

RESOLUTION MSC.125(75)
(adopted on 24 May 2002)

**ADOPTION OF AMENDMENTS TO THE GUIDELINES ON THE ENHANCED
PROGRAMME OF INSPECTIONS DURING SURVEYS OF BULK CARRIERS AND
OIL TANKERS (RESOLUTION A.744(18), AS AMENDED)**

THE MARITIME SAFETY COMMITTEE,

RECALLING article 28(b) of the Convention on the International Maritime Organization concerning the functions of the Committee,

RECALLING ALSO resolution A.744(18) by which the Assembly adopted the Guidelines on the enhanced programme of inspections during surveys of bulk carriers and oil tankers,

RECALLING FURTHER article VIII(b) and regulation XI/2 of the International Convention for the Safety of Life at Sea (SOLAS), 1974 (hereinafter referred to as "the Convention") concerning the procedure for amending the aforementioned Guidelines,

NOTING that the Assembly, when adopting resolution A.744(18), requested the Maritime Safety Committee and the Marine Environment Protection Committee to keep the Guidelines under review and update them as necessary, in the light of experience gained in their application,

HAVING CONSIDERED, at its seventy-fifth session, amendments to the Guidelines proposed and circulated in accordance with article VIII(b)(i) of the Convention,

1. ADOPTS, in accordance with article VIII(b)(iv) of the Convention, amendments to the Guidelines on the enhanced programme of inspections during surveys of bulk carriers and oil tankers, the text of which is set out in the Annex to the present resolution;
2. DETERMINES, in accordance with article VIII(b)(vi)(2)(bb) of the Convention, that the said amendments shall be deemed to have been accepted on 1 July 2003, unless, prior to that date, more than one third of the Contracting Governments to the Convention or Contracting Governments the combined merchant fleets of which constitute not less than 50% of the gross tonnage of the world's merchant fleet, have notified their objections to the amendments;
3. INVITES SOLAS Contracting Governments to note that, in accordance with article VIII(b)(vii)(2) of the Convention, the amendments shall enter into force on 1 January 2004 upon their acceptance in accordance with paragraph 2 above;
4. REQUESTS the Secretary-General, in conformity with article VIII(b)(v) of the Convention, to transmit certified copies of the present resolution and the text of the amendments contained in the Annex to all Contracting Governments to the Convention;
5. FURTHER REQUESTS the Secretary-General to transmit copies of this resolution and its Annex to Members of the Organization, which are not Contracting Governments to the Convention.

**AMENDMENTS TO THE GUIDELINES ON THE ENHANCED PROGRAMME OF
INSPECTIONS DURING SURVEYS OF BULK CARRIERS AND OIL TANKERS
(RESOLUTION A.744(18), AS AMENDED)**

ANNEX A

**GUIDELINES ON THE ENHANCED PROGRAMME OF INSPECTIONS DURING
SURVEYS OF BULK CARRIERS**

- 1 The "Contents" are amended as follows:
 - .1 the existing text of 1.3 is replaced by the following:

"1.3 Repairs";
 - .2 the following new item is added after the existing 3.5:

"3.6 Additional annual survey requirements for the foremost cargo hold of ships subject to SOLAS regulation XII/9.1";
 - .3 the existing text of 4 to 4.4 is replaced by the following:

"4 INTERMEDIATE ENHANCED SURVEY
4.1 General
4.2 Bulk carriers 5-10 years of age
4.3 Bulk carriers 10-15 years of age
4.4 Bulk carriers exceeding 15 years of age";
 - .4 the existing text of 6 and 6.1 is deleted and 7, 8 and 9 are renumbered as 6, 7 and 8;
 - .5 the following new appendices 4 and 5 are added in annex 8 after appendix 3:

"Appendix 4 Ore carriers - Thickness measurement and typical transverse section indicating longitudinal and transverse members

Appendix 5 Ore carriers - Thickness measurement and close-up survey requirements";
 - .6 the following new annexes 11 and 12 are added after annex 10:

"Annex 11 Guidelines for the gauging of the vertically corrugated transverse watertight bulkhead between holds Nos.1 and 2

Annex 12 Additional annual survey requirements for the foremost cargo hold of ships subject to SOLAS regulation XII/9.1"

2 The following new paragraphs 1.2.15 and 1.2.16 are added after the existing paragraph 1.2.14:

"1.2.15 A *prompt and thorough repair* is a permanent repair completed at the time of survey to the satisfaction of the surveyor, therein removing the need for the imposition of any associated condition of classification.

1.2.16 *Convention* means the International Convention for the Safety of Life at Sea, 1974, as amended."

