDSS)</b>   |  | COMSAR 7/23, section 3                   |
|   | .1 <b>matters relating to the GMDSS Master Plan</b>   | Continuous   | COMSAR 7/23, paragraphs 3.1 to 3.4       |
|   | .2 exemptions from radio requirements   | Continuous   | COMSAR 4/14, paragraphs 3.38 to 3.41     |
| 2 | Promulgation of maritime safety information (MSI) (in co-operation with ITU, IHO, WMO and IMSO)   |  |  |
|   | .1 <b>operational and technical co-ordination provisions of maritime safety information (MSI) services, including review of the related documents</b> | Continuous   | COMSAR 7/23, paragraphs 3.5 to 3.13      |
| 3 | <b>ITU World Radiocommunication Conference matters</b>  | Continuous   | COMSAR 7/23, paragraphs 4.2 to 4.5       |
| 4 | <b>Radiocommunication ITU-R Study Group 8 matters</b>   | Continuous   | COMSAR 7/23, paragraphs 4.1, 4.6 and 4.7 |
| 5 | <b>Satellite services (Inmarsat and COSPAS-SARSAT)</b>  | Continuous   | COMSAR 7/23, section 5                   |

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  - 2 Items printed in bold letters have been selected for the provisional agenda for COMSAR 8, shown in annex 23.

**Sub-Committee on Radiocommunications and Search and Rescue (COMSAR)**  
(continued)

|          |   | <b>Target completion date/number of sessions needed for completion</b> | <b>Reference</b>   |
|----------|---|--|--|
| <b>6</b> | <b>Matters concerning search and rescue, including those related to the 1979 SAR Conference and the implementation of the GMDSS</b> |  |  |
| .1       | <b>harmonization of aeronautical and maritime search and rescue procedures, including SAR training matters</b>                      | 2004   | COMSAR 7/23, paragraphs 7.1 to 7.16                              |
| .2       | <b>plan for the provision of maritime SAR services, including procedures for routeing distress information in the GMDSS</b>         | Continuous   | COMSAR 7/23, paragraphs 7.17 to 7.25                             |
| .3       | <b>revision of the IAMSAR Manual</b>  | Continuous   | MSC 71/23, paragraph 20.2; COMSAR 7/23, section 12               |
| .4       | <b>medical assistance in SAR services</b>   | 2004   | MSC 75/24, paragraph 22.29; COMSAR 7/22; paragraphs 7.26 to 7.33 |
| <b>7</b> | <b>Casualty analysis (co-ordinated by FSI)</b>  | Continuous   | MSC 70/23, paragraphs 9.17 and 20.4                              |
| H.1      | Amendments to SOLAS chapter IV pursuant to the criteria set out in resolution A.888(21)   | 3 sessions   | MSC 72/23, paragraph 21.33.1.2                                   |
| H.2      | <b>Developments in maritime radiocommunication systems and technology</b>   | 2005   | MSC 74/24; paragraph 21.25.1; COMSAR 7/22, section 11            |

**Sub-Committee on Radiocommunications and Search and Rescue (COMSAR)**  
(continued)

|   | <b>Target completion date/number of sessions needed for completion</b> | <b>Reference</b>   |
|---|--|--|
| H.3 <b>Large passenger ship safety</b>  | 2004   | MSC 74/24, paragraph 21.4; COMSAR 7/23, section 10                           |
| H.4 <b>Emergency radiocommunications, including false alerts and interference</b>                                 | 2006   | COMSAR 7/23, section 6   |
| H.5 Review of the OSV Guidelines (co-ordinated by DE)   | 3 sessions   | MSC 75/24, paragraph 22.4  |
| H.6 <b>Review of the 2000 HSC Code and amendments to the DSC Code and the 1994 HSC Code</b> (co-ordinated by DE)  | 2005   | MSC 75/24, paragraph 22.8; MSC 76/23, paragraphs 8.19 and 20.4               |
| H.7 <b>Review of the SOLAS and SAR Convention provisions regarding the treatment of persons rescued at sea</b>    | 2004   | MSC 75/24, paragraphs 11.53 and 22.30.1; COMSAR 7/23, paragraphs 8.1 to 8.33 |
| H.8 <b>Measures to enhance maritime security</b>  | 2004   | MSC 75/24, paragraph 22.9; COMSAR 7/23, section 16                           |
| L.1 <b>Revision of the forms of nuclear ship safety certificates</b> (co-ordinated by DE)                         | 2005   | MSC 75/24, paragraph 22.6; COMSAR 7/23, paragraph 20.6.4.1                   |
| L.2 <b>Review of the FAL and SALVAGE Convention provisions to address the treatment of persons rescued at sea</b> | 2004   | MSC 75/24, paragraphs 11.53 and 22.30.2; COMSAR 7/23, section 19             |

**Sub-Committee on Radiocommunications and Search and Rescue (COMSAR)**  
(continued)

|     |   | <b>Target<br/>completion<br/>date/number<br/>of sessions<br/>needed for<br/>completion</b> | <b>Reference</b>              |
|-----|---|--|-------------------------------|
| L.3 | Recommendations on high-risk oceanic crossings by adventure craft (co-ordinated by NAV) | 1 session  | MSC 76/23,<br>paragraph 20.24 |

**SUB-COMMITTEE ON SAFETY OF NAVIGATION (NAV)**

|     |   | <b>Target completion date/number of sessions needed for completion</b> | <b>Reference</b>  |
|-----|---|--|---|
| 1   | <b>Routeing of ships, ship reporting and related matters</b>                                | Continuous   | MSC 72/23, paragraphs 10.69 to 10.71, 20.41 and 20.42; NAV 48/19, section 3 |
| 2   | <b>Casualty analysis (co-ordinated by FSI)</b>  | Continuous   | MSC 70/23, paragraphs 9.17 and 20.4; NAV 48/19, section 15                  |
| H.1 | <b>World-wide radionavigation system (WWRNS)</b>  | 2005   | MSC 75/24, paragraph 22.37  |
|     | .1 new developments in the field of GNSS, especially Galileo                                | 2005   | NAV 48/19, paragraph 16.3.1   |
|     | .2 review and amendment of IMO policy for GNSS (resolution A.915(22))                       | 2005   | NAV 48/19, paragraph 16.3.2   |
|     | .3 recognition of radionavigation systems as components of the WWRNS (resolution A.815(19)) | 2005   | NAV 48/19, paragraph 16.3.3   |
| H.2 | <b>Feasibility study on carriage of VDR on existing cargo ships</b>                         | 2003   | MSC 73/21, paragraphs 11.31 and 18.22; NAV 48/19, section 8                 |

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  - 2 Items printed in bold letters have been selected for the provisional agenda for NAV 49, shown in annex 23.

