

SUB-COMMITTEE ON STABILITY AND
LOAD LINES AND ON FISHING VESSELS
SAFETY
55th session
Agenda item 9

SLF 55/INF.11
14 December 2012
ENGLISH ONLY

**DEVELOPMENT OF PROVISIONS TO ENSURE THE INTEGRITY AND UNIFORM
IMPLEMENTATION OF THE 1969 TM CONVENTION**

Comments on the report of the correspondence group

Submitted by the International Association of Classification Societies (IACS)

SUMMARY

Executive summary: This document provides at the annexes some diagrams to support the Sub-Committee's further consideration of the draft Unified Interpretations

Strategic direction: 2

High-level action: 2.0.1

Planned output: 2.0.1.5

Action to be taken: Paragraph 14

Related documents: SLF 55/9, SLF 55/INF.2 and SLF 55/9/2

Background

1 This document is submitted in accordance with the provisions of paragraph 6.12.5 of the *Guidelines on the organization and method of work of the Maritime Safety Committee and the Marine Environment Protection Committee and their subsidiary bodies* (MSC-MEPC.1/Circ.4/Rev.2).

2 The Sub-Committee, at its fifty-fourth session (16 to 20 January 2012), agreed to establish a correspondence group, under the coordination of the United States, in which IACS was able to participate.

3 IACS has provided comments on the report of the correspondence group (SLF 55/9 and SLF 55/INF.2) in document SLF 55/9/2.

Discussion

4 In paragraph 5 of document SLF 55/9/2, IACS advises that a number of explanatory diagrams have now been prepared with the aim of further clarifying and explaining the Unified Interpretations to the end-users. These diagrams are provided at the annexes to this

document. The issue numbers referred to are those used by the correspondence group as contained in documents SLF 55/9 and SLF 55/INF.2.

5 Annex 1 presents a diagram to address issue 1.b "Determining least moulded depth" for cases where a raked keel is present.

6 Annex 2 presents a diagram illustrating spaces which should be considered as an enclosed space in situations where there is an obstruction outside an end opening. This relates to Issue 5.b "Impact of end opening obstructions".

7 Annex 3 relates to issue 5.c "Excluding space opposite an end opening as a recess" and gives a number of examples for recesses and states whether they are considered to be a recess or not.

8 Annex 4 illustrates excluded spaces related to side openings. This is relevant to issue 5.d "Characteristics of end and side openings".

9 Annex 5 illustrates included and excluded spaces in a side passageway where a false ceiling has been fitted, issue 5.e "Deck structure height requirements for side openings".

10 Annex 6 relates to issue 5.f "Restrictions on excluding space below uncovered openings" and illustrates included and excluded spaces where there is an opening in the deck.

11 Annex 7 provides some examples of moon pool arrangements. This is relevant to issue 6.c "Treatment of moon pools".

12 Annex 8 presents three different tonnage certificate examples and proposed addenda to show the difficulties sometimes encountered with the limited space that is available on the mandated format of the certificate in the Convention. This is relevant to discussions under issue 9.a "Listing of spaces on the certificate".

13 Annex 9 illustrates methods for determining the length of a space for use on the tonnage certificate. It is relevant to issue 9.b "Specifying lengths on the certificate".

Action requested of the Sub-Committee

14 As proposed in paragraphs 5 and 6 of document SLF 55/9/2, the Sub-Committee is invited to consider the annexed diagrams for incorporation into the draft Unified Interpretations of the 1969 Tonnage Convention and to decide as appropriate.

Issue 1.b Determining Least Moulded Depth.

Figure 1. - Step 1

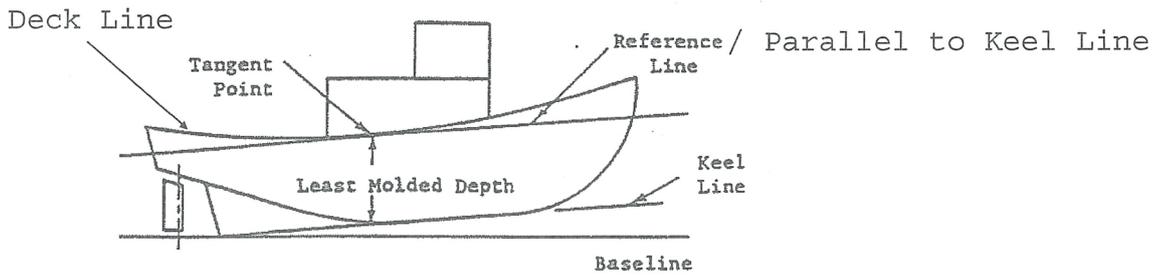
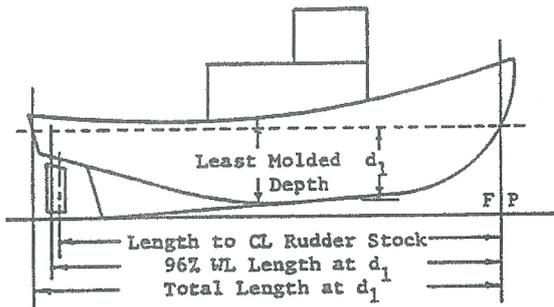
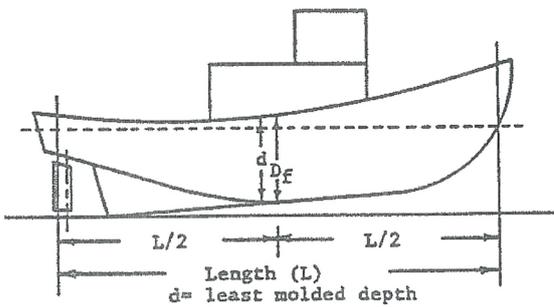


Figure 2. - Step 2



$d_1 = 85\%$ Least Moulded Depth
 96% WL Length at $d_1 >$ Length to CL Rudder Stock

Figure 3. - Step 3



96% WL Length at $d_1 =$ Length (L) = Length Article 2(8)
 $D_f =$ Moulded Depth Reg.2(2)