3 The existing text of section 1.3 is replaced by the following:

"1.3 Repairs

1.3.1 Any damage in association with wastage over the allowable limits (including buckling, grooving, detachment or fracture), or extensive areas of wastage over the allowable limits, which affects or, in the opinion of the Administration, will affect the ship's structural, watertight or weathertight integrity, should be promptly and thoroughly repaired. Areas to be considered include:

- .1 side shell frames, their end attachments or adjacent shell plating;
- .2 deck structure and deck plating;
- .3 bottom structure and bottom plating;
- .4 watertight or oiltight bulkheads, and
- .5 hatch covers or hatch coamings.

Where adequate repair facilities are not available, the Administration may allow the ship to proceed directly to a repair facility. This may require discharging the cargo and/or temporary repairs for the intended voyage.

1.3.2 Additionally, when a survey results in the identification of significant corrosion or structural defects, either of which, in the opinion of the Administration, will impair the ship's fitness for continued service, remedial measures should be implemented before the ship continues in service."

4 The following text is added at the end of paragraph 2.6.1:

"Annex 11 provides additional thickness measurement guidelines applicable to the vertically corrugated transverse watertight bulkhead between cargo hold Nos.1 and 2 on ships subject to compliance with regulation XII/6.2 of the Convention."

5 The following new paragraph 3.6 is added after the existing paragraph 3.5.1:

"3.6 Additional annual survey of the foremost cargo hold of ships subject to regulation XII/9.1 of the Convention in accordance with the requirements of annex 12

Ships subject to regulation XII/9.1 of the Convention are those meeting all of the following conditions:

- .1 bulk carriers of 150 m in length and upwards of single side skin construction;
- .2 carrying solid bulk cargoes having a density of 1,780 kg/m³ and above;
- .3 constructed before 1 July 1999; and
- .4 constructed with an insufficient number of transverse watertight bulkheads to enable them to withstand flooding of the foremost cargo hold in all loading conditions and remain afloat in a satisfactory condition of equilibrium as specified in regulation XII/4.3 of the Convention.”

6 The existing text of section 4 is replaced by the following:

"4 INTERMEDIATE ENHANCED SURVEY

4.1 General

4.1.1 Items that are additional to the requirements of the annual survey may be surveyed either at the second or third annual survey or between these surveys.

4.1.2 The extent of survey is dependent upon the age of the ship as specified in 4.2, 4.3 and 4.4.

4.2 Bulk carriers of 5 to 10 years of age

4.2.1 Ballast tanks

4.2.1.1 For spaces used for salt water ballast, an overall survey of representative spaces selected by the surveyor should be carried out. If such inspections reveal no visible structural defects, the examination may be limited to a verification that the protective coating remains efficient.

4.2.1.2 Where POOR coating condition, corrosion or other defects are found in salt water ballast spaces or where protective coating was not applied from the time of construction, the examination should be extended to other ballast spaces of the same type.

4.2.1.3 In salt water ballast spaces other than double bottom tanks, where a protective coating is found in POOR condition and it is not renewed, or where soft coating has been applied, or where a protective coating was not applied from the time of construction, the tanks in question should be examined and thickness measurements carried out as considered necessary at annual intervals. When such breakdown of coating is found in salt water ballast double bottom tanks, where a soft coating has been applied, or where a coating has not been applied, the tanks in question should be examined at annual intervals. When considered necessary by the surveyor, or where extensive corrosion exists, thickness measurements should be carried out.

4.2.1.4 In addition to the requirements above, areas found to be suspect areas at the previous periodical survey should be overall and close-up surveyed.

4.2.2 Cargo holds

4.2.2.1 An overall survey of all cargo holds, including close-up survey of sufficient extent, minimum 25% of frames, should be carried out to establish the condition of:

- .1 shell frames including their upper and lower end attachments, adjacent shell plating, and transverse bulkheads in the forward cargo hold and one other selected cargo hold; and
- .2 areas found to be suspect areas at the previous periodical survey.

4.2.2.2 Where considered necessary by the surveyor as a result of the overall and close-up survey as described in 4.2.2.1, the survey should be extended to include a close-up survey of all of the shell frames and adjacent shell plating of that cargo hold as well as a close-up survey of sufficient extent of all remaining cargo holds.

4.2.3 Extent of thickness measurement

4.2.3.1 Thickness measurement should be carried out to an extent sufficient to determine both general and local corrosion levels at areas subject to close-up survey as described in 4.2.2.1. The minimum requirement for thickness measurements at the intermediate enhanced survey are areas found to be suspect areas at the previous periodical survey.