**Sub-Committee on Safety of Navigation (NAV) (continued)**

|   | <b>Target completion date/number of sessions needed for completion</b> | <b>Reference</b>  |
|---|--|---|
| H.3 <b>Large passenger ship safety: effective voyage planning for large passenger ships</b>           | 2003   | MSC 73/21, paragraph 18.23; MSC 74/24, paragraph 21.4; NAV 48/19, section 12          |
| H.4 <b>Places of refuge</b> (in co-operation with COMSAR and MEPC)                                    | 2003   | MSC 74/24, paragraph 21.31; NAV 48/19, section 5                                      |
| H.5 <b>Revision of performance standards for radar reflectors</b>                                     | 2003   | MSC 74/24, paragraph 21.29; NAV 48/19, section 9                                      |
| H.6 <b>Anchoring, mooring and towing equipment</b> (co-ordinated by DE)                               | 2003   | MSC 74/24, paragraph 21.30; NAV 48/19, section 7                                      |
| H.7 <b>Review of performance standards for radar equipment</b>  | 2004   | MSC 74/24, paragraphs 9.16 to 9.17; MSC 75/24, paragraph 22.34; NAV 48/19, section 10 |
| H.8 <b>Review of the OSV Guidelines</b> (co-ordinated by DE)  | 3 sessions   | MSC 75/24, paragraph 22.4   |
| H.9 <b>Requirements for the display and use of AIS information on shipborne navigational displays</b> | 2004   | MSC 75/24, paragraph 22.35; NAV 48/19, paragraphs 18.29 to 18.33                      |

**Sub-Committee on Safety of Navigation (NAV) (continued)**

|      |   | <b>Target completion date/number of sessions needed for completion</b> | <b>Reference</b>   |
|------|---|--|--|
| H.10 | Review of the 2000 HSC Code and amendments to the DSC Code and the 1994 HSC Code (co-ordinated by DE) | 2 sessions*  | MSC 75/24, paragraphs 12.22 and 22.8; NAV 48/19, paragraphs 18.25 and 18.26; MSC 76/23, paragraphs 8.19 and 20.4 |
| H.11 | <b>Measures to enhance maritime security</b>  | 2004   | MSC 75/24, paragraph 22.9; NAV 48/19, paragraphs 18.34 to 18.55  |
| H.12 | <b>ITU matters, including Radio-communication ITU-R Study Group 8 matters</b>                         | 2003   | MSC 69/22, paragraphs 5.69 and 5.70; NAV 48/19, section 11   |
| H.13 | Guidance on early abandonment of bulk carriers <b>(in co-operation with DE)</b>                       | 2003   | MSC 76/23, paragraph 20.31   |
| H.14 | <b>Revision of the fishing vessel Safety Code and Voluntary Guidelines (co-ordinated by SLF)</b>      | 2004**   | MSC 77/26, paragraph 23.27   |
| L.1  | Revision of the forms of nuclear ship safety certificates (co-ordinated by DE)                        | 2 sessions   | MSC 75/24, paragraph 22.6  |
| L.2  | Recommendations on high-risk oceanic crossings by adventure craft (in co-operation with COMSAR)       | 1 session  | MSC 76/23, paragraph 20.30   |

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\* The work on the item should commence in 2004 as part of the next scheduled review of the 2000 HSC Code.

\*\* The item will be included in the provisional agenda for NAV 50.  
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**SUB-COMMITTEE ON SHIP DESIGN AND EQUIPMENT (DE)**

|     |   | <b>Target completion date/number of sessions needed for completion</b> | <b>Reference</b>   |
|-----|---|--|--|
| 1   | Casualty analysis (co-ordinated by FSI)   | Continuous   | MSC 70/23, paragraphs 9.17 and 20.4  |
| H.1 | <b>Amendments to resolution A.744(18)</b>   | 2004   | DE 45/27, paragraphs 7.18 and 7.19;<br>DE 46/32, section 5                               |
| H.2 | Safety aspects of water ballast management  | 2 sessions   | MSC 71/23, paragraph 9.11;<br>DE 46/32, section 6  |
| H.3 | <b>Large passenger ship safety</b>  | 2004   | MSC 74/24, paragraph 21.4;<br>DE 46/32, section 7  |
| H.4 | <b>Measures to prevent accidents with lifeboats</b> (in co-operation with FSI, NAV and STW) | 2004   | MSC 74/24, paragraph 21.34;<br>DE 46/32, section 9                                       |
| H.5 | <b>Protection of fuel tanks</b> (in co-operation with BLG and SLF as necessary)             | 2005   | DE 44/19, paragraph 2.7.2;<br>MEPC 46/23, paragraph 20.18;<br>MSC 74/24, paragraph 21.36 |
| H.6 | <b>Review of fast rescue boat and means of rescue requirements</b>                          | 2004   | MSC 74/24, paragraph 21.39;<br>DE 46/32, section 11                                      |

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2 Items printed in bold letters have been selected for the provisional agenda for DE 47, shown in annex 23.

**Sub-Committee on Ship Design and Equipment (DE) (continued)**

|      |   | <b>Target completion date/number of sessions needed for completion</b> | <b>Reference</b>  |
|------|---|--|---|
| H.7  | <b>Anchoring, mooring and towing equipment</b>  | 2004   | MSC 74/24, paragraph 21.42; DE 46/32, section 12                |
| H.8  | <b>Performance testing and approval standards for SOLAS personal life-saving appliances</b>   | 2005   | MSC 74/24, paragraph 21.46; DE 46/32, section 14                |
| H.9  | Review of the OSV Guidelines (in co-operation with FP, COMSAR, NAV and SLF)   | 3 sessions   | MSC 75/24, paragraph 22.4                                       |
| H.10 | <b>Review of the 2000 HSC Code and amendments to the DSC Code and the 1994 HSC Code</b> (in co-operation with FP, COMSAR, NAV and SLF)                | 2005   | MSC 75/24, paragraph 12.22; MSC 76/23, paragraphs 8.19 and 20.4 |
| H.11 | <b>Protection of pump-rooms of tankers and access to shore-based computer programs for salvage operations</b> (in co-operation with BLG as necessary) | 2004   | MEPC 47/20, paragraph 18.15; MEPC 48/21, paragraph 18.3.2       |
| H.12 | <b>Fitting of water ingress alarms in new, single hold cargo ships</b> (in co-operation with DSC as necessary)  | 2004   | MSC 76/23, paragraph 20.36                                      |
| H.13 | <b>Consideration of IACS unified interpretations</b>  | 2004   | MSC 76/23, paragraph 20.3; DE 46/32, section 16                 |
| H.14 | <b>Alternate hold loading ban for bulk carriers</b> (in co-operation with DSC)  | 2004   | MSC 76/23, paragraph 20.39.6; DE 46/32, section 23              |

**Sub-Committee on Ship Design and Equipment (DE) (continued)**

|      |  | <b>Target completion date/number of sessions needed for completion</b> | <b>Reference</b>  |
|------|--|--|---|
| H.15 | <b>Double-side skin construction of bulk carriers</b>                                  | 2004   | MSC 76/23, paragraph 20.39.7; DE 46/32, section 24            |
| H.16 | <b>Application of structural standards in SOLAS chapter XII</b>                        | 2004   | MSC 76/23, paragraph 20.39.7; DE 46/32, section 25            |
| H.17 | <b>Improved loading/stability information for bulk carriers (co-ordinated by SLF)</b>  | 2004   | MSC 76/23, paragraphs 20.41.1 and 20.48; DE 46/32, section 26 |
| H.18 | <b>Performance standards for protective coatings</b>                                   | 2004   | MSC 76/23, paragraphs 20.41.2 and 20.48; DE 46/32, section 27 |
| H.19 | <b>Free-fall lifeboats with float-free capability</b>                                  | 2004   | MSC 76/23, paragraphs 20.41.3 and 20.48; DE 46/32, section 28 |
| H.20 | Inspection and survey requirements for accommodation ladders                           | 2 sessions   | MSC 77/26, paragraph 23.32                                    |
| H.21 | Mandatory emergency towing systems in ships other than tankers greater than 20,000 dwt | 2 sessions   | MSC 77/26, paragraph 23.33                                    |