Issue 5b – Impact on End Opening Obstructions on Excluded Spaces

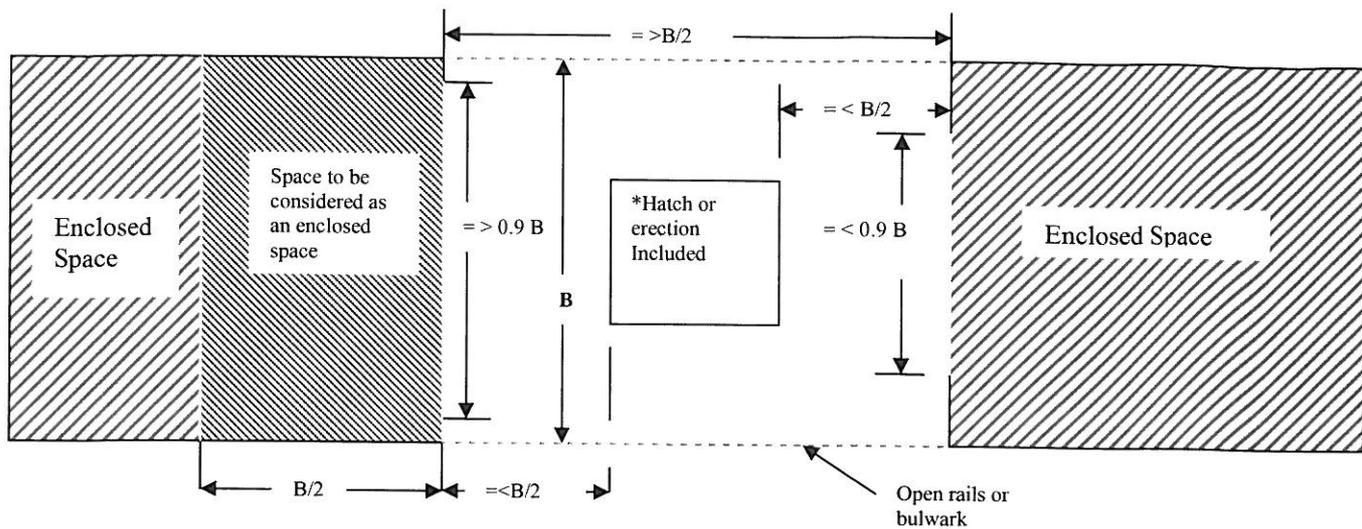


Fig. 1

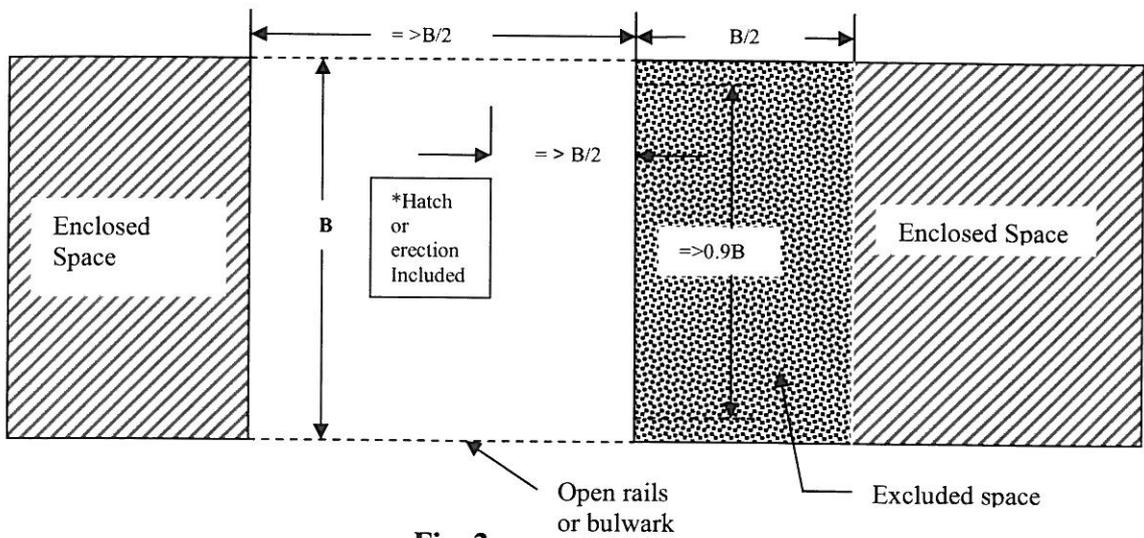


Fig. 2

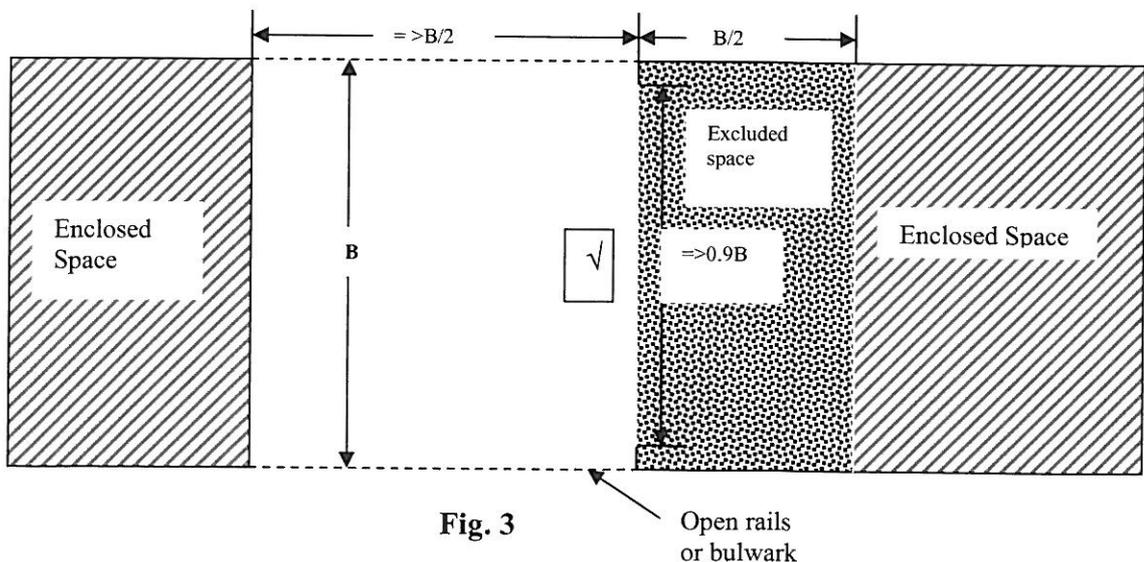
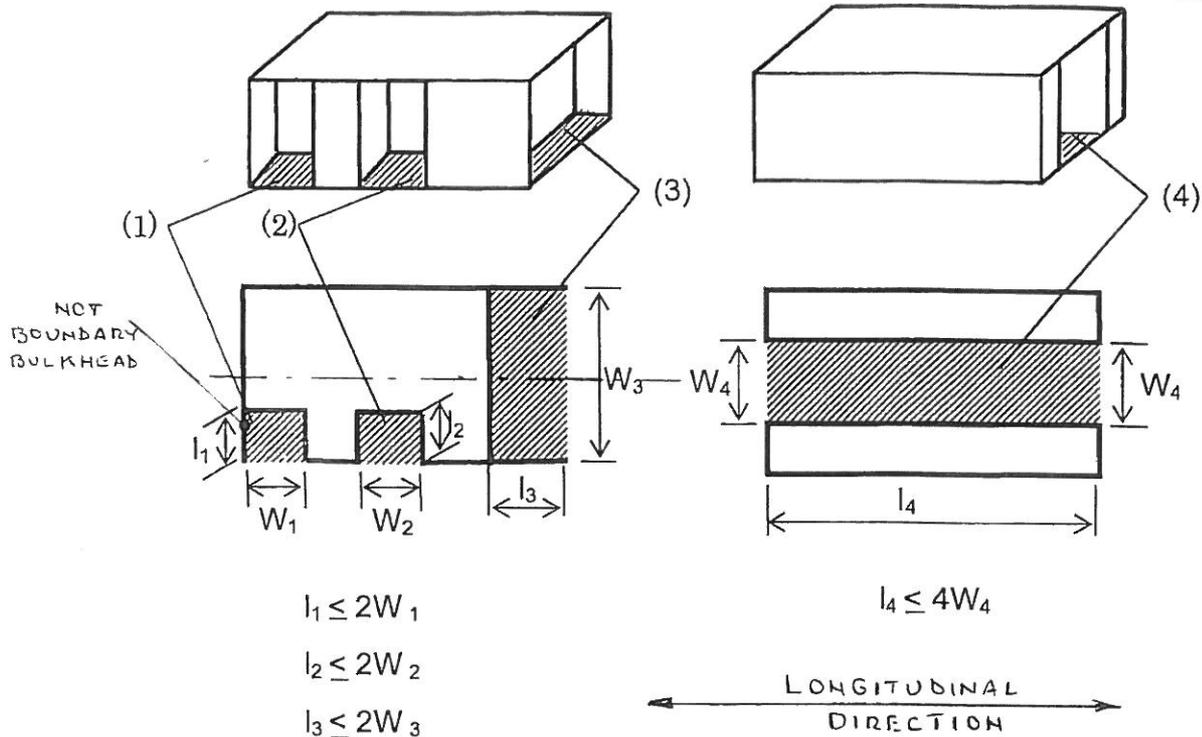
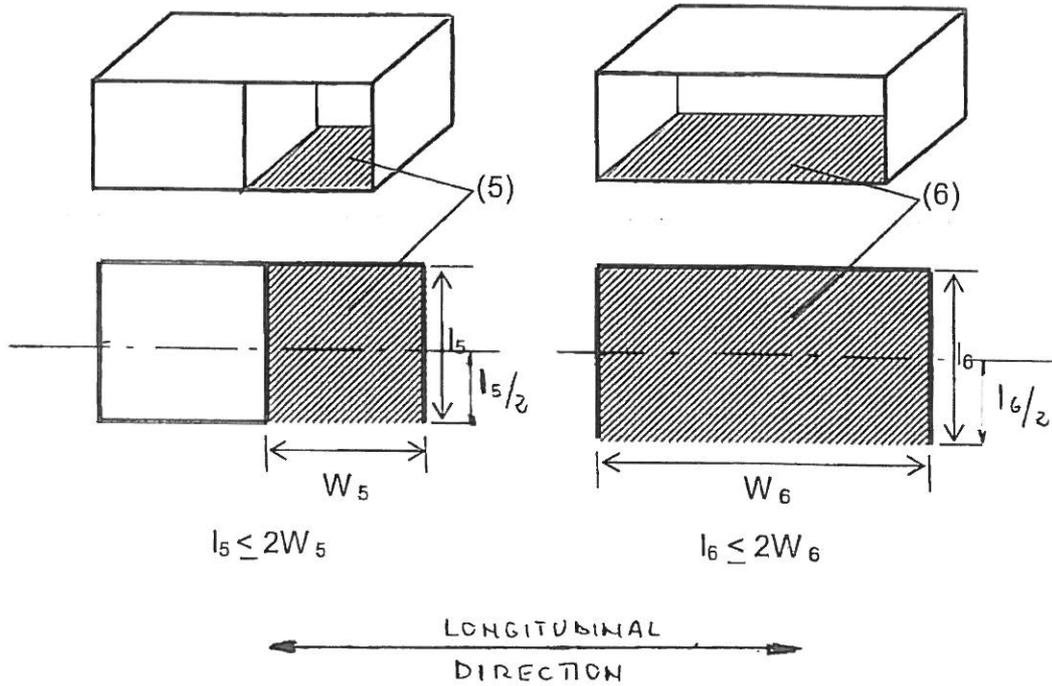