4.2.3.2 Where substantial corrosion is found, the extent of thickness measurements should be increased in accordance with the requirements of annex 10.

4.2.3.3 The thickness measurement may be dispensed with provided the surveyor is satisfied by the close-up survey, that there is no structural diminution and the protective coating, where applied, remains effective.

4.2.3.4 Where the protective coating in cargo holds, as referred to in the explanatory note below, is found to be in GOOD condition, the extent of close-up surveys and thickness measurements may be specially considered by the Administration.

Explanatory note:

At the time of new construction, all internal and external surfaces of hatch coamings and hatch covers, and all internal surfaces of the cargo holds, excluding the flat tank top areas and the hopper tanks sloping plating approximately 300 mm below the side shell frame and brackets, should have an efficient protective coating (epoxy coating or equivalent) applied in accordance with the manufacturer's recommendation. In the selection of coating, due consideration should be given by the owner to intended cargo conditions expected in service. For existing bulk carriers, where owners may elect to coat or recoat cargo holds as noted above, consideration may be given to the extent of the close-up and thickness measurement surveys. Prior to the coating of cargo holds of existing ships, scantlings should be ascertained in the presence of a surveyor.

4.3 Bulk carriers 10 - 15 years of age

4.3.1 Ballast tanks

4.3.1.1 For bulk carriers:

All salt water ballast tanks should be examined. If such inspections reveal no visible structural defects, the examination may be limited to a verification that the protective coating remains efficient.

4.3.1.2 For ore carriers:

- .1 all web frame rings - in one ballast wing tank;
- .2 one deck transverse - in each of the remaining ballast wing tanks;
- .3 both transverse bulkheads - in one ballast wing tank;
- .4 one transverse bulkhead - in each remaining ballast wing tank.

4.3.1.3 In addition, the requirements described in 4.2.1.2 to 4.2.1.4 apply.

4.3.2 Cargo holds

4.3.2.1 An overall survey of all cargo holds, including close-up survey of sufficient extent, minimum 25% of frames, should be carried out to establish the condition of:

- .1 shell frames including their upper and lower end attachments, adjacent shell plating, and transverse bulkheads of all cargo holds; and
- .2 areas found to be suspect areas at the previous periodical survey.

4.3.2.2 Where considered necessary by the surveyor as a result of the overall and close-up survey as described in 4.3.2.1, the survey should be extended to include a close-up survey of all of the shell frames and adjacent plating of all cargo holds.

4.3.3 Extent of thickness measurement

4.3.3.1 Thickness measurement should be carried out to an extent sufficient to determine both general and local corrosion levels at areas subject to close-up survey as described in 4.3.2.1. The minimum requirement for thickness measurements at the intermediate enhanced survey are areas found to be suspect areas at the previous periodical survey.

4.3.3.2 In addition, the requirements described in 4.2.3.2 to 4.2.3.4 apply.

4.4 Bulk carriers exceeding 15 years of age

4.4.1 The requirements of the intermediate enhanced survey should be to the same extent as the previous periodical survey required in 2 and 5.1. However, pressure testing of tanks and cargo holds used for ballast is not required unless deemed necessary by the attending surveyor.

4.4.2 In application of 4.4.1, the intermediate enhanced survey may be commenced at the second annual survey and be progressed during the succeeding year with a view to completion at the third annual survey in lieu of the application of 2.1.1."

7 The existing text of paragraph 5.2.2 is replaced by the following:

"5.2.2 Tanks and spaces should be safe for access, i.e. gas-freed, ventilated, and illuminated."

8 The text of chapter 6 is deleted and the following chapters 7, 8 and 9 are renumbered accordingly.

9 The following new subparagraph 5 is added at the end of existing paragraph 7.3.1 (renumbered paragraph 6.3.1):

".5 survey programme as required by 5.1 until such time as the periodical survey has been completed."

10 The existing text of section 8.1 (renumbered section 7.1) is replaced by the following:

"7.1 General

7.1.1 The required thickness measurements, if not carried out by the recognised organization acting on behalf of the Administration, should be witnessed by a surveyor of the recognised organization. The surveyor should be on board to the extent necessary to control the process.

7.1.2 The thickness measurement company should be part of the survey planning meeting to be held prior to commencing the survey.

7.1.3 In all cases the extend of the thickness measurements should be sufficient as to represent the actual average condition."

11 The table in annex 2 is amended as follows:

.1 In the second column " $5 < AGE \leq 10$ ", the existing text of item 6 is replaced by the following:

"6. Wind and water strikes in way of transverse sections considered under point 2 above."

.2 In the third column " $10 < AGE \leq 15$ ", the following new item 8 is added at the end:

"8. As required by annex 12 for ships subject to compliance with regulation XII/6.2 of the Convention."