**Sub-Committee on Ship Design and Equipment (DE) (continued)**

|     |   | <b>Target completion date/number of sessions needed for completion</b> | <b>Reference</b>  |
|-----|---|--|---|
| L.1 | Guidelines under MARPOL Annex VI on prevention of air pollution from ships                      |  | MEPC 41/20, paragraph 8.22.1; DE 42/15, paragraphs 10.2 to 10.4 |
|     | .1 Guidelines on equivalent methods to reduce on-board NOx emission                             | 2 sessions   |   |
|     | .2 <b>Guidelines on on-board exhaust gas cleaning systems</b>                                   | 2005   | DE 46/32, paragraphs 3.10 and 29.9.6.1                          |
|     | .3 Guidelines on other technological methods verifiable or enforceable to limit SOx emission    | 2 sessions   |   |
| L.2 | Revision of the forms of nuclear ship safety certificates (in co-operation with COMSAR and NAV) | 2 sessions   | MSC 75/24, paragraph 22.6                                       |
| L.3 | <b>Revision of the Explanatory notes to the Standards for ship manoeuvrability</b>              | 2004   | MSC 76/23, paragraph 20.38; DE 46/32, paragraph 29.9.4.2        |
| L.4 | Revision of resolution A.760(18)  | 2 sessions   | DE 46/32, paragraph 31.23                                       |

**SUB-COMMITTEE ON STABILITY AND LOAD LINES AND ON FISHING VESSELS SAFETY (SLF)**

|     |  | <b>Target completion date/number of sessions needed for completion</b> | <b>Reference</b>  |
|-----|--|--|---|
| 1   | Analysis of intact stability casualty records  | Continuous   | MSC 70/23, paragraph 20.4; SLF 30/18, paragraphs 4.16 and 4.17                            |
| 2   | Analysis of damage cards   | Continuous   | MSC 70/23, paragraph 20.4; SLF 41/18, paragraph 17.5                                      |
| H.1 | <b>Development of the revised SOLAS chapter II-1 parts A, B and B-1</b>  | 2003   | SLF 42/18, section 3; MSC 72/23, paragraph 21.52; SLF 45/14, section 3                    |
| H.2 | <b>Development of explanatory notes for harmonized SOLAS chapter II-1</b>  | 2004   | MSC 69/22, paragraph 20.60.1; SLF 44/18, paragraph 15.2.2 ; SLF 45/14, paragraph 11.1.2.1 |
| H.3 | <b>Revision of the fishing vessel Safety Code and Voluntary Guidelines</b><br>(in co-operation with FP, COMSAR, NAV, DE and STW) | 2004   | SLF 43/16, section 5; MSC 73/21, paragraph 18.32; SLF 45/14, section 5                    |
| H.4 | Safety aspects of ballast water management   | 1 session  | MSC 71/23, paragraph 9.11   |

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**Notes:** 1 "H" means a high priority item and "L" means a low priority item. However, within the high and low priority groups, items have not been listed in any order of priority.

2 Items printed in bold letters have been selected for the provisional agenda for SLF 46, shown in annex 23.

**Sub-Committee on Stability and Load Lines and on Fishing Vessels Safety (SLF)**  
 (continued)

|      |   | <b>Target completion date/number of sessions needed for completion</b> | <b>Reference</b>  |
|------|---|--|---|
| H.5  | <b>Large passenger ship safety</b>  | 2003   | MSC 74/24, paragraph 21.4; SLF 45/14, section 8                     |
| H.6  | <u>Review of the Intact Stability Code</u>  | 2004   | SLF 41/18, paragraph 3.14; SLF 45/14, section 6                     |
| H.7  | <b>Review of the OSV Guidelines</b><br>(co-ordinated by DE)   | 2005   | MSC 75/24, paragraph 22.4; SLF 45/14, paragraph 11.1.2.2            |
| H.8  | Review of the 2000 HSC Code and amendments to the DSC Code and the 1994 HSC Code (co-ordinated by DE)   | 2 sessions   | MSC 76/23, paragraphs 8.19 and 20.4                                 |
| H.9  | <b>Consideration of IACS unified interpretations</b>  | 2004   | MSC 76/23, paragraph 20.3   |
| H.10 | <b>Revision of technical regulations of the 1966 LL Convention</b>  | 2005   | MSC 76/23, paragraph 20.51  |
| H.11 | <b>Improved loading/stability information for bulk carriers</b> (in co-operation with DE)   | 2004   | MSC 76/23, paragraph 20.52  |
| L.1  | <b>Harmonization of damage stability provisions in other IMO instruments, including the 1993 Torremolinos Protocol (probabilistic method)</b> | 2005   | MSC 65/25, paragraph 21.23; SLF 45/14, paragraph 11.1.2.3           |
| L.2  | Revision of resolution A.266(VIII)  | 2 sessions   | SLF 45/14, paragraphs 3.19 and 11.1.4.1; MSC 76/23, paragraph 20.50 |

**SUB-COMMITTEE ON STANDARDS OF TRAINING AND WATCHKEEPING (STW)**

|            |  | <b>Target completion date/number of sessions needed for completion</b> | <b>Reference</b>   |
|------------|--|--|--|
| 1          | <b>Validation of model training courses</b>  | <b>Continuous</b>  | STW 31/17, paragraph 14.4; STW 33/17, section 3                              |
| 2          | Casualty analysis (co-ordinated by FSI)  | <b>Continuous</b>  | MSC 70/23, paragraphs 9.17 and 20.4; MSC 77/26, paragraphs 18.10 and 23.40.2 |
| <b>H.1</b> | <b>Watchkeeping at anchor</b>  | 2005   | MSC 75/24, paragraph 22.46.2; STW 34/14, paragraph 11.7                      |
| <b>H.2</b> | <b>Unlawful practices associated with certificates of competency</b>   | 2005   | MSC 71/23, paragraph 20.55.2; STW 34/14, section 5                           |
| <b>H.3</b> | <b>Large passenger ship safety</b>   | 2004   | MSC 74/24, paragraph 21.4 ; STW 34/14 paragraph 11.10                        |
| <b>H.4</b> | <b>Training of crew in launching/ recovering operations of fast rescue boats and means of rescue in adverse weather conditions</b> | 2004   | MSC 74/24, paragraph 21.56; STW 34/14, paragraph 11.10                       |
| <b>H.5</b> | <b>Measures to prevent accidents with lifeboats (co-ordinated by DE)</b>   | 2005   | MSC 74/24, paragraph 21.34; STW 34/14, paragraph 11.10                       |

**Notes:** 1 "H" means a high priority item and "L" means a low priority item. However, within the high and low priority groups, items have not been listed in any order of priority.