Fig. 3

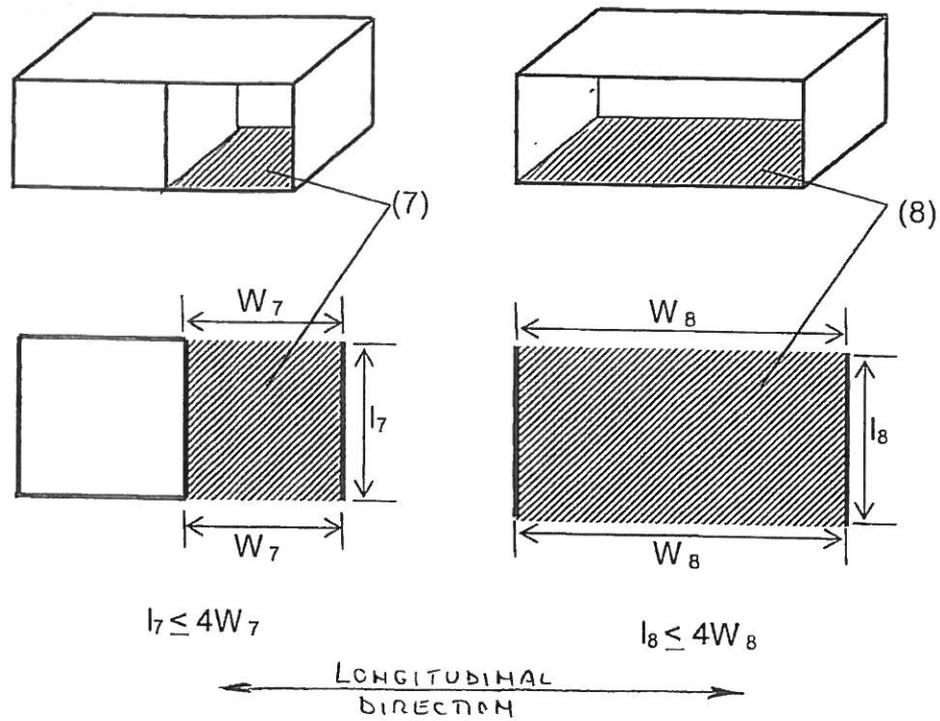
B = Breadth of deck in way of the opening
 *Hatch or erection, included. Area greater than 1m² and volume exceeding 1m³
 √ Hatch or erection, not included.



- (1) It is not a recess – Bounded by only two boundary bulkheads –
It should be excluded according to Reg. 2(5)(c) due to the side opening. In this interpretation the Reg. 2(5)(c) should be applied also to the not side-to-side. This is also supported by the fact that if the transversal bulkheads of the space should be extended until ship side (as requested by the Reg. 2(5)(c)), the excluded space would be more protected and greater.
- (2) It is a recess – Bounded by three boundary bulkheads –
Can be excluded according Reg. 2(5)(e) and, according to my above interpretation, also according Reg. 2(5)(c).
- (3) It is not a recess – Bounded by only one boundary bulkhead –
It is a space within an erection opposite an and opening and it can be excluded only if the provision of the Reg. 2(5)(a)(i) are met.
- (4) It is not a recess - Bounded by only two boundary bulkheads –
It is a space within an erection opposite an and opening and it can be excluded only if the provision of the Reg. 2(5)(a)(i) are met.

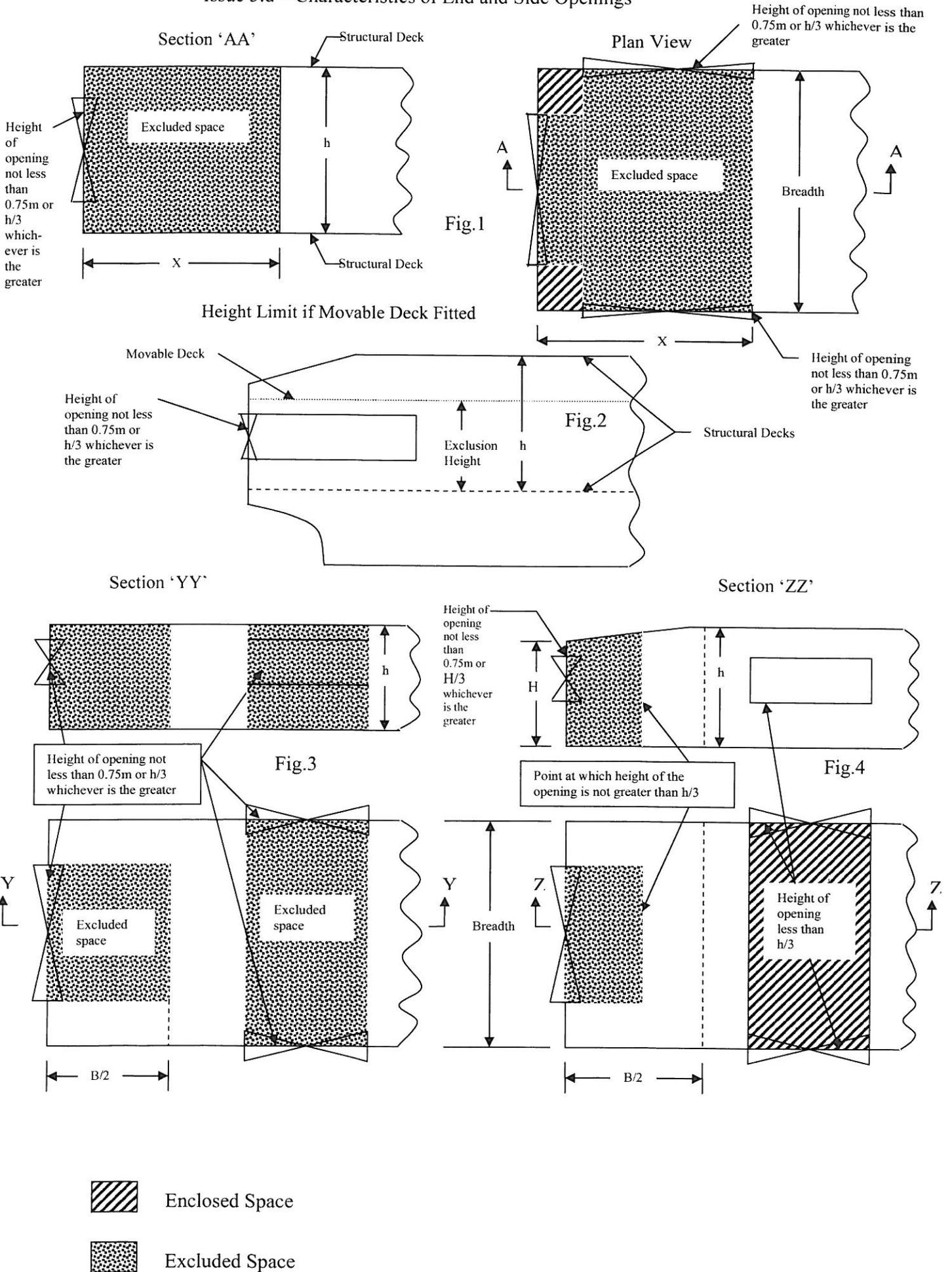


- (5) It is not a recess – Bounded by only one boundary bulkhead –
According Reg. 2(5)(c) should be excluded a space limited inboard from the side opening to one-half of the breadth of the erection ($l_5/2$), due to the only one side opening. According to what I was already said in the space (1), the space should be excluded also if the erection is not a side-to-side erection.
- (6) It is not a recess – There are not boundary bulkhead –
According Reg. 2(5)(c) should be excluded a space limited inboard from the side opening to one-half of the breadth of the erection ($l_6/2$), due to the only one side opening. According to what I was already said in the space (1), the space should be excluded also if the erection is not a side-to-side erection.



