

Lost Containers in open sea/overboard

Wadden Sea Forum
WG Shipping, 6th Meeting

31 Aug. 2009, Bremen

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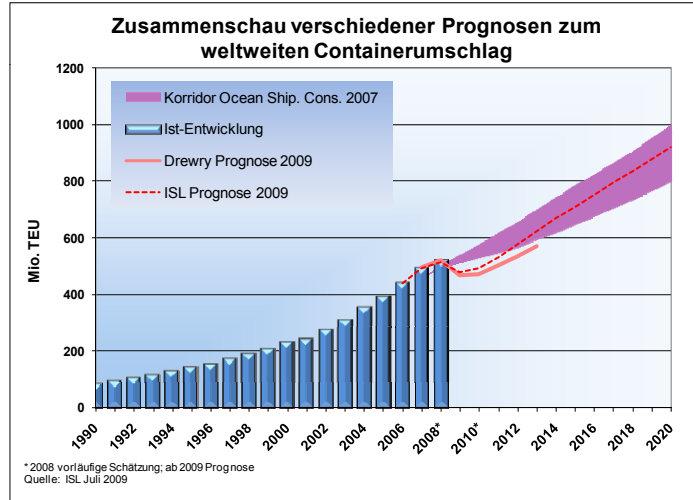
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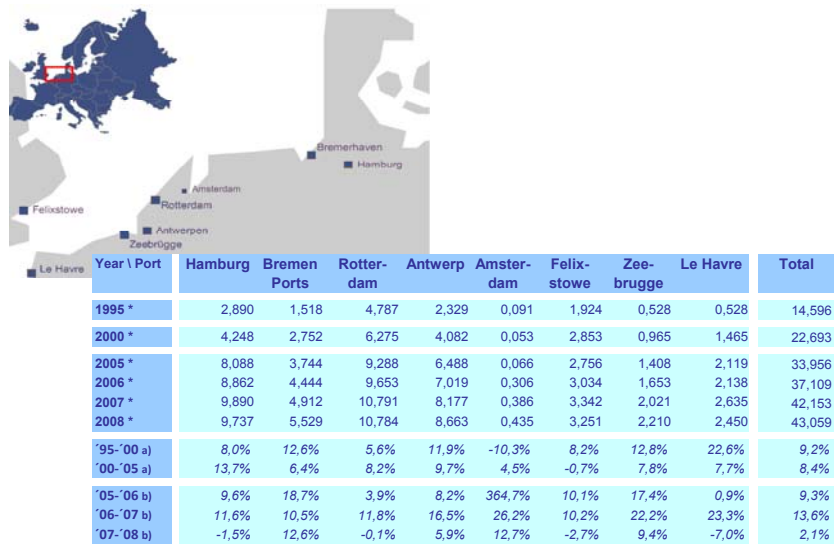
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Development of Container Handling



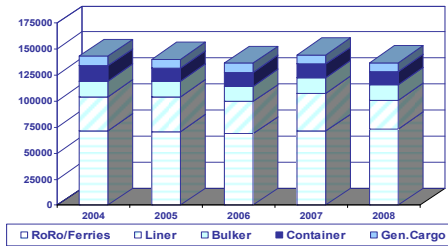
Development of TEU Handling of Selected Northrange Ports



Source: ISL, 2009; Port Database (2008 preliminary)

Development of Portcalls in German Seaports

Ship-Type \ Year	2004 2005 2006 2007 2008					% share of Total (2008)	Annual growth rate			
					'04-'05		'05-'06	'06-'07	'07-'08	
Tanker	6.470	6.103	5.371	5.440	5.508	3,9%	-5,7%	-12,0%	1,3%	1,3%
Dry Bulk	9.515	9.180	9.084	9.561	9.688	6,9%	-3,5%	-1,0%	5,3%	1,3%
Container	14.382	12.455	13.226	13.115	12.719	9,1%	-13,4%	6,2%	-0,8%	-3,0%
Special	368	389	284	346	441	0,3%	5,7%	-27,0%	21,8%	27,5%
General Cargo	9.146	8.595	9.039	8.918	7.837	5,6%	-6,0%	5,2%	-1,3%	-12,1%
RoRo/Ferries	71.550	70.791	68.767	71.077	73.381	52,5%	-1,1%	-2,9%	3,4%	3,2%
Car-Carrier	1.365	1.385	1.281	1.446	295	0,2%	1,5%	-7,5%	12,9%	-79,6%
Barges	49	117	115	134	131	0,1%	138,8%	-1,7%	16,5%	-2,2%
Liner	32.405	33.154	30.915	36.286	27.406	19,6%	2,3%	-6,8%	17,4%	-24,5%
Offshore	0	0	0	1	1	0,0%	-	-	-	0,0%
Others	806	966	707	911	827	0,6%	19,9%	-26,8%	28,9%	-9,2%
Unknow	0	292	229	293	1.499	1,1%	-	-21,6%	27,9%	411,6%
Total	146.056	143.427	139.018	147.528	139.733	100,0%	-1,8%	-3,1%	6,1%	-5,3%