2 Items printed in bold letters have been selected for the provisional agenda for STW 35, shown in annex 23.

**Sub-Committee on Standards of Training and Watchkeeping (STW) (continued)**

|      |   | <b>Target completion date/number of sessions needed for completion</b> | <b>Reference</b>  |
|------|---|--|---|
| H.6  | <b>Measures to enhance maritime security</b>  | 2004   | STW 33/17, paragraph 14.4; MSC 75/24, paragraphs 22.9 and 22.45 |
| H.7  | <b>Education and training requirements for fatigue prevention, mitigation and management</b>                    | 2004   | MSC 75/24, paragraph 22.48; STW 34/14, paragraph 11.11          |
| H.8  | <b>Requirements for knowledge, skills and training for officers on WIG craft</b>                                | 2005   | MSC 76/23, paragraph 20.55; STW 34/14, paragraph 11.12          |
| H.9  | <b>Development of requirements for training in ballast water management</b>                                     | 2005   | MSC 71/23, paragraph 20.55.3; STW 34/14, paragraph 11.12        |
| H.10 | <b>Development of competences for ratings</b>   | 2005   | STW 34/14, paragraph 11.11 ; MSC 77/26, paragraph 23.40.1       |
| H.11 | Training and certification requirements for Company and port facility security officers                         | 2005   | MSC 77/26, paragraphs 6.82 and 23.41                            |
| L.1  | <b>Review of the implementation of STCW chapter VII</b>   | 2005   | MSC 72/23, paragraph 21.56 ; STW 34/14, paragraph 11.12         |
| L.2  | Clarification of the STCW-F Convention provisions and follow-up action to the associated Conference resolutions | 2 sessions   | STW 34/14, paragraph 11.8                                       |

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**ANNEX 23**

**PROVISIONAL AGENDAS FOR THE FORTHCOMING SESSIONS  
OF THE SUB-COMMITTEES\***

**SUB-COMMITTEE ON BULK LIQUIDS AND GASES (BLG) - 9TH SESSION**

- Opening of the session
- 1 Adoption of the agenda
  - 2 Decisions of other IMO bodies
  - 3 Evaluation of safety and pollution hazards of chemicals and preparation of consequential amendments
  - 4 Requirements for protection of personnel involved in the transport of cargoes containing toxic substances in all types of tankers
  - 5 Revision of the fire protection requirements of the IBC, IGC, BCH and GC Codes
  - 6 Consideration of IACS unified interpretations
  - 7 Work programme and agenda for BLG 10
  - 8 Election of Chairman and Vice-Chairman for 2005
  - 9 Any other business
  - 10 Report to the Committees

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\* Agenda item numbers do not necessarily indicate priority.

**SUB-COMMITTEE ON DANGEROUS GOODS, SOLID CARGOES AND CONTAINERS (DSC) –  
8TH SESSION**

- Opening of the session
- 1 Adoption of the agenda
  - 2 Decisions of other IMO bodies
  - 3 Amendments to the IMDG Code and supplements, including harmonization of the IMDG Code with the UN Recommendations on the Transport of Dangerous Goods
    - .1 harmonization of the IMDG Code with the UN Recommendations on the Transport of Dangerous Goods
    - .2 amendments to the IMDG Code\* and supplements
    - .3 review of Annex III of MARPOL 73/78
  - 4 Review of the BC Code, including evaluation of properties of solid bulk cargoes
  - 5 Cargo securing manual
  - 6 Casualty and incident reports and analysis
  - 7 Development of a manual on loading and unloading of solid bulk cargoes for terminal representatives
  - 8 Guidance on serious structural deficiencies in containers
  - 9 Measures to enhance maritime security
  - 10 Ship/terminal interface improvement for bulk carriers
  - 11 Alternative hold loading ban for bulk carriers
  - 12 Work programme and agenda for DSC 9
  - 13 Election of Chairman and Vice-Chairman for 2004
  - 14 Any other business
  - 15 Report to the Maritime Safety Committee

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\* As adopted by resolution MSC.122(75).  
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**SUB-COMMITTEE ON FIRE PROTECTION (FP) – 48TH SESSION**

- Opening of the session
- 1 Adoption of the agenda
  - 2 Decisions of other IMO bodies
  - 3 Unified interpretations of SOLAS chapter II-2, the FSS Code and related fire test procedures
  - 4 Large passenger ship safety
  - 5 Performance testing and approval standards for fire safety systems
  - 6 Revision of the fishing vessel Safety Code and Voluntary Guidelines
  - 7 Revision of the gas concentration limit on sulphur dioxide for floor coverings
  - 8 Review of the OSV Guidelines
  - 9 Use of directional sound for passenger evacuation
  - 10 Review of the 2000 HSC Code and amendments to the DSC Code and the 1994 HSC Code
  - 11 Consideration of IACS unified interpretations
  - 12 Recommendation on evacuation analysis for new and existing passenger ships
  - 13 Analysis of fire casualty records: revision of the fire casualty record
  - 14 Amendments to resolution A.754(18) relating to performance criteria for fire doors
  - 15 Amendments to the procedure for the preparation of specimens of sealants and mastics (resolution A.653(16))
  - 16 Work programme and agenda for FP 49
  - 17 Election of Chairman and Vice-Chairman for 2005
  - 18 Any other business
  - 19 Report to the Maritime Safety Committee

**SUB-COMMITTEE ON FLAG STATE IMPLEMENTATION (FSI) – 12TH SESSION**

- Opening of the session
- 1 Adoption of the agenda
  - 2 Decisions of the IMO bodies
  - 3 Mandatory reports under MARPOL 73/78
  - 4 Casualty statistics and investigations
  - 5 Regional co-operation on port State control
  - 6 Reporting procedures on port State control detentions and analysis and evaluation of reports
  - 7 Responsibilities of Governments and measures to encourage flag State compliance
  - 8 Comprehensive analysis of difficulties encountered in the implementation of IMO instruments
  - 9 Review of the Survey Guidelines under the HSSC (resolution A.746(18))
  - 10 PSC on seafarers' working hours
  - 11 Illegal, unregulated and unreported (IUU) fishing and implementation of resolution A.925(22)
  - 12 Development of provisions on transfer of class
  - 13 Consideration of IACS unified interpretations
  - 14 PSC officer training for bulk carriers
  - 15 Measures to enhance maritime security
  - 16 Unique IDs for companies and registered owners
  - 17 Marking the ship's plans, manuals and other documents with the IMO ship identification number
  - 18 Review of reporting requirements for reception facilities\*
  - 19 Work programme and agenda for FSI 13
  - 20 Election of Chairman and Vice-Chairman for 2005
  - 21 Any other business
  - 22 Report to the Committees

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\* Subject to approval by the MEPC.  
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**SUB-COMMITTEE ON RADIOCOMMUNICATIONS AND SEARCH AND RESCUE (COMSAR) –  
8TH SESSION**