- (7) It is not a recess – Bounded by only one boundary bulkhead –
According Reg. 2(5)(c) should be entirely excluded due to the two sides opening.
According to what I was already said in the space (1), the space should be excluded also if the erection is not a side-to-side erection.

- (8) It is not a recess – There are not boundary bulkhead -
According Reg. 2(5)(c) should be entirely excluded due to the two sides opening.
According to what I was already said in the space (1), the space should be excluded also if the erection is not a side-to-side erection.



Issue 5.d – Characteristics of End and Side Openings
Plan View of Cruiser Stern

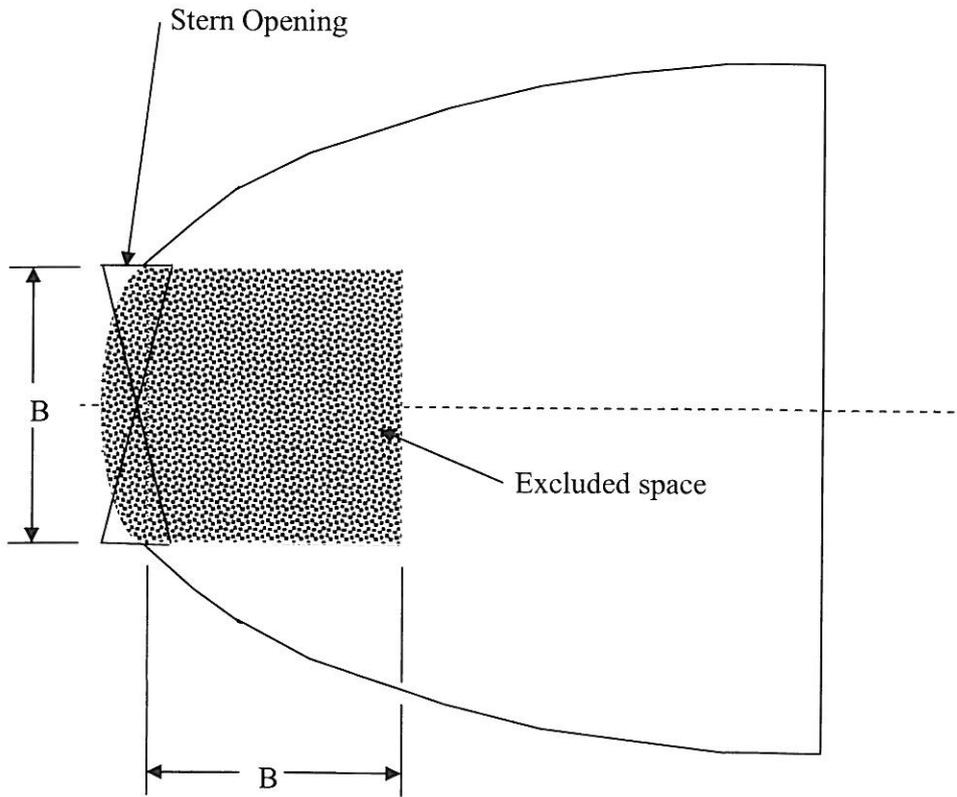
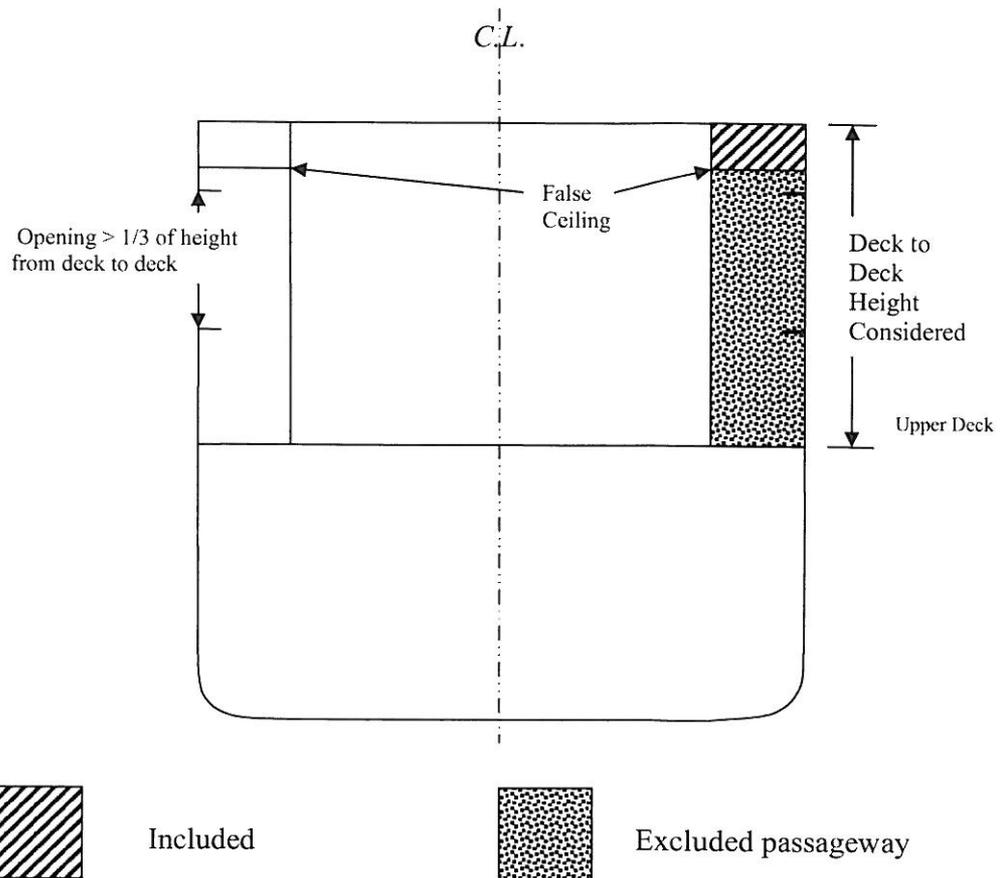


Fig.5

Projection of Exclusion = Breadth of Opening

Issue 5.e – Deck Structure Height Requirements for Excluded Space Side Openings



1. When determining the height requirement of the side opening in Regulation 2(5)(c); this should be taken as one third of the height, where the height is from deck to deck, ignoring any false ceiling that may be fitted.
2. When the height of the side opening is not less than 0.75 metres or one-third of the height of the erection, whichever is the greater, the space to be excluded shall be limited from the deck to the underside of any false ceiling. The space from the underside of the false ceiling to the deck above, should be included in the enclosed space volume.