12 In annex 7, the table headed "Extract of thickness measurements" is amended as follows:

.1 The existing text of the heading of the first column is replaced by the following:

"Position of substantially corroded tanks/areas or areas with deep pitting"

.2 The following new note is added at the end of the table:

"3 Any bottom plating with a pitting intensity of 20% or more, with wastage in the substantial corrosion range or having an average depth of pitting of 1/3 or more of actual plate thickness should be noted."

13 In annex 8, General, the following new appendices are added to the list of appendices:

“Appendix 4 Ore carriers – Thickness measurement and typical transverse section indicating longitudinal and transverse members

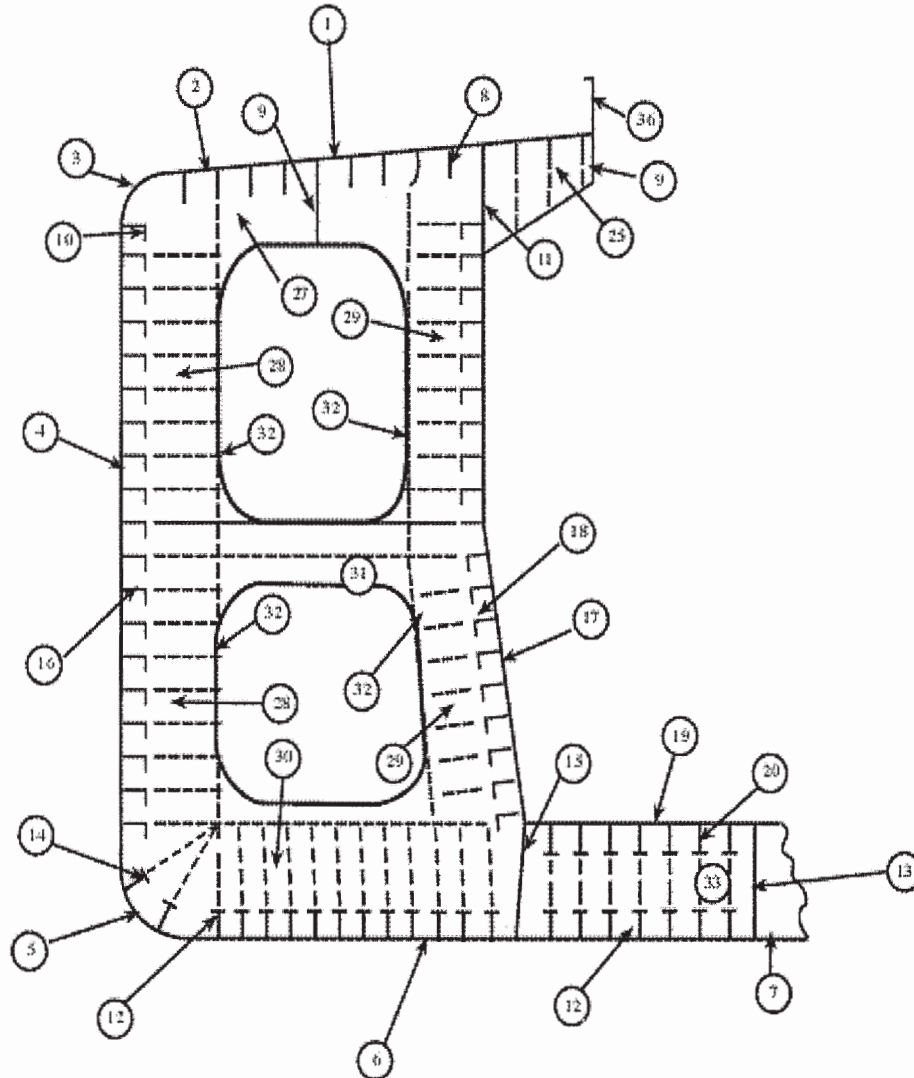
Appendix 5 Ore carriers – Thickness measurements and close-up survey requirements”

14 In annex 8, the following new appendices 4 and 5 are added after appendix 3:

“Appendix 4

Ore carriers

Thickness measurement and typical transverse section indicating longitudinal and transverse members



Report on TM2-BC (1) and (2)	
1.	Strength deck plating
2.	Stringer plate
3.	Sheerstrake
4.	Side shell plating
5.	Bilge plating
6.	Bottom shell plating
7.	Keel plate

Report on TM6-BC	
36.	Hatch coamings
37.	Deck plating between hatches
38.	Hatch covers

