



SUB-COMMITTEE ON STABILITY AND  
LOAD LINES AND ON FISHING VESSELS  
SAFETY  
48th session  
Agenda item 12

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## TONNAGE MEASUREMENT OF OPEN-TOP CONTAINERSHIPS

### Open-top containerships admeasurements in accordance with the 1969 TM Convention

#### Submitted by Germany

#### SUMMARY

*Executive summary:* This document presents a short summary of observations and recent developments made with regard to open-top containerships and their tonnage figures. It proposes to proceed in parallel amending existing interpretations of the TM.5/Circ.5 and at the same time to develop a relevant amendment to the convention itself.

*Action to be taken:* Paragraphs 10 and 12

*Related documents:* SLF 46/15/1, SLF 46/15/2, MSC 78/24/5, 1969 TM Convention and TM.5/Circ.5

#### Background

1 Germany considers it necessary to improve the means to admeasure open-top containerships. With regard to a preliminary discussion at the forty-sixth session of the SLF Sub-Committee based on a submission by the Netherlands (SLF 46/15/2), the question was raised as to how best to overcome specific shortcomings.

2 The shortcomings for **open-top containerships** were established as being two-fold:

- .1 a deficiency with regard to the formula itself, which foresees open-top containerships to not be larger than 30,000 GT; and
- .2 currently open-top containerships are granted a specific **interpretation** (in accordance with TM.5/Circ.5) to allow for a reduction in gross tonnage. This interpretation has no binding character. The result in allowance is not carried forward to first page of the tonnage certificate.

3 Based on observations made in the time between the establishment of the interpretation contained in TM.5/Circ.5 and today Germany has worked on a better formulae to allow for open-top containerships without defining a limitation in size. Such formulae were proposed in the previous papers (annex to document SLF 46/15/1).

4 Meanwhile more open-top containerships have been presented to the German Administration. Most recently there in one case it seemed the design had overcome the commercial disadvantageous. However, this impression was understood to have been triggered unintentionally and without justification. Closed hatch containerships with a similar deadweight and container in take do have a smaller gross tonnage.

The comparison of containerships can identify very different results depending on the characteristics used as the basis. The study presented by a classification society<sup>1</sup> to allow for a different interpretation for a gross tonnage correction in a specific case.

### **Reduction in GT**

5 Based on such studies, Germany continued to explore the previous proposal and at the same time, tried to develop trends for conventional closed hatch containerships and open-tops (reference is made to the annex).

The annex provides an update on the previously developed proposal for an amendment of the circular TM.5/Circ.5 and establishes in its part III a comparison of the gross tonnage versus deadweight for all available closed hatch and open-top containerships.

6 Based on the data provided in the annex, Germany would like propose that the allowance for open-top containerships should be simplified and very general, i.e. the allowance should be **a flat reduction rate of 10% of GT** calculated in accordance with the 1969 TM Convention.

### **Definition of open-top containerships**

7 The current definition of open-top containerships is rather vague. It only requires very generically to have a U-shaped cross section. It does not specify the extent of the hatches to remain uncovered. Thus any containership with a single, very small hatch located symmetrically to the centre line would make a vessel qualify as an “open-top” containership.

8 The abovementioned reduction of 10% gt should only be granted to open-top containerships which **feature at least 50% of their hatches “open-top”** and comply fully with the relevant **MSC/Circ.608/Rev.1**.

### **Proposal for a longer term binding solution**

9 A short term solution for the improved open-top containership admeasurement is proposed by means of an **amendment to the tonnage circular TM.5/Circ.5**. This should cover both **the amended formulae** but also the **amended definition of the term open-top containership**. This remedy, however, will not lead to a binding solution.

10 Germany wishes to propose to proceed with an amendment to TM.5/Circ.5, however, at the same time to develop an amendment to the 1969 TM Convention itself. The major advantage of this convention remains to be its simplicity of the formulae (allowing virtually no room for interpretations). The proposed reduction by 10% features the same advantage.

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<sup>1</sup> “A comparison between the gross tonnage of P&O Nedlloyd open hatch containerships and closed hatch containerships of similar deadweight” was presented by LR as a non-paper at MSC 78.