- Opening of the session and election of Chairman for 2004
- 1 Adoption of the agenda
  - 2 Decisions of other IMO bodies
  - 3 Global Maritime Distress and Safety System (GMDSS)
    - .1 matters relating to the GMDSS Master Plan
    - .2 operational and technical co-ordination provisions of maritime safety information (MSI) services, including review of the related documents
  - 4 ITU maritime radiocommunication matters
    - .1 Radiocommunication ITU-R Study Group 8 matters
    - .2 ITU World Radiocommunication Conference matters
  - 5 Satellite services (Inmarsat and COSPAS-SARSAT)
  - 6 Emergency radiocommunications, including false alerts and interference
  - 7 Matters concerning search and rescue, including those related to the 1979 SAR Conference and the implementation of the GMDSS
    - .1 harmonization of aeronautical and maritime search and rescue procedures, including SAR training matters
    - .2 plan for the provision of maritime SAR services, including procedures for routing distress information in the GMDSS
    - .3 medical assistance in SAR services
  - 8 Review of the Convention provisions regarding the treatment of persons rescued at sea
    - .1 SOLAS and SAR Conventions
    - .2 FAL and SALVAGE Conventions
  - 9 Large passenger ship safety
  - 10 Developments in maritime radiocommunication systems and technology
  - 11 Review of the IAMSAR Manual

**Sub-Committee on Radiocommunications and Search and Rescue (COMSAR) – 8th session** (continued)

- 12 Review of the 2000 HSC Code and amendments to the DSC Code and the 1994 HSC Code
- 13 Measures to enhance maritime security
- 14 Revision of the forms of nuclear ship safety certificates
- 15 Work programme and agenda for COMSAR 9
- 16 Election of Chairman and Vice-Chairman for 2005
- 17 Any other business
- 18 Report to the Maritime Safety Committee

**SUB-COMMITTEE ON SAFETY OF NAVIGATION (NAV) - 49TH SESSION**

- Opening of the session
- 1 Adoption of the agenda
- 2 Decisions of other IMO bodies
- 3 Routeing of ships, ship reporting and related matters
- 4 Requirements for the display and use of AIS information on shipborne navigational displays
- 5 Places of refuge
- 6 Anchoring, mooring and towing equipment
- 7 Feasibility study on carriage of VDR on existing cargo ships
- 8 Revision of performance standards for radar reflectors
- 9 Review of performance standards for radar equipment
- 10 ITU matters, including Radiocommunication ITU-R Study Group 8 matters
- 11 Large passenger ship safety: effective voyage planning for large passenger ships
- 12 Measures to enhance maritime security
- 13 World-wide radionavigation system (WWRNS)
- 14 Casualty analysis
- 15 Guidance on early abandonment of bulk carriers
- 16 Work programme and agenda for NAV 50
- 17 Election of Chairman and Vice-Chairman for 2004
- 18 Any other business
- 19 Report to the Maritime Safety Committee

**SUB-COMMITTEE ON SHIP DESIGN AND EQUIPMENT (DE) - 47TH SESSION**

- Opening of the session
- 1 Adoption of the agenda
  - 2 Decisions of other IMO bodies
  - 3 Amendments to resolution A.744(18)
  - 4 Large passenger ship safety
  - 5 Measures to prevent accidents with lifeboats
  - 6 Protection of fuel tanks
  - 7 Review of fast rescue boat and means of rescue requirements
  - 8 Anchoring, mooring and towing equipment
  - 9 Performance testing and approval standards for SOLAS personal life-saving appliances
  - 10 Review of the 2000 HSC Code and amendments to the DSC Code and the 1994 HSC Code
  - 11 Protection of pump-rooms of tankers and access to shore-based computer programs for salvage operations
  - 12 Fitting of water ingress alarms in new, single hold cargo ships
  - 13 Consideration of IACS unified interpretations
  - 14 Alternate hold loading ban for bulk carriers
  - 15 Double-side skin construction of bulk carriers
  - 16 Application of structural standards in SOLAS chapter XII
  - 17 Improved loading/stability information for bulk carriers
  - 18 Performance standards for protective coatings
  - 19 Free-fall lifeboats with float-free capability
  - 20 Guidelines on on-board exhaust gas cleaning systems
  - 21 Revision of the Explanatory notes to the Standards for ship manoeuvrability

**Sub-Committee on Ship Design and Equipment (DE) - 47th session (continued)**

- 22 Work programme and agenda for DE 48
- 23 Election of Chairman and Vice-Chairman for 2005
- 24 Any other business
- 25 Report to the Maritime Safety Committee

**SUB-COMMITTEE ON STABILITY AND LOAD LINES AND ON FISHING VESSELS SAFETY (SLF)  
- 46TH SESSION**

- Opening of the session
- 1 Adoption of the agenda
  - 2 Decisions of other IMO bodies
  - 3 Development of the revised SOLAS chapter II-1 parts A, B and B-1
  - 4 Development of explanatory notes for harmonized SOLAS chapter II-1
  - 5 Revision of the fishing vessel Safety Code and Voluntary Guidelines
  - 6 Review of the Intact Stability Code
  - 7 Review of the OSV Guidelines
  - 8 Large passenger ship safety
  - 9 Harmonization of damage stability provisions in IMO instruments
  - 10 Consideration of IACS unified interpretations
  - 11 Revision of technical regulations of the 1966 LL Convention
  - 12 Improved loading/stability information for bulk carriers
  - 13 Work programme and agenda for SLF 47
  - 14 Election of Chairman and Vice-Chairman for 2004
  - 15 Any other business
  - 16 Report to the Maritime Safety Committee

**SUB-COMMITTEE ON STANDARDS OF TRAINING AND WATCHKEEPING (STW)  
- 35TH SESSION**

- Opening of the session
- 1 Adoption of the agenda
  - 2 Decisions of other IMO bodies
  - 3 Validation of model training courses
  - 4 Watchkeeping at anchor
  - 5 Unlawful practices associated with certificates of competency
  - 6 Large passenger ship safety
  - 7 Training of crew in launching/recovering operations of fast rescue boats and means of rescue in adverse weather conditions
  - 8 Measures to prevent accidents with lifeboats
  - 9 Measures to enhance maritime security
  - 10 Education and training requirements for fatigue prevention, mitigation and management
  - 11 Requirements for knowledge, skills and training for officers on WIG craft
  - 12 Development of requirements for training in ballast water management
  - 13 Development of competences for ratings
  - 14 Review of the implementation of STCW chapter VII
  - 15 Training and certification requirements for Company and port facility security officers
  - 16 Work programme and agenda for STW 36
  - 17 Election of Chairman and Vice-Chairman for 2005
  - 18 Any other business
  - 19 Report to the Maritime Safety Committee

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**ANNEX 24****LONG-TERM WORK PLAN OF THE COMMITTEE**

The items listed below which are marked with an asterisk are considered to be high priority items. Work on the remaining items will be initiated only after proposals substantiating their importance and urgency have been submitted and endorsed by the Committee or a compelling need to do so has been clearly established and the Committee has agreed that urgent action should be taken on them.

**I OBJECTIVES**

1 Pursuant to the provisions of Articles 1 and 28 of the Convention on the International Maritime Organization, **to encourage** the general adoption of the highest practicable standards in respect of matters concerning maritime safety and efficiency of navigation, including any matter within the scope of the Organization relating to the design, construction and equipment of ships (and other marine vehicles), training and qualification of seafarers and fishing vessel personnel, manning of ships from a safety standpoint, rules for the prevention of collisions, search and rescue, aids to navigation, maritime safety procedures and requirements, hydrographic information, handling of dangerous cargoes, log-books and navigational records, marine casualty investigations, salvage and any other matter directly affecting maritime safety (e.g., fire safety, maritime communications and the safe transport of cargoes generally), and with due regard to the contents of resolutions A.500(XII), A.777(18) and A.900(21). Maritime security tasks were also assigned to the Committee following decisions of A 22 and the 2002 SOLAS Conference on Maritime Security.