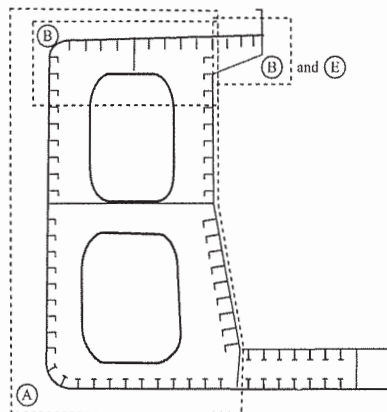
Report on TM3-BC	
8.	Deck longitudinals
9.	Deck girders
10.	Sheerstrake longitudinals
11.	Longitudinal bulkhead top strake
12.	Bottom longitudinals
13.	Bottom girders
14.	Bilge longitudinals
15.	Longitudinal bulkhead lower strake
16.	Side shell longitudinals
17.	Longitudinal bulkhead plating (remainder)
18.	Longitudinal bulkhead longitudinals
19.	Inner bottom plating
20.	Inner bottom longitudinals

Report on TM4-BC	
25.	Deck transverse centre tank
26.	Bottom transverse centre tank
27.	Deck transverse wing tank
28.	Side shell vertical web
29.	Longitudinal bulk-head vertical web
30.	Bottom transverse wing tank
31.	Struts
32.	Transverse web face plate
33.	D.b. floors

Appendix 5

Ore carriers Thickness measurement and close-up survey requirements

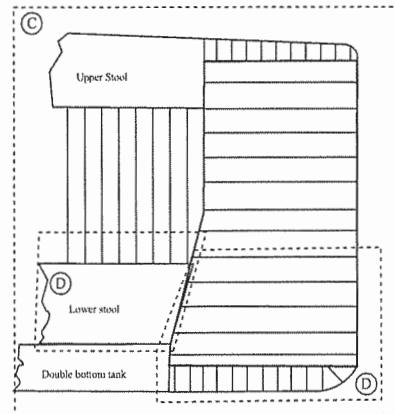
Typical transverse section close-up survey



Thickness to be reported on
TM3-T of Annex B and TM4-T of Annex B
as appropriate

Close-up survey
area

Typical transverse bulkhead



Thickness to be reported on TM5-T of Annex B

Recommendations for the extent and pattern of gaugings
are indicated in Annex 10.

15 In annex 10, in the table headed "Deck structure including cross strips, main cargo hatchways, hatch covers, coamings and top side tanks", the existing text of item "a", in the column headed "Extent of measurement", across from the entry "3. Hatch covers" in the column headed "Structural members" is replaced by the following:

"a. Side and end skirts, each 3 locations".

16 The following new annexes 11 and 12 are added after existing annex 10:

"ANNEX 11

GUIDELINES FOR THE GAUGING OF THE VERTICALLY CORRUGATED TRANSVERSE WATERTIGHT BULKHEAD BETWEEN HOLDS Nos.1 AND 2

1 Gauging is necessary to determine the general condition of the structure and to define the extent of possible repairs and/or reinforcements of the vertically corrugated transverse watertight bulkhead for verification of the compliance with the Bulk carrier bulkhead and double bottom strength standards, defined in regulation XII/1.5 of the Convention.

2 Taking into account the buckling model specified in the Bulk carrier bulkhead and double bottom strength standards, defined in regulation XII/1.5 of the Convention, in the evaluation of strength of the bulkhead, it is essential to determine the thickness diminution at the critical levels shown in figures 1 and 2 of this annex.

3 The gauging should be carried out at the levels as described below. To adequately assess the scantlings of each individual vertical corrugation, each corrugation flange, web, shedder plate and gusset plate within each of the levels given below should be gauged.

Level (a) Ships without lower stool (see figure 1):

Locations:

- The mid-breadth of the corrugation flanges at approximately 200 mm above the line of shedder plates;
- The middle of gusset plates between corrugation flanges, where fitted;
- The middle of the shedder plates;
- The mid-breadth of the corrugation webs at approximately 200 mm above the line of shedder plates.

Level (b) Ships with lower stool (see figure 2):

Locations:

- The mid-breadth of the corrugation flanges at approximately 200 mm above the line of shedder plates;
- The middle of gusset plates between corrugation flanges, where fitted;
- The middle of the shedder plates;
- The mid-breadth of the corrugation webs at approximately 200 mm above the line of shedder plates.

Level (c) Ships with or without lower stool (see figures 1 and 2):

Locations:

- The mid-breadth of the corrugation flanges and webs at about the mid-height of the corrugation.

4 Where the thickness changes within the horizontal levels, the thinner plate should be gauged.

5 Steel renewal and/or reinforcement should comply with the Bulk carrier bulkhead and double bottom strength standards, defined in regulation XII/1.5 of the Convention.