Issue 5.f – Restrictions on Excluded Space Below Uncovered Openings

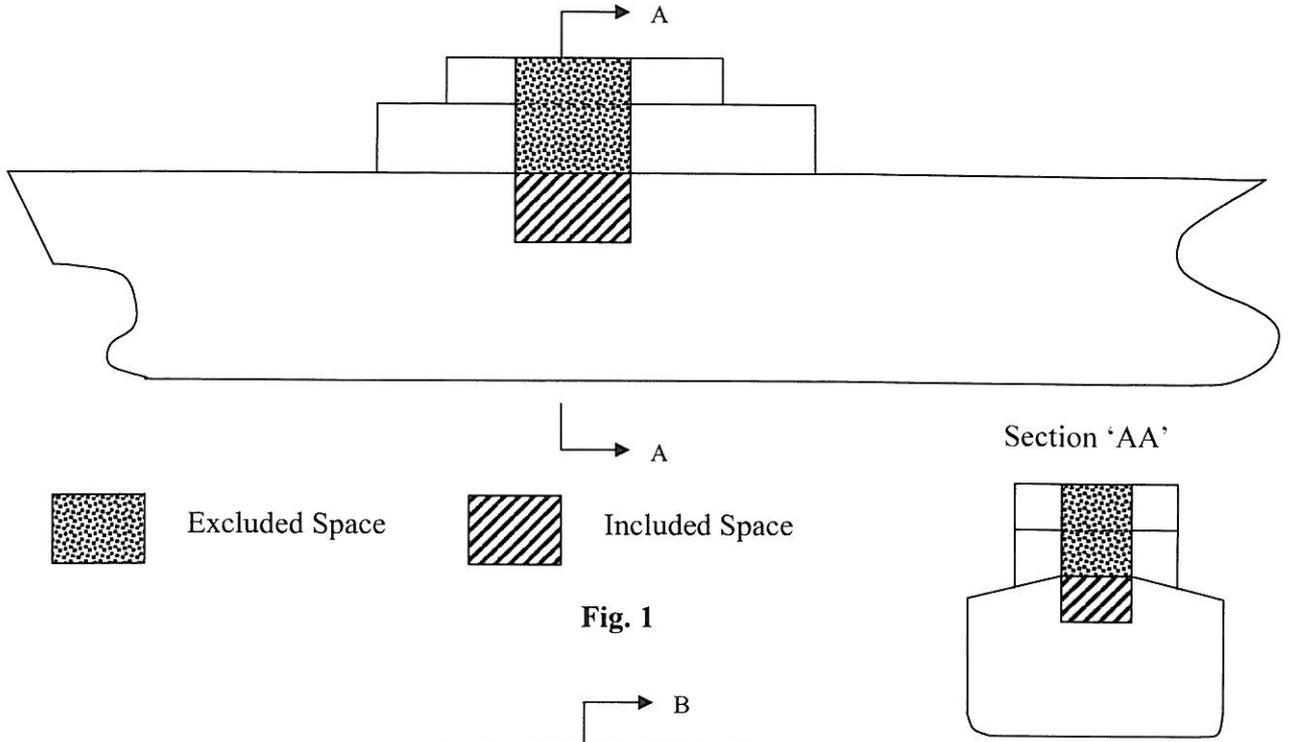


Fig. 1

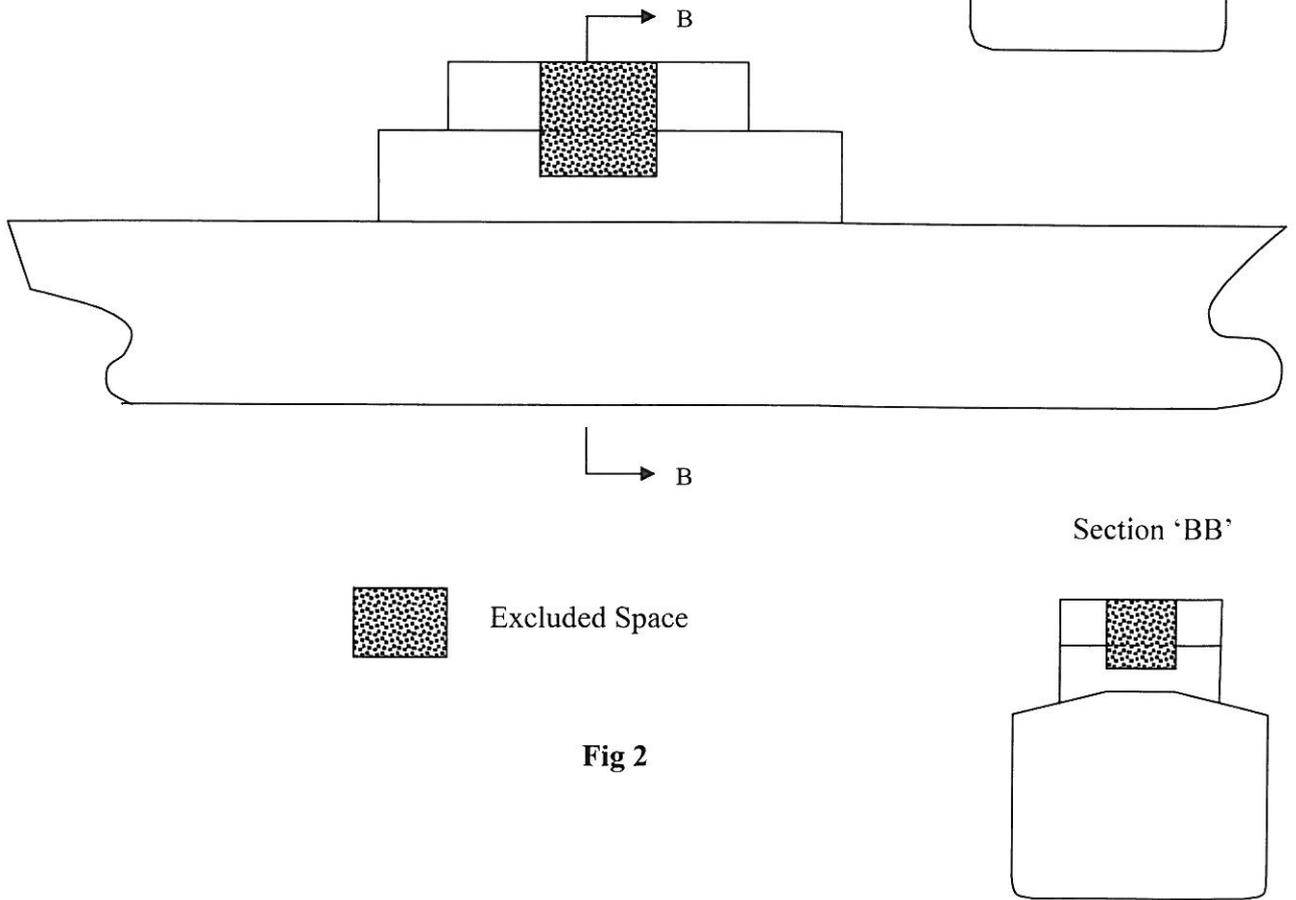


Fig 2

Issue 6.c - Treatment of Moon Pools

Upper Deck

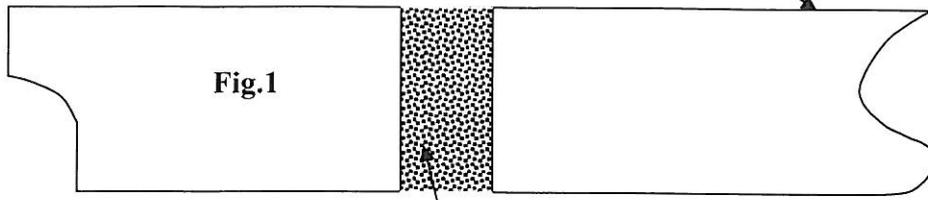
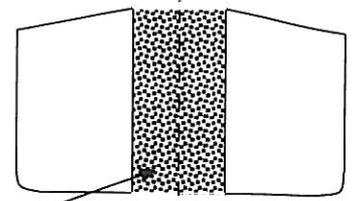


Fig.1



 Moonpool is open throughout and therefore totally excluded

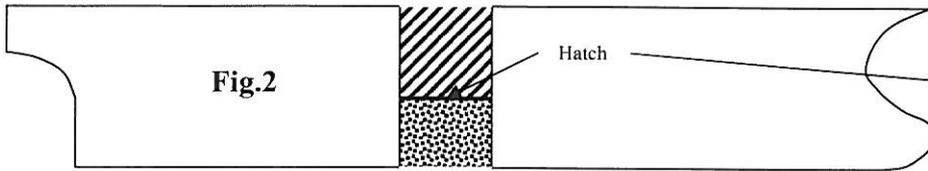
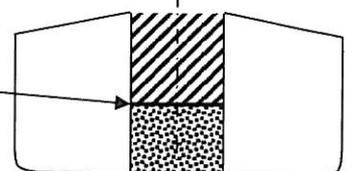


Fig.2



The Moonpool volume below the hatch is excluded from the Underdeck volume.