2 **To provide** the necessary machinery for performing any duties assigned to it and to maintain such close relationship with other bodies as may further the purposes of the Organization.

**II GENERAL SUBJECTS**

- \* 1 Implementation, enforcement, monitoring, technical interpretation and improvement of conventions, codes, recommendations and guidelines.
- \* 2 Role of the human element in the prevention of maritime casualties and accidents.
- \* 3 Promotion and maintenance of a safety culture and security consciousness.
- \* 4 Shipboard and shore-based management for the safe and secure operation of ships.
- \* 5 Formal safety assessment.
- 6 Procedures for the control of ships, including deficiency reports.
- \* 7 Casualty statistics and investigations into serious casualties.

- 8 Harmonization of survey and certification requirements.
- \* 9 Prevention/suppression of acts of piracy and armed robbery against ships; and other unlawful acts which may threaten the safety of navigation.
- \* 10 Measures to enhance maritime security.
- \* 11 Safety measures and procedures for the treatment of persons rescued at sea.
- \* 12 Co-operation with the United Nations and other international bodies on matters of mutual interest.
- 13 Technical input in technical co-operation projects.
- \* 14 Goal-based new ship construction standards.
- \* 15 Large passenger ship safety.

### **III SPECIFIC SUBJECTS**

#### **Items related to ship design, construction, machinery, electrical installations and equipment**

- 1 Safety aspects of the design, construction, machinery, electrical installations, equipment and operation of specific types of ships, including fishing vessels.
- 2 Intact and damage stability, subdivision and load lines of ships.
- 3 Manoeuvrability of ships.
- 4 Matters pertaining to fire protection, detection and extinction, fire-test procedures and other matters related to fire safety on board ships.
- 5 Safe evacuation, survival and recovery following maritime casualties or in case of distress.
- 6 Tonnage measurement of ships.

#### **Items related to navigation and radiocommunications**

- 7 Measures to improve navigational safety, including ships' routing, ship reporting systems, vessel traffic services, requirements and standards for navigational aids and shipborne navigational systems and requirements.
- 8 Monitoring the operation of the global maritime distress and safety system and dealing with other maritime radiocommunication matters (including maritime safety information, shipborne radio equipment and operational procedures) and the worldwide provision of maritime search and rescue services.

**Items related to training, certification and watchkeeping**

- 9 Training, watchkeeping and operational procedures for maritime personnel, including seafarers, fishing vessel personnel, maritime pilots, VTS operators, those responsible for maritime safety and security on board ships, mobile offshore units and shore-based port personnel.
- 10 Seafarers' certificates of competency.

**Items related to cargo handling**

- 11 Safe handling and carriage by sea of solid and liquid bulk cargoes.
- 12 Safe handling and carriage of dangerous goods in packaged form, including portable tanks, unit loads, other cargo transport units, shipborne barges and intermediate bulk containers (IBCs).
- 13 Emergency procedures and safety measures for ships carrying dangerous goods, medical first aid in case of accidents involving dangerous goods, and the safe use of pesticides in ships.
- 14 Safe cargo stowage and securing and container safety and security matters.
- 15 Safety and security at the ship/port interface.
- 16 Transboundary movement of hazardous waste.

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**ANNEX 25****STATEMENTS ON SEVERE ACUTE RESPIRATORY SYNDROME (SARS)****STATEMENT BY THE WHO REPRESENTATIVE**

Thank you for the opportunity to update the Committee on SARS. I wish also to express my thanks to the International Maritime Organisation for the advice and assistance offered to WHO over the past few months in the global effort to control SARS. I should also like to thank Singapore and Hong Kong, China for their submissions which help to raise awareness of the issue of SARS.

SARS is the first new infectious disease to emerge in this century but the number of cases remains small in comparison with many other diseases. It is an important disease because of the speed with which it can spread internationally and the need for international collaboration on an unprecedented scale to control the disease

To date there have been some 5,500 cases in 30 countries, with the main outbreaks in:

- China
- Hong Kong, SAR
- Singapore
- Canada
- Viet Nam

National measures have proved very effective as Viet Nam and Singapore are now SARS-free and only a very small number of new cases are being reported daily from China and Hong Kong, China.

International measures to prevent the spread of the disease have also been effective as only a small number of cases have been exported from affected areas and, with the disease isolated there has been no further spread of the disease. The re-emergence of SARS in Toronto demonstrates however the need for continued vigilance.

SARS has had the attention of the international community since February 2003. Since then a lot has been learned and guidance developed, updated and expanded in light of new information. Most cases of SARS are not infectious until symptoms develop, most notably fever and/or breathing problems. Based on this knowledge and to prevent international spread of the disease, pre-departure screening of all international passengers departing from areas where there is local transmission of SARS is recommended. Regularly updated travel recommendations have also been promulgated by WHO.

*(See WHO recommendations for persons undertaking international travel from areas affected by Severe Acute Respiratory Syndrome – on WHO website, and linked to IMO website)*

The major route of transmission of the disease is through close human-to-human contact. Based on this knowledge, WHO has developed guidance on:

- Awareness of early signs and symptoms of SARS
- Care and isolation of passenger/crew with suspect SARS
- Procedures to follow on arrival in port
- Management of people who have come into contact with suspect cases

*(See:*

- *Information for crew on international transport from areas affected by SARS*
- *Procedures for prevention and management of probable cases of SARS on international cargo vessels*
- *Recommendations regarding cruise vessels are currently under consultation)*

Although close human-to-human contact is a major route of transmission, the recent experience in Hong Kong, China has shown that the virus that causes SARS can survive for a period of time outside the human body and some people suffering SARS can excrete virus in their faeces. As a result of this knowledge WHO has issued guidance on disinfection of vessels carrying cases of suspect SARS

*(See: Guide to Ship Sanitation)*

To date there is no evidence to suggest that the movement of goods, products or animals from affected areas poses a risk to public health and WHO is not advising any restrictions in transportation of trade.

*(Information to member States regarding goods and animals arriving from SARS affected areas was issued on 11 April 2003)*

However, WHO will continue to work closely with the Food and Agriculture Organisation of the United Nations and Office International des Epizooties (OIE) to continually review the situation.

The need to respond rapidly to the global threat of SARS has highlighted the importance of the International Health Regulations (IHRs) as a framework for global alert and response to events of international health concern. The lessons learned from SARS will be invaluable during the revision of the current IHRs and will strengthen our ability to ensure that future events can be dealt with effectively.

Thank you once again for this opportunity to provide an update on developments with SARS. I am happy to answer any questions the Committee may have.

### STATEMENT BY THE ICCL OBSERVER

The International Council of Cruise Lines appreciated papers submitted by Singapore and Hong Kong, China sharing their experience in dealing with SARS and the information provided by WHO. The ICCL and its 15 members have formally adopted aggressive guidelines to prevent the occurrence of SARS both before and after ships sail.

Although no confirmed reports of SARS have been reported on any ICCL member vessel, the membership of the ICCL began taking aggressive health precautions working practically with Federal health officials of the USCDC and Health Canada to identify best practices and to adopt a uniform set of policies and procedures and have been in consultation with WHO. Working closely with these health experts, we have made prevention our utmost priority and first line of defence against SARS. Ships have strengthened their already stringent disinfections and sanitation policies followed before and after each cruise.