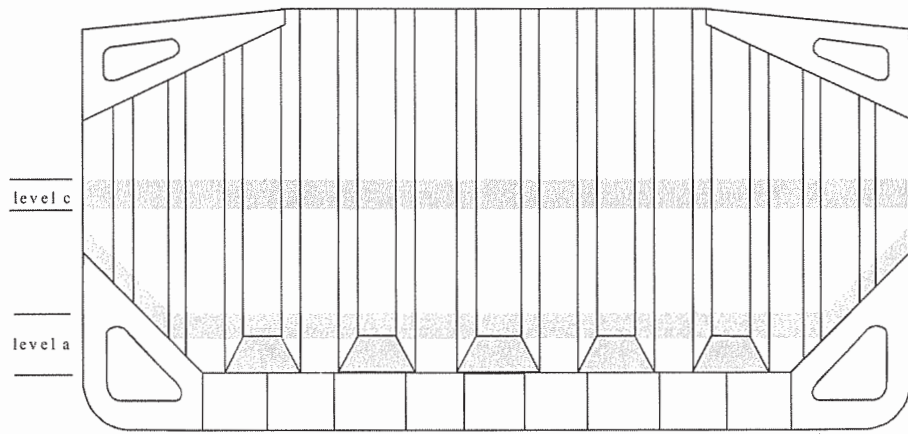


Figure 1. Ships without lower stool

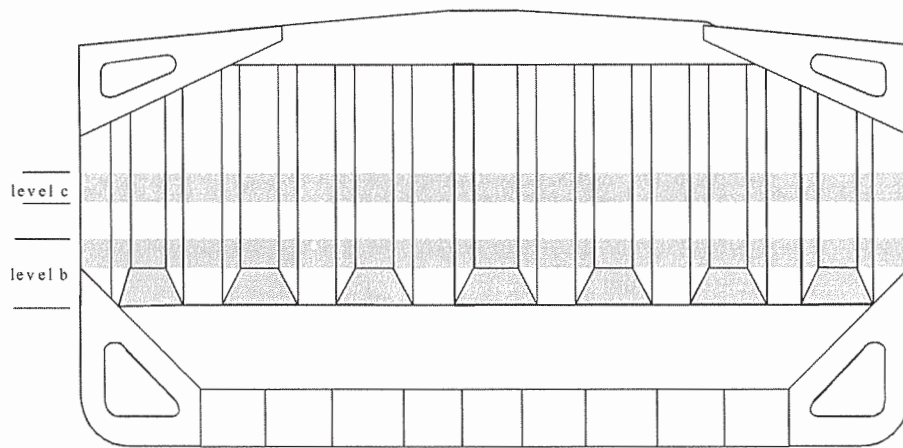


Figure 2. Ships with lower stool

**ADDITIONAL ANNUAL SURVEY REQUIREMENTS FOR THE FOREMOST
CARGO HOLD OF SHIPS SUBJECT TO SOLAS REGULATION XII/9.1**

1 General

In the case of bulk carriers over 5 years of age, the annual survey should include, in addition to the requirements of the annual surveys prescribed in chapter 3 of the present Guidelines, an examination of the following items.

2 Extent of survey

2.1 For bulk carriers of 5 - 15 years of age:

2.1.1 An overall survey of the foremost cargo hold, including close-up survey of sufficient extent, minimum 25% of frames, should be carried out to establish the condition of:

- .1 shell frames including their upper and lower end attachments, adjacent shell plating, and transverse bulkheads; and
- .2 areas found to be suspect areas at the previous periodical survey.

2.1.2 Where considered necessary by the surveyor as a result of the overall and close-up survey as described in 2.1.1 above, the survey should be extended to include a close-up survey of all of the shell frames and adjacent shell plating of the cargo hold.

2.2 For bulk carriers exceeding 15 years of age:

An overall survey of the foremost cargo hold, including close-up survey should be carried out to establish the condition of:

- .1 all shell frames including their upper and lower end attachments, adjacent shell plating, and transverse bulkheads; and
- .2 areas found to be suspect areas at the previous periodical survey.

3 Extent of thickness measurement

3.1 Thickness measurement should be carried out to an extent sufficient to determine both general and local corrosion levels at areas subject to close-up survey, as described in 2.1 and 2.2. The minimum requirement for thickness measurements are areas found to be suspect areas at the previous periodical survey. Where substantial corrosion is found, the extent of thickness measurements should be increased with the requirements of annex 10.