11 In order to eliminate the current economic disadvantage of open-top containerships – which have a very good safety record - Germany proposes further that the reduction in gross tonnage should be taken forward **as a correction for the number representing the enclosed volumes of the ship hull** and thus be entered - in lieu of the previously calculated GT – **on the first page of the tonnage certificate.**

**Action requested of the Sub-Committee**

12 The Sub-Committee is invited to consider the information provided in the annex and take action as deemed appropriate.

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## ANNEX

### I. REDUCED GT FOR OPEN-TOP CONTAINERSHIPS (COMPARISON IMO-FORMULA/BSH GT' DRAFT)

IMO provis.:  $GT'_{IMO} = GT \times [1 - ((30000 - GT)/1000) \times 0,007]$

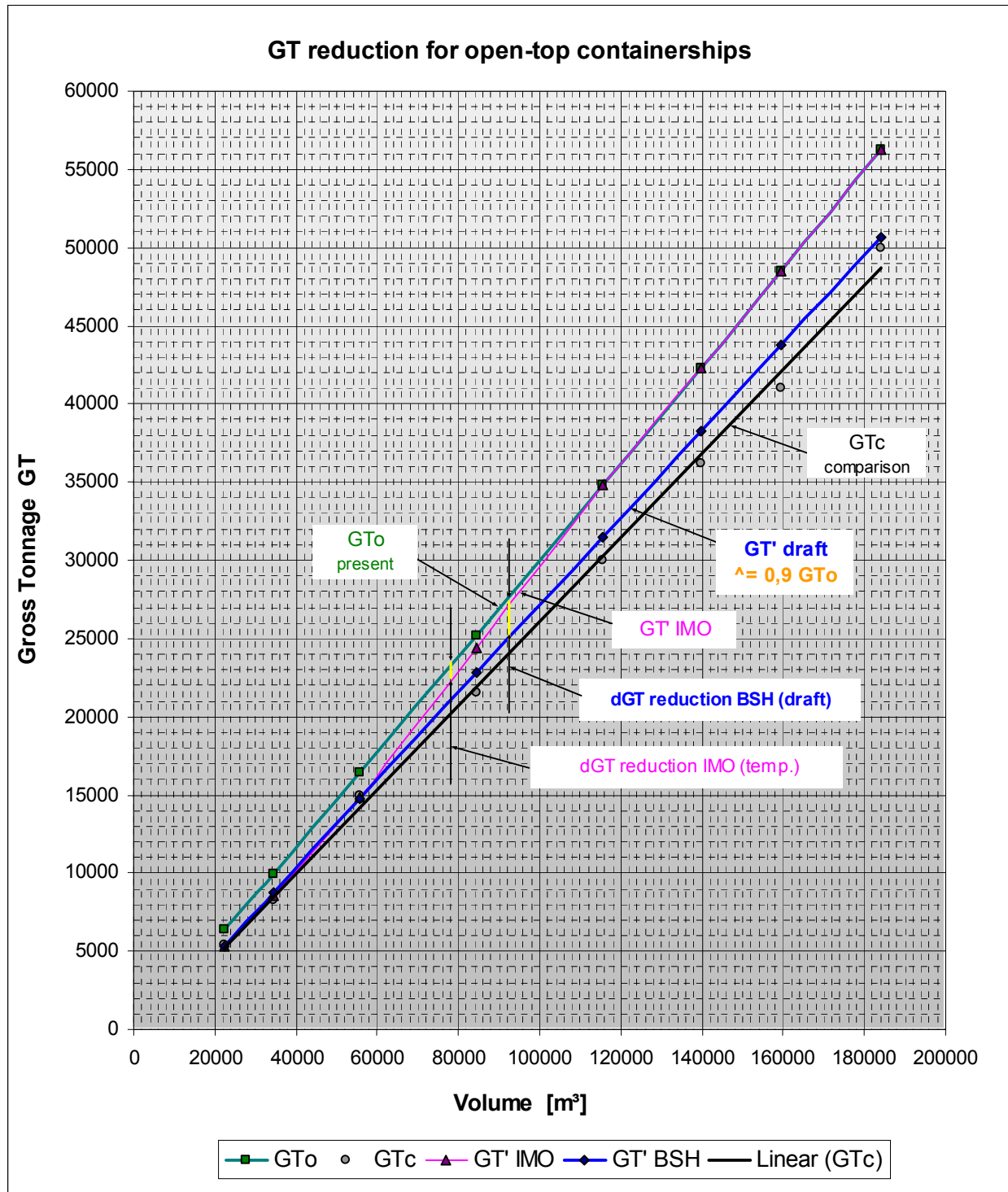
BSH draft:  $GT'_{draft} = 0,28 \times V - 850$