The Moonpool volume above the hatch is included in the Underdeck volume.

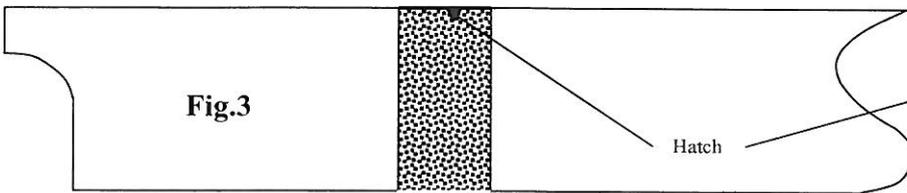
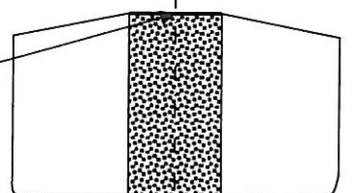


Fig.3



The hatch is situated at the top of the Moonpool, therefore the total volume of the Moonpool is excluded

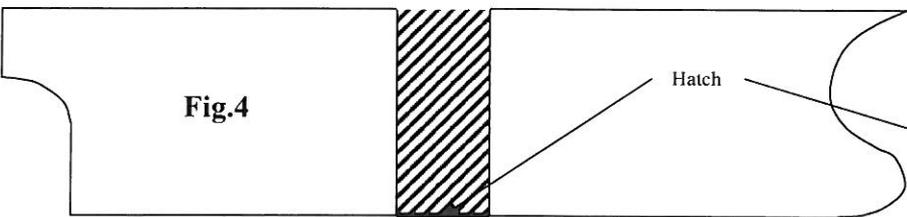
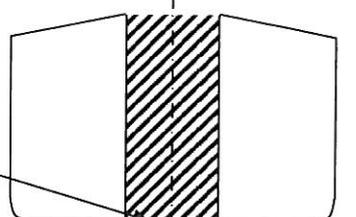


Fig.4



A hatch is fitted at the bottom of the Moonpool, therefore the total volume of the Moonpool is included in the Underdeck volume.

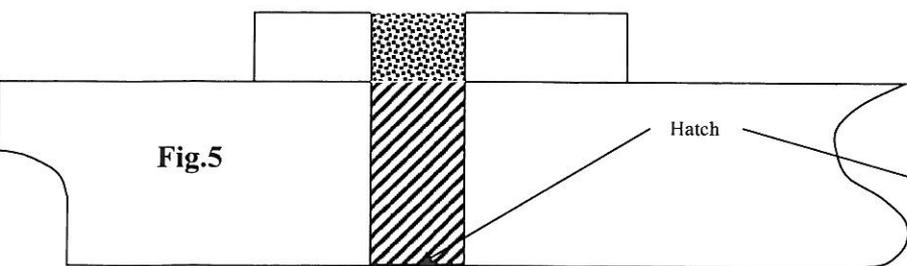
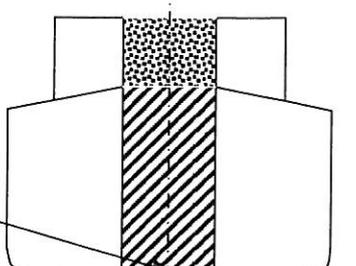


Fig.5



A hatch is fitted at the base of the Moonpool, therefore the total volume of the Moonpool within the Underdeck is included.



However the volume of the Moonpool which extends into the deckhouse is excluded.

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"SHIP 1"		IMO number 1234567	
SPACES INCLUDED IN TONNAGE - GROSS TONNAGE			
Name of space	Location (Frames)	Length (m)	Moulded Volume (m ³)
Underdeck	(-)04-161	115.70	15343.70
Forecastle	110-153	30.00	1669.10
Break (Aft)	(-)04-52	39.15	904.50
DECKHOUSE ON			
Forecastle Deck	111-136	17.50	691.22
'A' Deck	113-130	11.90	507.30
'B' Deck	113-130	11.90	507.30
'C' Deck	116-127	7.70	251.74
Navigation Bridge Deck	116-127	7.70	361.07
OTHER ENCL. SPACES			
Trunk on Upper Deck	12-110	68.60	3159.03
Crane (P)	81-83	1.80	23.10
Crane (C)	23-25	1.80	29.46
Cargo Hatch & Cover	51-107	39.20	492.98
Bow Thruster Hatch	136-139	2.31	5.39
Technical Space Hatch	111-113	1.60	2.18
Pump Room Hatch	38-40	1.40	2.18
Engine Room Hatch	31-34	2.19	2.98
Engine Room.Escape Hatch	29-31	2.19	2.98
Engine Casing on Trunk	12-20	5.60	197.10
Funnel on Engine Casing	12-20	5.60	114.10
TOTAL VOLUME (V1)			24267.41
An asterisk (*) should be added to those spaces listed above which comprise both enclosed and excluded spaces.			

SPACES INCLUDED IN TONNAGE					
GROSS TONNAGE			NET TONNAGE		
Name of space	Location (Frames)	Length (m)	Name of space	Location (Frames)	Length (m)
Underdeck	(-)04-161	115.70	Cargo Hold	47-110	44.10
Forecastle	110-153	30.00	Cargo Trunk on Upper Deck	47-110	44.10
Break (Aft)	(-)04-52	39.15	Cargo Hatch & Cover	51-107	39.20
DECKHOUSE ON					
Forecastle Deck	111-136	17.50			
'A' Deck	113-130	11.90			
'B' Deck	113-130	11.90			
'C' Deck	116-127	7.70			
Navigation Bridge Deck	116-127	7.70			
OTHER ENCL. SPACES					
Trunk on Upper Deck	12-110	68.60			
Crane (P)	81-83	1.80			
Crane (C)	23-25	1.80			
Cargo Hatch & Cover	51-107	39.20			
Bowthruster Hatch	136-139	2.31			
Technical Space Hatch	111-113	1.60			
Pump Room Hatch	38-40	1.40			
Engine Room Hatch	31-34	2.19			
Engine Room Escape Hatch	29-31	2.19			
Engine Casing on Trunk	12-20	5.60			
Funnel on Engine Casing	12-20	5.60			
EXCLUDED SPACES (regulation 2(5))			NUMBER OF PASSENGERS (regulation 4(1))		
NIL			Number of passengers in cabins with not more than 8 berths NIL		
			Number of other passengers NIL		
An asterisk (*) should be added to those spaces listed above which comprise both enclosed and excluded spaces.			MOULDED DRAUGHT (regulation 4(2)) 5.97 m		
Date and place of original measurement		APRIL 2012	at PORT, COUNTRY		
Date and place of last previous re- measurement		NOT APPLICABLE			
REMARKS:					
NIL					

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"SHIP 1"		IMO number 1234567	
SPACES INCLUDED IN TONNAGE - NET TONNAGE			
Name of space	Location (Frames)	Length (m)	Moulded Volume (m ³)
Cargo Hold	47-110	44.10	3895.18
Cargo Trunk on Upper Deck	47-110	44.10	2189.10
Cargo Hatch & Cover	51-107	39.20	492.98
TOTAL VOLUME (V2)			6577.26