3.2 The thickness measurement may be dispensed with provided the surveyor is satisfied by the close-up survey, there is no structural diminution and the protective coating, where applied, remains effective.

4 Special consideration

Where the protective coating, as referred to in the explanatory note below, in the foremost cargo hold is found to be in GOOD condition, the extent of close-up surveys and thickness measurements may be specially considered.

Explanatory note:

At the time of new construction, all internal and external surfaces of hatch coamings and hatch covers, and all internal surfaces of the cargo holds, excluding the flat tank top areas and the hopper tanks sloping sloping plating approximately 300 mm below the side shell frame and brackets, should have an efficient protective coating (epoxy coating or equivalent) applied in accordance with the manufacturer's recommendation. In the selection of coating due consideration should be given by the owner to intended cargo conditions expected in service.

For existing bulk carriers, where owners may elect to coat or recoat cargo holds as noted above, consideration may be given to the extent of the close-up and thickness measurement surveys. Prior to the coating of cargo holds of existing ships, scantlings should be ascertained in the presence of a surveyor."

ANNEX B

GUIDELINES ON THE ENHANCED PROGRAMME OF INSPECTIONS DURING SURVEYS OF OIL TANKERS

17 The "Contents" are amended as follows:

.1 The existing text of 1.3 is replaced by the following:

"1.3 Repairs"

.2 The existing text of 4 to 4.4 is replaced by the following:

"4 INTERMEDIATE ENHANCED SURVEY

4.1 General

4.2 Oil tankers 5-10 years of age

4.3 Oil tankers 10-15 years of age

4.4 Oil tankers exceeding 15 years of age"

18 The following new paragraphs 1.2.13 is added after the existing paragraph 1.2.12:

"1.2.13 A *prompt and thorough repair* is a permanent repair completed at the time of survey to the satisfaction of the surveyor, therein removing the need for the imposition of any associated condition of classification."

19 The existing text of section 1.3 is replaced by the following:

"1.3 Repairs

1.3.1 Any damage in association with wastage over the allowable limits (including buckling, grooving, detachment or fracture), or extensive areas of wastage over the allowable limits, which affects or, in the opinion of the Administration, will affect the ship's structural, watertight or weathertight integrity, should be promptly and thoroughly repaired. Areas to be considered include:

- .1 side shell frames, their end attachments or adjacent shell plating;
- .2 deck structure and deck plating;
- .3 bottom structure and bottom plating;
- .4 watertight or oiltight bulkheads; and
- .5 hatch covers or hatch coamings.

Where adequate repair facilities are not available, the Administration may allow the ship to proceed directly to a repair facility. This may require discharging the cargo and/or temporary repairs for the intended voyage.

1.3.2 Additionally, when a survey results in the identification of significant corrosion or structural defects, either of which, in the opinion of the Administration, will impair the ship's fitness for continued service, remedial measures should be implemented before the ship continues in service."

20 In existing paragraph 2.1.3 the words “, as required in 2.1.5,” are inserted between the words “piping” and “is in a satisfactory condition”.

21 The existing text of paragraph 2.1.5 is replaced by the following:

"2.1.5 Cargo piping on deck, including crude oil washing (COW) piping, and cargo and ballast piping within the above tanks and spaces should be examined and operationally tested to working pressure to attending surveyor's satisfaction to ensure that tightness and condition remain satisfactory. Special attention should be given to any ballast piping in cargo tanks and cargo piping in ballast tanks and void spaces, and surveyors should be advised on all occasions when this piping, including valves and fittings, are open during repair periods and can be examined internally."

22 The existing text of paragraph 2.3.1 is replaced by the following:

"Where provided, the condition of the corrosion prevention system of cargo tanks should be examined. A ballast tank where a protective coating is found in POOR condition and it is not renewed, or where soft coating has been applied, or where a protective coating has not been applied from the time of construction, the tank in question should be examined at annual intervals. Thickness measurements should be carried out as deemed necessary by the surveyor."

23 The following new paragraph is added after the end of the existing paragraph 3.5.2:

"3.5.3. For oil tankers exceeding 15 years of age, all ballast tanks adjacent to (i.e. with a common plane boundary) a cargo tank with any means of heating should be examined internally. When considered necessary by the surveyor, thickness measurements should be carried out and if the results of these thickness measurements indicate that substantial corrosion is found, the extent of thickness measurements should be increased in accordance with the requirements of annex 4. Tanks or areas where coating was found to be in GOOD condition at the previous intermediate or periodical survey may be specially considered by the Administration."

24 The existing text of paragraphs 4 to 4.4.2 is replaced by the following:

"4 INTERMEDIATE ENHANCED SURVEY

4.1 General

4.1.1 Items that are additional to the requirements of the annual survey may be surveyed either at the second or third annual survey or between these surveys.