corresponds to a **reduction** of ~ 10% ==>

$0,9 GT_o = GT' = 0,277 \times V - 586$

Examples:	V [m <sup>3</sup> ]	present GT <sub>o</sub> Lo69	comp. with GT <sub>c</sub> Lo69	reduction GT' IMO	reduction GT' draft	reduction 0,9 GT <sub>o</sub>	GT' IMO red. in %	GT' draft red. in %
	1	2	3	4	5	6 = 0,9 * 2	7 = 4:2	8 = 5:2
A Sietas T160	22200	6375	5400	5300	5350	5738	16,9	16,1
B Sietas T168	34400	9960	8300	8600	8775	8964	13,7	11,9
C Meyer	55800	16450	14970	14900	14775	14805	9,4	10,2
D 'Shire' Fleet	84400	25200	21500	24350	22800	22680	3,4	9,5
E HDW Dole	115500	34800	30000	34800	31500	31320	0,0	9,5
F HDW Norasia	139650	42300	36200	42300	38250	38070	0,0	9,6
G P&O Nedlloyd	159500	48500	41000	48500	43800	43650	0,0	9,7
H P&O Nedlloyd	184200	56250	50000	56250	50700	50625	0,0	9,9

o = open-top      c = closed (with hatch covers)

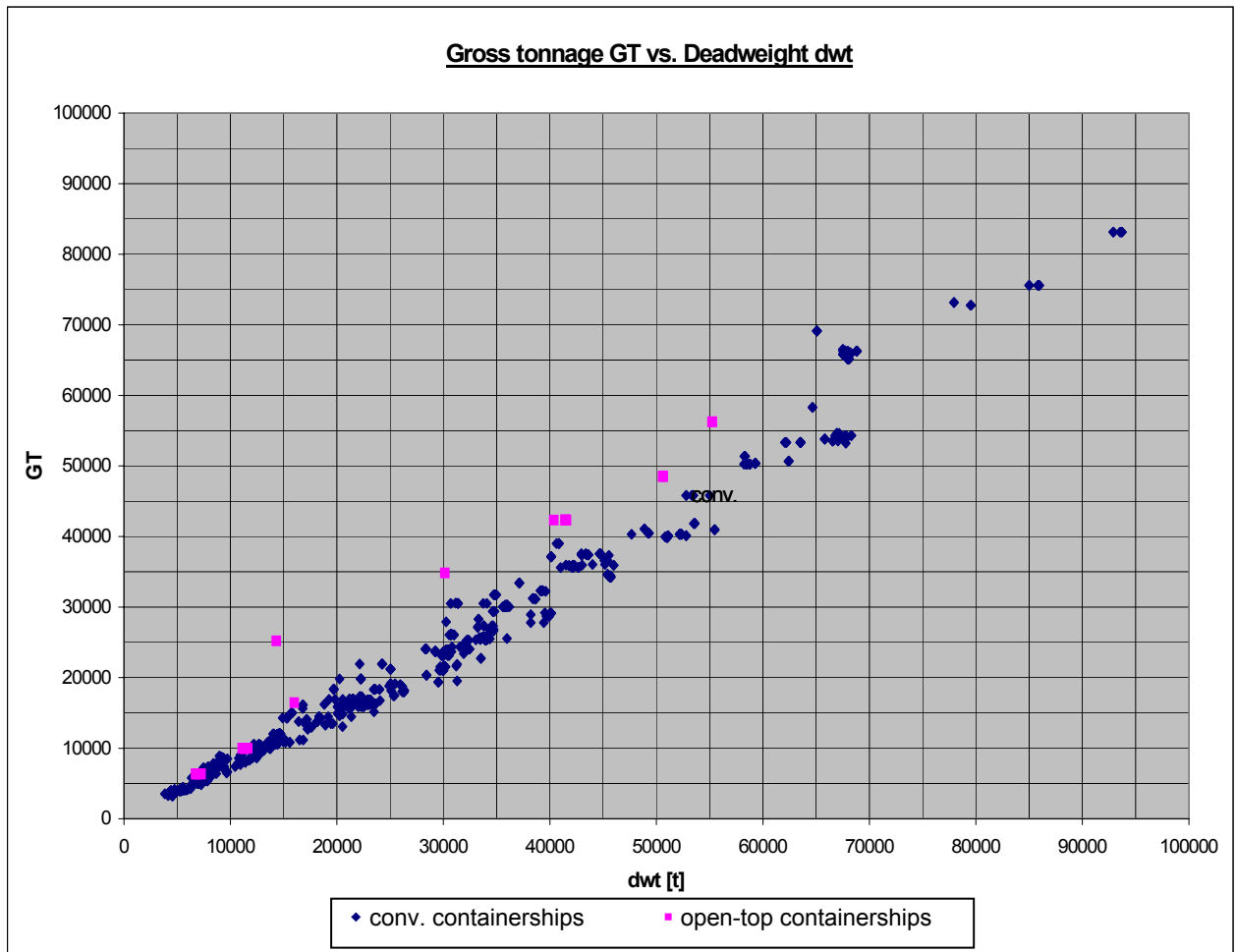


## II. SHIPS DATA OF CLOSED CONTAINERSHIPS IN COMPARISON WITH OPEN-TOP SHIPS

	Name	Year b.	Type	L ca	B	d	tdw	TEU GT	resp. GTo	IMO-No	BISS-No	Builder
A	SVEN	1996	opentop	121.94	18.20	6.69	6950	700	6375	9134139	90893	Sietas/D
	ANTJE	1997	closed	118.25	17.90	7.08	6650	658	5050	9186405	93905	Sietas/D
	TANGER	1981	closed	120.54	18.40	6.49	7826	607	5370 *	8017310	31076	Sinagp Sb.
	CARINA	1990	closed	122.02	18.70	6.95	7562	697	5800	8908545	32684	Sietas/D
B	MAERSK FALMOUTH	2001	opentop	134.40	22.50	8.70	11150	862	9980	9266530	110189	Sietas/D
	CONCORDIA	1997	closed	138.50	21.75	8.36	11400	864	8000	9162679	93498	Sietas/D
	UMFLOZI	1982	closed	133.40	20.20	8.65	11700	891	8390 *	8116738	30264	Sietas/D
	ALROCA	1995	closed	132.90	22.90	7.70	9200	907	8600	9106443	90376	Stocznia/PL
C	ELBEK	2004	opentop	169.00	27.20	9.00	16000	1600	16450	9313199	104558	Meyer/D
	LYKES PILOT	1996	closed	166.80	27.40	9.60	20100	1512	15850 *	9081019	90759	TNWD
	SAFMARINE PAKISTAN	1998	closed	167.99	26.70	10.81	22250	1671	15930	9162370	93545	MTWD
	COLUMBUS FLORIDA	1996	closed	168.52	27.40	9.90	21000	1640	16200	9141132	93068	TNWD