The ICCL member SARS guidelines include:

- designation of areas of special concern and areas for increased screening;
- member lines will make every attempt to contact all passengers who are from, will transfer or transit through, an Area of Special Concern in advance of their cruise; and
- all passengers, visitors and crew will be required to complete and sign a written questionnaire prior to boarding. The answers to the questionnaire will be used to make the determinations required under the Denial of Boarding Policy.

It also addresses:

- routing air/sea passengers and crew to avoid concern areas;
- hiring freeze or quarantine for crew from areas of special concern;
- medical reporting and on-board management, protocols for respiratory illness including surveillance, examination, treatment, and where appropriate, isolation; and
- all ICCL member lines will report respiratory illness as appropriate to public health authorities and co-ordinate with diagnosis and case management.

Additional details about the cruise industry's response to SARS and the newly adopted guidelines approved by ICCL and the CDC can be found at <http://www.iccl.org>.

Due to the availability of doctors and medical facilities on cruise ships we recognize that these guidelines and the associated Cruise Industry Severe Acute Respiratory Syndrome (SARS) respiratory illness guidelines developed by CDC may not be fully applicable to others sectors of the main industry.

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## ANNEX 26

## STATEMENTS ON THE CASE OF THE M/V “WELL PESCADORES”

## STATEMENT BY THE DELEGATION OF THE UNITED STATES

Thank you, Mr. Chairman.

As you well know, the IMO has long played a substantial role in addressing the issue of stowaways on ships, including adoption of resolution A.871(30) on Guidelines on the allocation of responsibilities to seek the successful resolution of stowaway cases. Paragraph 5.1.7 of that resolution states that the master should take appropriate measures to ensure the security, general health, welfare and safety of stowaways found onboard until their disembarkation. However, as we all know, this is not always the case. It is in that light that I report to this Committee a situation that occurred recently.

On 28 March, the Panamanian-flagged cargo vessel **Well Pescadores** arrived in the port of Houston, Texas, with a load of steel being carried from the Dominican Republic. Shortly after the **Well Pescadores** arrived in Houston, a Liberian-flagged vessel, the m/v **Seaboard Valparaiso** rescued three Dominicans found clinging to a makeshift raft about 65 nautical miles off the coast of Texas. The three survivors claimed that they were among five persons who had stowed away aboard the **Well Pescadores** as it prepared to leave the port of Haina in the Dominican Republic. Once underway on the high seas, the stowaways revealed themselves to the crew. The stowaways claimed that the crew of the **Well Pescadores** then beat them with boards and metal pipes, and threw them overboard. After being thrown into the water, two of the five stowaways apparently drowned.

After the claims of the stowaways were reported to the United States Coast Guard, the Governments of the United States and the Government of Panama, as the flag State, began working closely to investigate this case and take appropriate action. Panama ordered that the vessel be detained in the Port of Houston, where it remained for 34 days. They also sent investigators and prosecutors to the ship to determine the facts of the case. The results thus far are that the ship and those crewmembers suspected of involvement sailed back to Panama on 31 April and we understand that five of the crew have been charged with murder.

Mr. Chairman, successful resolution of stowaway cases requires that all concerned abide by the responsibilities outlined in resolution A.871(2). The United States wishes to commend the Government of Panama for aggressively exercising its jurisdiction in this matter. The case of the **Well Pescadores**, where a working ship was detained for over a month and a number of crewmembers face criminal prosecution, should serve as a strong deterrent to those who would seek to avoid their responsibilities by abusing stowaways. Certainly, the price paid by the shipowner and the crew far exceeds any costs they might have incurred had they properly disembarked and repatriated those found onboard.

Although this case presented numerous jurisdictional and logistical challenges to both the Governments of Panama and the United States, we believe that it is only through flag States and port States working together that cases such as the **Well Pescadores** can be successfully resolved.

Mr. Chairman, I request that this statement be included in the report of this Committee meeting.

Thank you, Mr. Chairman.

#### STATEMENT BY THE DELEGATION OF PANAMA

Thank you, Mr. Chairman.

Our delegation wishes to add to the comments made by the United States delegation concerning the handling by our authorities of the case of the ship **Well Pescadores**, registered by Panama.

As soon as the United States, exercising its functions as coastal State, reported the incident to us on 28 March of this year, the maritime administration of Panama gave instructions for an inquiry to be launched by the flag State which would serve as a basis for determining the truth of the facts reported by the Liberian-registered ship **Seaboard Valparaiso**, which rescued three nationals of the Dominican Republic adrift on a hand-made raft 65 nautical miles off the coasts of Houston, Texas.

The facts investigated constitute a serious infringement of human rights. Despite the fact that both the International Maritime Organization and the penal law of Panama clearly specify what action should be taken by the crew of a ship to ensure the security, general health, nourishment, handover and repatriation of stowaways, from their arrival on board until their handover to the competent authorities, the crew is accused of having ignored these requirements.

Since the incident took place aboard a ship registered under our flag in international waters, the Panama administration quickly took steps to prosecute those involved, as required by international law. Our legislation punishes severely the kind of action supposedly carried out by the crew of the ship. Early this week The Public Prosecutor of Panama ordered their arrest, granting them the guarantees to which they are entitled as detainees, and the penal authorities have undertaken to ensure that they receive a fair trial.

We should like to thank the United States Government for its invaluable assistance. Thanks to the close co-operation between the authorities of Panama and those of America, we were able to take appropriate and timely action, as we did in the middle of last year with the Japanese authorities to prosecute those involved in the crime committed against the master of Panama-registered ship **Tajima**, off the coast of Japan.

These two cases again demonstrate the crucial importance of co-operation between flag States and coastal States if action is to be taken with the speed and efficacy that such incidents demand.

Finally, we should like to comment that both the Maritime Administration of Panama and the prosecuting authorities have received numerous requests from shipowners that ships aboard which persons subject to criminal proceedings have to be held should be released. Such ships are unable to set sail owing to the fact that the presumed offenders remain detained on board,

and cannot enter the territory of the coastal State with a view to avoiding a lengthy extradition process.

The kind of incidents we have referred to indicate that it is appropriate for discussions to be held within the International Maritime Organization on how mutual legal assistance between States can be given, with a view to speeding up procedures for investigating criminal acts and arresting the perpetrators, so that shipowners do not suffer severe economic losses as a result of ships on which such incidents occur having their operations paralysed for long periods.

Mr. Chairman, the delegation of Panama wishes this statement to be reflected in the report of this session of the Committee.

Thank you, Mr. Chairman.

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## ANNEX 27

## STATEMENTS ON THE INDONESIAN ARCHIPELAGIC SEA LANES

## STATEMENT BY THE DELEGATION OF INDONESIA

The delegation of Indonesia appreciates the delegation of the United States for its submission on the designation of Indonesian Archipelagic Sea Lanes Passage (ASLP) as we can read in document MSC 77/25/7 . Upon reading carefully of the concern, this delegation notes that the issues raised by the United States delegate can be classified into two subjects, firstly the substantive issue relating the nature of the designation of Indonesia's ASLP namely partial *vis-à-vis* full designation; and secondly the procedural requirement for the application of Indonesia Government Regulation Number 37 of 2002.