4.1.2 The survey extent of cargo and ballast tanks dependent on the age of the ship is specified in 4.2, 4.3 and 4.4.

4.1.3 For weather decks, an examination as far as applicable of cargo, crude oil washing, bunker, ballast, steam and vent piping systems as well as vent masts and headers. If upon examination there is any doubt as to the condition of the piping, the piping may be required to be pressure tested, thickness measured or both.

4.2 Oil tankers of 5 to 10 years of age

4.2.1 The requirements of 4.1.3 apply.

4.2.2 For tanks used for salt water ballast, an overall survey of representative tanks selected by the surveyor should be carried out. If such inspections reveal no visible structural defects, the examination may be limited to a verification that the protective coating remains efficient.

4.2.3 Where POOR coating condition, corrosion or other defects are found in salt water ballast tanks or where a protective coating was not applied from the time of construction, the examination should be extended to other ballast tanks of the same type.

4.2.4 In salt water ballast tanks where a protective coating is found in POOR condition and it is not renewed, or where soft coating has been applied, or where a protective coating was not applied from the time of construction, the tanks in question should be examined and thickness measurements carried out as considered necessary at annual intervals.

4.3 Oil tankers of 10 to 15 years of age

4.3.1 The requirements of 4.2 apply.

4.3.2 An overall survey of at least two representative cargo tanks should be carried out.

4.3.3 For tanks used for salt water ballast including combined cargo/ballast tanks, an overall survey of all such tanks should be carried out. If such survey reveals no visible structural defects, the survey may be limited to a verification that the protective coatings remain efficient.

4.3.4 Extent of close up survey:

- .1 Ballast tanks: To the same extent as previous periodical survey.
- .2 Cargo tanks: Two combined cargo/ballast tanks. The extent of survey should be based on the record of the previous periodical survey, and repair history of the tanks.

The extent of close-up surveys may be extended as stated in 2.4.3. For areas in tanks where coatings are found to be in GOOD condition, the extent of the close-up surveys may be specially considered by the Administration.

4.3.5 Extent of thickness measurement

The minimum requirements for thickness measurements at the intermediate survey are areas found to be suspect areas at the previous periodical survey. Where substantial corrosion is found, the extent of the thickness measurements should be increased in accordance with the requirements of annex 4.

4.4 Oil tankers exceeding 15 years of age

4.4.1 The requirements of the intermediate survey should be to the same extent as the previous periodical survey as required in 2 and 5.1. However, pressure testing of cargo and ballast tanks is not required unless deemed necessary by the attending surveyor.

4.4.2 In application of 4.4.1, the intermediate enhanced survey may be commenced at the second annual survey and be progressed during the succeeding year with a view to completion at the third annual survey in lieu of the application of 2.1.1.”

25 The existing text of paragraph 5.2.2 is replaced by the following:

"5.2.2 Tanks and spaces should be safe for access, i.e. gas-freed, ventilated and illuminated."

26 The following new subparagraph .6 is added after subparagraph .5 of existing paragraph 6.3.1:

".6 survey programme as required by 5.1 until such time as the periodical survey has been completed,".

27 The existing text of paragraph 7.1.1 is replaced by the following:

"7.1.1 The required thickness measurements, if not carried out by the recognised organization acting on behalf of the Administration, should be witnessed by a surveyor of the recognised organization. The surveyor should be on board to the extent necessary to control the process.

7.1.2 The thickness measurement company should be part of the survey planning meeting to be held prior to commencing the survey.

7.1.3 In all cases the extend of the thickness measurements should be sufficient as to represent the actual average condition."

28 Annex 9 is amended as follows:

.1 In the Condition evaluation report under the heading "Contents of condition evaluation report" after the existing Part 3, the following new Part 4 is inserted:

"Part 4 - Cargo and ballast piping system: - Examined
- Operationally tested"

and the existing parts 4 to 9 are renumbered as parts 5 to 10;

.2 The table headed "Extract of thickness measurements" is amended as follows:

.1 The existing text of the heading of the first column is replaced by the following:

"Position of substantially corroded tanks/areas or areas with deep pitting"

.2 The following new note is added at the end of the table:

"3 Any bottom plating with a pitting intensity of 20% or more, with wastage in the substantial corrosion range or having an average depth of pitting of 1/3 or more of actual plate thickness should be noted."

29 In annex 11, the fourth sentence of the existing paragraph 3.1 is replaced by the following:

"The approach is basically an evaluation of the risk based on the knowledge and experience related to design and corrosion."