	TIMMOXACA	1997	closed	148.00	24.50	9.03	16500	1122	11150	9157131	93407	Peene/WD
	MARS	1996	closed	158.75	24.00	10.20	18400	1129	14240	9127502	93156	Stocznia/PL
	CALA FIEDAD	1994	closed	167.04	25.00	9.83	20140	1384	14970 *	9085314	90255	Aker/WD
	Shire Fleet	1998	opentop	216.00	26.66	9.40	14310	1388	25200	9169067	93680	HDWD
D	D. RICKMERS	1997	closed	184.00	25.30	9.89	22990	1730	16800	9144160	93981	Stocznia/PL
	EYRENE	1993	closed	182.00	28.40	11.54	30000	1806	21000	9070644	90019	TNWD
	SANTA GIOVANNA	1996	closed	182.09	29.80	11.55	29700	2060	21500 *	9126479	90850	Fleender/D
	NORDEAGLE	1997	closed	205.85	27.40	10.10	21700	2100	24000	9134505	90941	Daewoo/Kor
E	DOLE CHILE	1999	opentop	205.00	32.24	10.21	30100	2000	34800	9185281		HDWD
	MERKUR STAR	1995	closed	203.00	30.60	11.55	39500	2480	29100	9102734	91680	FSGD
	QVA CG MEGYPT	1996	closed	201.50	32.25	12.20	35900	2517	30300 *	9116369	90717	Halla/Kor
	CONTSHIP AMBITION	1996	closed	209.50	32.20	12.50	38450	2890	31200	9122203	90773	Aker/WD
F	PONL SHANGHAI	1994	opentop	241.90	32.24	11.98	41500	2780	42300	9057496	90223	HDWD
	BONN EXPRESS	1989	closed	236.65	32.20	12.50	42026	2716	35300	8711368	32094	HDWD
	PONL DAMIETT	1997	closed	244.90	32.20	12.00	45217	3600	36600	9147100	93324	Hyundai/Kor
	ZIM FLORIDA	1991	closed	237.00	32.20	12.00	46900	2402	37100 *	8913459	33686	HDWD
G	NEDLOYD EUROPA	1991	opentop	266.30	32.20	12.50	50620	3600	48500	8915691	104824	Mitsubishi/J
	PONL CARTAGENA	1998	closed	260.66	32.24	12.50	52350	3987	40300	9169122	93701	Hyundai/Kor
	VILLE d TALURUS	1997	closed	259.34	32.20	12.00	49000	3753	40500	9150183	93408	Daewoo/Kor
H	NEDLOYD HONGKONG	1993	opentop	279.12	37.75	13.00	55240	4100	55250	9001253	104831	Mitsubishi/J
	MAERSK DRESDEN	1996	closed	292.06	32.25	13.50	62400	4322	50640	9112571	91504	Hyundai/Kor

Reference values most coincident

### III. GRAPH OF ALL CONTAINERSHIPS (CLOSED AND OPEN)



The graph shows that all open-top ships are located above the average trend range for closed hatch ships.