In responding to the first issue, this delegation is fully aware that Article 53, paragraph 1 in conjunction with paragraph 12 of UNCLOS 1982 provides options for archipelagic states either to designate or not to designate ASLP within their archipelagic waters for foreign ships and aircraft transiting from one high sea or EEZ and another high sea or another EEZ. The rights to designate such sea lanes is not a mandatory for archipelagic states as reflected from the word "may" used in Article 53, paragraph 1. If archipelagic states - due to their lack of capability or for other reasons - do not indicate their intention to designate such sea lanes, consequently the ASLP shall be conducted through all routes normally used for international navigation. Pending to full designation the similar consequence will be applied through routes normally used for international navigation. The UNCLOS 1982 neither limit nor indicate a time framework for the process as it leaves open to the consideration of archipelagic states. In all situations, most likely the users will not depend on the process as they can proceed through routes normally used for international navigation. Therefore, the notion of the designation of this ASLP tends to have meaning as "an obligation" for archipelagic states rather than the rights as stipulated in article 53 paragraph 1.

It is for that reason that the Indonesian Government since 1995 has engaged intensive consultations with a number of states as well as several international organizations, including the IMO which has the sole authority in ensuring the safety of navigation. By submitting the proposal for designation of ASLP, our intention is very clear that as an archipelagic state, Indonesia reserve its rights to determine safety routes for transit of foreign ships and aircraft in exercising this passage rights. Consideration to ensure the safety of navigation as well as the interest to protect marine environment from such transit are two key factors that raised during the consultation process, which eventually shaped the formulation of our regulation in this particular issue. With the view to accommodate all concerns, including the concern of the safety of Indonesia, for the time being the Indonesian government has been able to designate 3 archiplepic sea lanes in its waters.

This delegation wishes to inform the meeting that the nature of the designation of Indonesian ASLP is a partial one. This fact has been confirmed by this delegation on various occasions of the Maritime Safety Committee meetings. Article 3, paragraph 2 of the Indonesian Government regulation of 37/2002 has clearly emphasised this understanding by keeping open the possibility of designating other sea lane in Indonesian archipelagic waters for the purpose of this transit in the future.

The reason for this refers to the responsibility of the archipelagic state to ensure the safety of navigation transiting the Indonesian waters. In this regard, Indonesia needs to complete preliminary technical studies, *amongst other* hydrographical survey simultaneously conducting consultation with the competent international organisation in the field; a similar process that we have experienced during the first phase of designation of three archipelagic sea lanes.

In designation these ASLP, Article 53, paragraph 4 of UNCLOS 1982 requires that all routes normally used for international navigation shall be included. This delegation would like to recall that during the process of designation, the Indonesian Government *did* take serious consideration on the existing routes of this kind which are available in Indonesian waters. Still one basic problem was not solved as to what constitute as routes normally used for international navigation, let alone the question of number of such routes exercised within our archipelagic waters. We found that different standard might be applied to it. Even Indonesia has own reference with regard to routes fit to this classification in order to ensure the most efficient and effective transit of foreign ships via its archipelagic waters for continuous, expeditious and unobstructed transit; therefore avoiding inappropriate duplication as indicated in the last part of Article 53, paragraph 4 of UNCLOS 1982.

Noting this situation, the Government Regulation of 37/2002 further guarantees that the designation of the Indonesian ASLP does not derogate the exercise of the right of innocent passage through Indonesian waters. Nor it prohibits foreign ships transiting in innocent passage within the Indonesian ASLP.

With regard to the second question, this delegation is fully aware of the requirement for the application of the said regulation to be consistent with Section H, paragraph 3.13 of the IMO's publication on "Ships Routeing". This delegation will submit the regulation at the earliest convenience.

#### **STATEMENT BY THE DELEGATION OF AUSTRALIA**

The delegation of Australia thanks the United States for the submission of their document MSC 77/25/7 in relation to archipelagic sea lanes. This delegation supports the paper in principle but considers that the primary issue in this item is not necessarily the amount of notice given but the role of IMO and the status of IMO resolutions in this matter.

Australia has a deep and continuing interest in this issue, which has at its base Article 53 of UNCLOS. However, in addition to UNCLOS, IMO as the recognised competent international organization has a continuing role in this issue.

Australia was pleased to work in close co-operation in 1996/97 with Indonesia and the United States in considerable negotiations in respect of the identifying and designating ASL in the Indonesia Archipelago and also developing draft amendments for the General Provisions on Ships Routeing in relation to the designation of ASL. This resulted in May 1998, MSC 69 adopting two resolutions, MSC.71(69), which amended the General Provisions on Ships' Routeing (resolution A.572(14), as amended) for the adoption of ASL, and MSC.72(69) which identified three North/South Routes in Indonesia as a Partial Designation of ASL in Indonesian waters.

Australia is seeking reaffirmation by this Committee of the continuing jurisdiction of the IMO in this regard and also of the relevant provisions of the General Provisions on Ships' Routeing.

Article 53 of UNCLOS does not include the concept of a "Partial" designation but the IMO General Provisions on Ships' Routeing (resolution A.572(14), as amended) do and here we quote these relevant sections:

"2.2.2 Partial Archipelagic Sea Lanes proposal

An Archipelagic Sea Lanes proposed by an Archipelagic State which does not meet the requirement to include all normal passage routes and navigational channels as required by UNCLOS.

3.5 In order for IMO to ensure that sea lanes proposed for adoption include all normal passage routes IMO shall retain continuing jurisdiction (i.e. competence) over the process of adopting archipelagic sea lanes until such time that sea lanes including all normal passage routes have been adopted as required by UNCLOS.

6.7 Where a partial archipelagic sea lanes proposal has come into effect the right of archipelagic sea lanes passage may be exercised through all normal passage routes used as routes for international navigation or overflight in other parts of archipelagic waters in accordance with UNCLOS."

Resolution MSC.72(69) contains the specific designation of the three north south routes by Indonesia and again it stresses that it is a "partial system".

At MSC 76, the Indonesian delegation advised the Committee that the three north/south ASL were designated in June 2002 and would enter into force on 28 December 2002.

Australia is in receipt of an unofficial translation of the Indonesian Domestic Regulations which appears to state that ASL passage can only be exercised by foreign ships and aircraft on the three designated north/south ASL and which is therefore inconsistent with the IMO resolution.

Australia welcomes the intervention of the Indonesian delegation here today in which it was confirmed that this designation was in fact still a partial designation.

Australia therefore seeks an affirmation from the Maritime Safety Committee in its report as to what exactly is meant by a "Partial designation" and also confirmation that IMO retains jurisdiction of this issue while it remains a partial designation and until all normal routes, including yet to be identified east/west routes are covered by ASL in accordance with the relevant parts of the General Provisions on Ships' Routeing (resolution A.572(14), as amended).

As above, as a result of the partial designation, ships and aircraft can enjoy the right of Archipelagic Sea Lanes passage throughout the Archipelago until such time as all normal routes are covered by ASL, adopted by the organization.

Australia is willing to work with Indonesia in identifying further routes to be eventually covered by ASL and ultimate adoption by IMO. Australia also wants to continue to co-operatively work with Indonesia in clarifying the apparent inconsistency between the domestic regulations and the IMO resolutions.

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