Source: ISL, 2009, based on data by Flottenkommando, Fakten und Zahlen div. Jg. 2004-2009

Wadden Sea Forum; WG Shipping, 6th Meeting, 31 Aug. 2009, Bremen

Current Container Fleet Structure by GT Size (June 2009)

Number of Fully Cellular Container Vessels (Age Class)

GT-Size\Years	-1979	-1984	-1989	-1994	-1999	-2004	-2009	Total	% Share of total
-5000	59	19	9	52	130	20	30	319	6,8%
-10000	25	86	51	83	181	144	347	917	19,5%
-15000	16	18	30	70	131	60	50	375	8,0%
-20000	19	25	21	103	158	89	196	611	13,0%
-25000	11	18	30	29	65	25	46	224	4,8%
-30000	12	8	3	10	77	139	192	441	9,4%
-35000	6	50	13	19	31	34	28	181	3,9%
-40000	5	17	40	49	33	41	119	304	6,5%
-45000	2	7	35	12	29	35	116	236	5,0%
-50000	-	2	19	31	26	12	13	103	2,2%
-55000	-	-	10	46	53	80	110	299	6,4%
-60000	-	3	4	1	4	3	10	25	0,5%
-65000	-	-	5	1	19	11	-	36	0,8%
-70000	-	-	-	-	40	100	43	183	3,9%
-75000	-	-	-	-	-	34	57	91	1,9%
-80000	-	-	-	-	5	32	36	73	1,6%
-85000	-	-	-	-	10	9	5	24	0,5%
-90000	-	-	-	-	-	10	28	38	0,8%
-85000	-	-	-	-	10	24	81	115	2,5%
-100000	-	-	-	-	-	-	26	26	0,6%
over	-	-	-	-	-	-	70	70	1,5%
Total	155	253	270	506	1002	902	1603	4691	100,0%
% Share of Total	3,3%	5,4%	5,8%	10,8%	21,4%	19,2%	34,2%	100,0%	

Source: ISL, 2009; based on ISL-Fleetdatabase

Wadden Sea Forum; WG Shipping, 6th Meeting, 31 Aug. 2009, Bremen

Current Container Fleet Structure by GT Size (June 2009)









Number of Fully Cellular Container Vessels (Flag)

GT \ Flag	Panama	Liberia	Germany	UK	Singapore	Hong Kong	Den-marc	Antigua Barb.	Marshall Islands	China	others	Total	%Share of Total
-5000	25	9	10	5	2	15	-	34	-	44	175	319	6,8%
-10000	72	55	34	38	60	46	4	185	18	37	368	917	19,5%
-15000	86	19	12	9	32	19	4	42	46	19	87	375	8,0%
-20000	98	137	30	20	67	24	7	47	39	13	129	611	13,0%
-25000	44	57	17	9	10	2	3	5	28	11	38	224	4,8%
-30000	35	134	50	13	27	28	6	47	20	-	81	441	9,4%
-35000	32	41	17	2	10	5	7	11	11	2	43	181	3,9%
-40000	59	78	24	15	22	26	-	5	21	5	49	304	6,5%
-45000	40	63	7	9	10	22	-	14	2	22	47	236	5,0%
-50000	21	20	6	9	9	2	-	-	1	7	28	103	2,2%
-55000	79	49	41	40	9	6	10	-	7	-	58	299	6,4%
-60000	10	4	-	2	-	1	-	-	4	-	4	25	0,5%
-65000	9	7	-	5	3	-	-	-	-	-	12	36	0,8%
-70000	53	24	32	11	13	15	-	-	-	13	22	183	3,9%
-75000	33	15	8	15	4	2	-	-	1	-	13	91	1,9%
-80000	36	1	7	9	7	2	-	-	-	-	11	73	1,6%
-85000	-	8	5	4	-	-	-	-	-	-	7	24	0,5%
-90000	7	7	4	-	-	12	-	-	-	-	8	38	0,8%
-85000	9	26	26	5	4	3	25	-	-	5	12	115	2,5%
-100000	13	-	-	-	-	-	12	-	-	-	1	26	0,6%
over	23	8	1	4	4	10	8	-	-	-	12	70	1,5%
Total	784	762	331	224	293	240	86	390	198	178	1.205	4.691	100,0%
%Share of Total	16,7%	16,2%	7,1%	4,8%	6,2%	5,1%	1,8%	8,3%	4,2%	3,8%	25,7%	100,0%	