"SHIP 1"	IMO number 1234567
<p>EXCLUDED SPACES (regulation 2(5)) NIL</p>	

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"SHIP NAME 2"		IMO number 1234567	
SPACES INCLUDED IN TONNAGE - GROSS TONNAGE			
Name of space	Location (Frames)	Length (m)	Moulded Volume (m ³)
Underdeck	(-)19-389	291.78	89868.00
Tweendeck on Deck 0	(-)18-379	285.03	29417.20
Tweendeck on Deck 1	(-)17-386	288.87	27247.40
Tweendeck on Deck 2	(-)16-394	292.24	27352.00
Tweendeck on Deck 3	(-)16-401	296.17	33673.42
BRIDGE&EXT ON			
*Deck 4	(-)14-386	276.94	27639.90
*Deck 10	43-346	219.47	21258.48
Deck 12 (Fwd)	242-339	70.05	5892.00
*Deck 14 (Fwd)	242-331	64.63	4517.82
BRIDGE ON			
Deck 8	07-359	254.91	22854.90
*Deck 9	12-353	247.63	22336.90
DECKHOUSE ON			
*Deck 5	(-)09-376	276.35	30433.56
Deck 6	(-)01-368	266.11	23575.21
Deck 7	03-359	257.93	22865.70
Deck 10 (P)	27-37	6.75	104.06
Deck 10 (S)	27-32	3.30	35.70
*Deck 11 (Fwd)	222-339	84.50	7688.16
Deck 11 (Aft)	45-169	89.58	6234.25
Deck 12 (Mid Fwd)	154-170	11.60	542.57
*Deck 12 (Mid Aft)	80-127	34.08	2095.74
Deck 12 (Aft)	46-56	7.25	291.58
Deck 14 (Mid)	80-123	31.59	1183.20
Deck 15 (Fwd)	259-320	36.60	1225.84
Deck 15 (Mid)	252-256	3.05	84.40
OTHER ENCL. SPACES			
Jacuzzi on Deck 4	389-395	3.59	8.16
Jacuzzis on Deck 5 (P&S)	192-208	11.00	42.92
Jacuzzis on Deck 5 (P&S)	64-80	11.00	27.42
Jacuzzi on Deck 10 (P)	26-33.5	5.25	7.80
Jacuzzi on Deck 10 (S)	26-33.5	5.25	7.80
Water slide structure on Deck 12	224-232		210.99
Skylight on Deck 15 (Fwd)	307-321	9.80	140.48
Companionway on Deck 15 (P)	260-268	5.60	23.44
Funnel on Deck 15	90-121	22.63	1199.43
TOTAL VOLUME (V1)			410086.43
An asterisk (*) should be added to those spaces listed above which comprise both enclosed and excluded spaces.			

Issue 9.a - Listing of Spaces on the Certificate
 Ship 2. Excess spaces in Gross Tonnage continued under Net Tonnage

Certificate no:

ABCD 1234567

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SPACES INCLUDED IN TONNAGE					
GROSS TONNAGE			NET TONNAGE		
Name of space	Location (Frames)	Length (m)	Name of space	Location (Frames)	Length (m)
Underdeck	(-)19-389	291.78	Mail Room	200-210	6.88
Tweendeck on Deck 0	(-)18-379	285.03	Baggage Locker	214-219	3.44
Tweendeck on Deck 1	(-)17-386	288.87	Baggage Locker	219-225	3.44
Tweendeck on Deck 2	(-)16-394	292.24			
Tweendeck on Deck 3	(-)16-401	296.17			
BRIDGE&EXT ON					
*Deck 4	(-)14-386	276.94			
*Deck 10	43-346	219.47			
Deck 12 (Fwd)	242-339	70.05			
*Deck 14 (Fwd)	242-331	64.63			
BRIDGE ON					
Deck 8	07-359	254.91			
*Deck 9	12-353	247.63			
DECKHOUSE ON					
*Deck 5	(-)09-376	276.35			
Deck 6	(-)01-368	266.11	SPACES INCLUDED IN		
Deck 7	03-359	257.93	GROSS TONNAGE		
Deck 10 (P)	27-37	6.75	CONTINUED:		
Deck 10 (S)	27-32	3.30	Jacuzzi on Deck 4	389-395	3.59
*Deck 11 (Fwd)	222-339	84.50	Jacuzzis on Deck 5 (P&S)	192-208	11.00
Deck 11 (Aft)	45-169	89.58	Jacuzzis on Deck 5 (P&S)	64-80	11.00
Deck 12 (Mid Fwd)	154-170	11.60	Jacuzzi on Deck 10 (P)	26-33.5	5.25
*Deck 12 (Mid Aft)	80-127	34.08	Jacuzzi on Deck 10 (S)	26-33.5	5.25
Deck 12 (Aft)	46-56	7.25	Water slide structure on Deck	224-232	
Deck 14 (Mid)	80-123	31.59	Skylight on Deck 15 (Fwd)	307-321	9.80
Deck 15 (Fwd)	259-320	36.60	Companionway on Deck 15 (P)	260-268	5.60
Deck 15 (Mid)	252-256	3.05	Funnel on Deck 15	90-121	22.63
EXCLUDED SPACES (regulation 2(5)) SEE ADDENDUM			NUMBER OF PASSENGERS (regulation 4(1))		
An asterisk (*) should be added to those spaces listed above which comprise both enclosed and excluded spaces.			Number of passengers in cabins with not more than 8 berths 4631		
			Number of other passengers NIL		
			MOULDED DRAUGHT (regulation 4(2)) 8.50 m		
Date and place of original measurement		JANUARY 2012	at		PORT, COUNTRY
Date and place of last previous re- measurement		MARCH 2011	at		SOMEWHERE, COUNTRY
REMARKS: NIL					

Certificate Reference

Issuing Authority
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"SHIP NAME 2"		IMO number 1234567	
SPACES INCLUDED IN TONNAGE - NET TONNAGE			
Name of space	Location (Frames)	Length (m)	Moulded Volume (m ³)
Mail Room	200-210	6.88	44.69
Baggage Locker	214-219	3.44	89.34
Baggage Locker	219-225	3.44	89.34
TOTAL VOLUME (V2)			

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Certificate Addendum

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"SHIP NAME 2"

IMO number 1234567

EXCLUDED SPACES (regulation 2(5))

Side Recesses in Bridge on Deck 4 (P&S) FR.34-FR.335
Side Recesses in Deckhouse on Deck 5 (FR.125-FR.127
Swimming Pool in Bridge on Deck 9 FR.179-FR.192
Swimming Pool in Bridge on Deck 9 FR.24-FR.33
Recess in Bridge & Extension on Deck 10 (C) FR.176-FR.218
Aft Recesses in Bridge & Extension on Deck 10 (P&S) FR.43-FR.56
Aft Recess in Bridge & Extension on Deck 10 (S) FR.45-FR.48
Aft Side Recesses in Deckhouse on Deck 11 (P&S) FR.222-FR.224
Aft Recess in Deckhouse on Deck 11 (C) FR.222-FR.224
Fwd. Recess in Deckhouse on Deck 12 (C) FR.124-FR.127
Aft Recess in Deckhouse on Deck 14 (P) FR.255-FR.257

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"SHIP 3"		IMO number 1234567	
SPACES INCLUDED IN TONNAGE - GROSS TONNAGE			
Name of space	Location (Frames)	Length (m)	Moulded Volume (m ³)
Underdeck	(-)06-239	188.80	79239.25
Forecastle	212-235	14.68	691.26
DECKHOUSE ON			
Upper Deck	181-185	3.20	88.02
Upper Deck	144-148	3.20	88.02
Upper Deck	108-112	3.20	88.02
Upper Deck	71-75	3.20	88.02
Upper Deck	21-36	12.00	731.23
Upper Deck (P&S)	12-18	5.20	153.82
'A' Deck	21-36	12.00	677.98
'B' Deck	21-36	12.00	587.58
'C' Deck	23-36	10.40	587.57
Nav Bridge Deck	23-35	9.60	298.34
OTHER ENCL. SPACES			
No.1 Cargo Hatch & Cover	188-209	16.80	662.65
Nos 2-5 Cargo Hatches & Covers		20.00	3152.90
Engine Casing on Upper Deck	12-21	7.20	382.97
Funnel on Engine Casing	13-19	4.80	198.77
No.1 Crane Post & Housing	181-185	2.77	81.76
No.2 Crane Post & Housing	144-148	2.77	89.68
No.3 Crane Post & Housing	108-112	2.77	81.76
No.4 Crane Post & Housing	71-75	2.77	89.68
Companionway Aft	10-12	1.22	6.59
TOTAL VOLUME (V1)			88065.87
An asterisk (*) should be added to those spaces listed above which comprise both enclosed and excluded spaces.			