Source: ISL, 2009; based on ISL-Fleetdatabase

Development of Container Fleet Generation



Generation (Year)	TEU	Length (m)	breadth (m)	draught (m)
1. (1972) 	bis 1.500	225	24,5	9,00
2. (1980) 	bis 3.000	275	27,5	10,00
3. (1987) 	bis 4.500	300	32,2	11,50
4. (1997) 	bis 6.600	320	40,0	14,30
5. (1999) 	ca. 8.300	347	42,6	14,50
6. (2007) 	ca. 13.500	398	56,4	16,00

Current General Cargo Fleet Structure by GT Size (June 2009)



Number of Vessels (Age Class)

GT \ Years	-1979	-1984	-1989	-1994	-1999	-2004	-2009	Total	% Share of total
-5000	731	477	448	503	425	255	283	3122	53,7%
-10000	207	178	139	193	185	158	256	1316	22,6%
-15000	145	172	115	82	65	41	54	674	11,6%
-20000	53	79	66	30	46	27	15	316	5,4%
-25000	22	20	15	3	14	53	10	137	2,4%
-30000	20	15	33	7	21	9	10	115	2,0%
-35000	13	19	1	6	7	15	4	65	1,1%
-40000	5	1	4	0	15	4	2	31	0,5%
-45000	2	6	2	1	-	-	-	11	0,2%
-50000	-	1	4	-	-	-	4	9	0,2%
-55000	-	-	2	-	-	2	-	4	0,1%
-60000	-	3	2	-	-	7	-	12	0,2%
-65000	-	-	-	-	-	-	-	-	-
-70000	-	-	-	-	-	4	-	4	0,1%
over	-	-	-	-	-	-	-	-	-
Total	1198	971	831	825	778	575	638	5816	100,0%
% Share of Total	20,6%	16,7%	14,3%	14,2%	13,4%	9,9%	11,0%	100,0%	

Source: ISL, 2009; based on ISL-Fleetdatabase

Current General Cargo Fleet Structure by GT Size (June 2009)



Number of Vessels (Flag)

GT \ Flag	St.											Total	%Share of Total
	Panama	Bahamas	Antigua Barb.	Nether-lands	Malta	Liberia	Norway	Italy	Vincent	China	others		
-5000	192	89	397	267	156	19	73	12	125	74	1.718	3.122	53,6%
-10000	152	63	174	117	80	77	15	15	35	48	540	1.316	22,6%
-15000	115	51	21	32	18	63	1	15	41	46	271	674	11,6%
-20000	36	8	10	24	40	21	2	4	19	13	139	316	5,4%
-25000	5	7	-	2	10	6	10	2	2	-	93	137	2,4%
-30000	13	38	-	6	5	3	14	5	-	-	31	115	2,0%
-35000	1	20	1	2	4	2	10	6	-	-	19	65	1,1%
-40000	1	11	-	-	-	-	2	2	-	-	15	31	0,5%
-45000	3	-	-	-	-	-	3	1	-	-	4	11	0,2%
-50000	1	-	-	-	1	3	-	2	-	-	2	9	0,2%
-55000	2	-	-	-	-	-	-	7	-	-	-	9	0,2%
-60000	-	-	-	-	-	-	-	6	-	-	9	15	0,3%
-65000	-	-	-	-	-	-	-	-	-	-	-	0	0,0%
-70000	-	-	-	-	-	-	4	-	-	-	-	4	0,1%
Total	521	287	603	450	314	194	134	77	222	181	2.841	5.824	100,0%
%Share of Total	8,9%	4,9%	10,4%	7,7%	5,4%	3,3%	2,3%	1,3%	3,8%	3,1%	48,8%	100,0%	

Source: ISL, 2009; based on ISL-Fleetdatabase

Lost Container Survey



- Lost Container Survey
 - Description and Source
 - by Time (Years)
 - by Number of Lost Container Classes
 - by Reasons
 - by Heavy Weather Incidents and Month
 - by Region and Reason
 - by Ship Age (Classes)
 - by Ship Type
 - by Flag
 - by Ship Size (GT Classes)
 - by Dangerous Goods