Issue 9.a - Listing of Spaces on the Certificate
Ship 3. Typical Bulk Carrier Certificate

Certificate no: **ABCD 1234567**
Page 2 of 2

SPACES INCLUDED IN TONNAGE					
GROSS TONNAGE			NET TONNAGE		
Name of space	Location (Frames)	Length (m)	Name of space	Location (Frames)	Length (m)
Underdeck	(-)06-239	188.80	No. 1 Cargo Hold	183-218	28.00
Forecastle	212-235	14.68	No. 2 Cargo Hold	146-183	29.60
DECKHOUSE ON			No. 3 Cargo Hold	110-146	29.60
Upper Deck	181-185	3.20	No. 4 Cargo Hold	73-110	29.60
Upper Deck	144-148	3.20	No. 5 Cargo Hold	36-73	29.60
Upper Deck	108-112	3.20	No.1 Cargo Hatch & Cover	188-209	16.80
Upper Deck	71-75	3.20	No.2 Cargo Hatch & Cover	152-177	20.00
Upper Deck	21-36	12.00	No.3 Cargo Hatch & Cover	115-140	20.00
Upper Deck (P&S)	12-18	5.20	No.4 Cargo Hatch & Cover	79-104	20.00
'A' Deck	21-36	12.00	No.5 Cargo Hatch & Cover	42-67	20.00
'B' Deck	21-36	12.00			
'C' Deck	23-36	10.40			
Nav Bridge Deck	23-35	9.60			
OTHER ENCL. SPACES					
No.1 Cargo Hatch & Cover	188-209	16.80			
Nos 2-5 Cargo Hatches & Covers		20.00			
Engine Casing on Upper Deck	12-21	7.20			
Funnel on Engine Casing	13-19	4.80			
No.1 Crane Post & Housing	181-185	2.70			
No.2 Crane Post & Housing	144-148	2.70			
No.3 Crane Post & Housing	108-112	2.70			
No.4 Crane Post & Housing	71-75	2.70			
Companionway Aft(-)	10-12	1.22			
EXCLUDED SPACES (regulation 2(5)) NIL			NUMBER OF PASSENGERS (regulation 4(1))		
An asterisk (*) should be added to those spaces listed above which comprise both enclosed and excluded spaces.			Number of passengers in cabins with not more than 8 berths NIL		
			Number of other passengers NIL		
			MOULDED DRAUGHT (regulation 4(2)) 10..90 m		
Date and place of original measurement		DECEMBER 1996	at		PORT, COUNTRY
Date and place of last previous re- measurement		APRIL 2003	at		SOMEWHERE, COUNTRY
REMARKS: NIL					

Certificate Reference

Issuing Authority
Logo

"SHIP 3"		IMO number 1234567	
SPACES INCLUDED IN TONNAGE - NET TONNAGE			
Name of space	Location (Frames)	Length (m)	Moulded Volume (m ³)
No. 1 Cargo Hold	183-218	28.00	9466.86
No. 2 Cargo Hold	146-183	29.60	11759.51
No. 3 Cargo Hold	110-146	29.60	11443.59
No. 4 Cargo Hold	73-110	29.60	11811.81
No. 5 Cargo Hold	36-73	29.60	10963.60
No.1 Cargo Hatch & Cover	188-209	16.80	662.65
No.2 Cargo Hatch & Cover	152-177	20.00	788.24
No.3 Cargo Hatch & Cover	115-140	20.00	788.24
No.4 Cargo Hatch & Cover	79-104	20.00	788.24
No.5 Cargo Hatch & Cover	42-67	20.00	788.18
TOTAL VOLUME (V2)			59260.92

Issuing Authority
Logo

"SHIP 3"

IMO number 1234567

EXCLUDED SPACES (regulation 2(5))

NIL

Issue 9b – Specifying Lengths of Spaces on the Certificate

Deckhouse with a vent which is not full height, when they are indicated as a single item on the Tonnage Certificate.

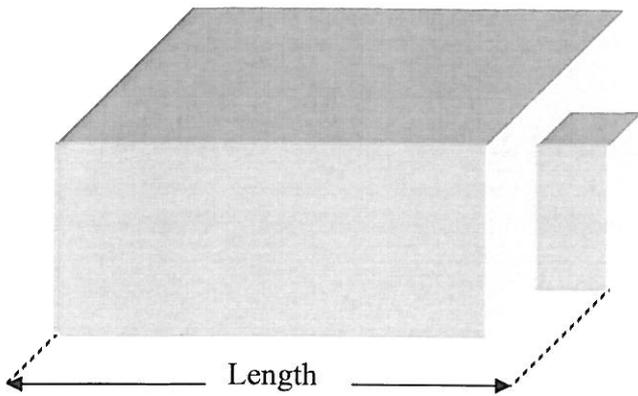


Fig. 1.

Deckhouse with a vent at full height, when they are indicated as a single item on the Tonnage Certificate.

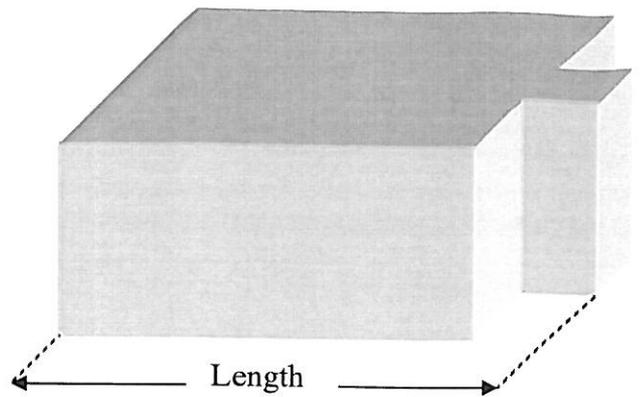


Fig. 2.

Deckhouse with raked forward and aft bulkheads

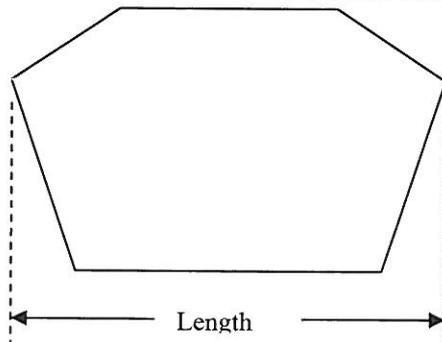


Fig. 3.

Forecastle without an overhang

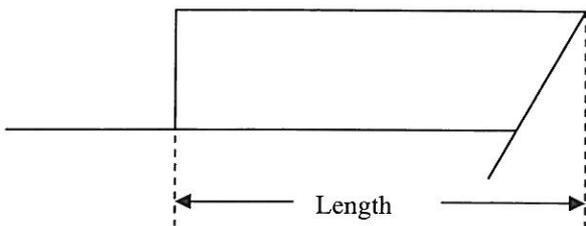


Fig. 4

Forecastle with overhang

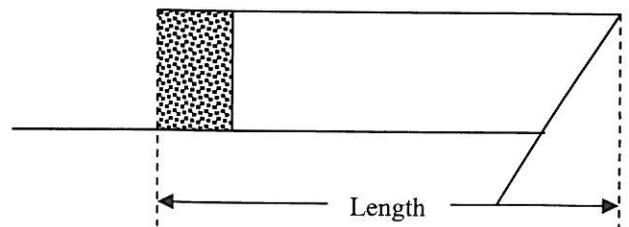


Fig. 5



Excluded Space

Hatch Coaming and Cover when they are indicated as a single item on the Tonnage Certificate.

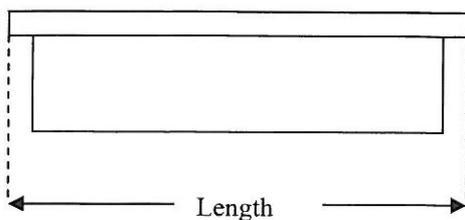


Fig. 6

Hold length

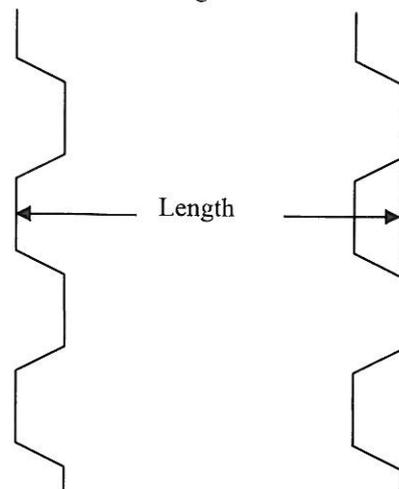


Fig. 7