Lost Container Survey Description and Source



- Record Description
- Reported 1990 - 2006

The screenshot shows a detailed form for a container record. Fields include:

- Name:** MARISSA
- Typ:** 504 - General Car
- Flag:** MEX
- Dimensions:** Breadth (20.27), Depth (11.47), Draft (8.87), Forward (20.02), Length Overall (133)
- GT:** 6700
- TEU on Deck:** 0
- TEU in Lockers:** 0
- TEU Gesamt:** 0
- number hold:** 0
- Loss eigene Schätzung:** 0
- Damage eigene Schätzung:** 0

- Sources of Casualties
 - Lloyd's List 457
 - AIMU 7
 - Others 1

IUMI 9
Dolphin 2

Lloyd's List



American Institute of Marine Underwriters

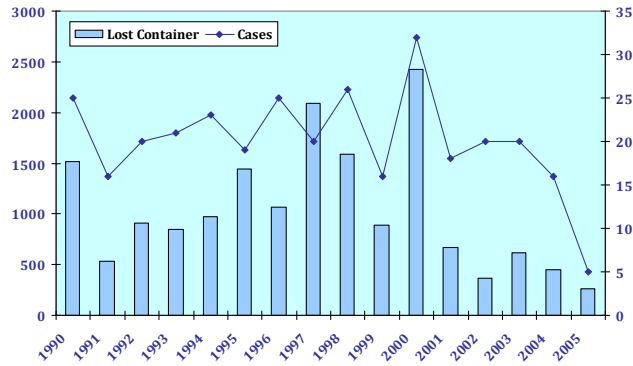


DOLPHIN MARITIME & AVIATION SERVICES LTD

Source: based on data by Jens Gabrysch, Containerverluste auf See, 25.02.2006

Lost Container Survey 1990-2005 By Time

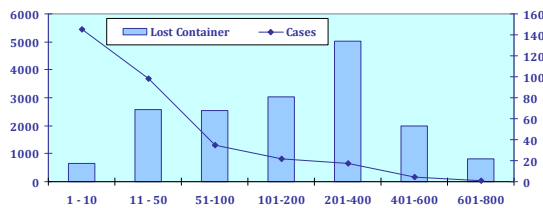
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Number of Containers Lost/Overboard	458	313	542	496	422	998	180	1581	1347	455	1005	399	247	487	375	255
Number of Containers with estimated Loss Figures by Author	1055	215	365	355	550	445	885	505	240	435	1425	265	115	125	75	10
Total Lost Containers	1513	528	907	851	972	1443	1065	2086	1587	890	2430	664	362	612	450	265
Cases	25	16	20	21	23	19	25	20	26	16	32	18	20	20	16	5



Source: ISL, 2009; based on data by Jens Gabrysch, Containerverluste auf See, 25.02.2006

Lost Container Survey 1990-2005 By Lost Container Classes

Class of Lost Containers up to ...	Container	% share of Total Container	Cases	% share of Total Cases
50	3218	19,4%	243	75,5%
100	2549	15,3%	35	10,9%
150	2094	12,6%	17	5,3%
200	938	5,6%	5	1,6%
250	1108	6,7%	5	1,6%
300	1350	8,1%	5	1,6%
350	996	6,0%	3	0,9%
400	1572	9,5%	4	1,2%
450	445	2,7%	1	0,3%
500	485	2,9%	1	0,3%
550	1070	6,4%	2	0,6%
600	800	4,8%	1	0,3%
Total	16.625	100,0%	322	100,0%



Source: ISL, 2009; based on data by Jens Gabrysch, Containerverluste auf See, 25.02.2006

Lost Container Survey 1990-2005 by Reasons



Lost Containers by Reason	% Share of Total	
	Total	Total
Only Heavy Weather	3.205	19,3%
Only Fire/Explosion	88	0,5%
Only Collision/Contact	375	2,3%
Only Miscellaneous	4.287	25,8%
Heavy Weather/Fire Explosion	30	0,2%
Heavy Weather/Collision/Contact	10	0,1%
Heavy Weather/Miscellaneous	3.697	22,2%
Fire/Explosion/Collision Contact	45	0,3%
Fire/Explosion/Miscellaneous	1.439	8,7%
Collision/Contact/Miscellaneous	1.835	11,0%
Unknown	1.614	9,7%
Total	16.625	100,0%

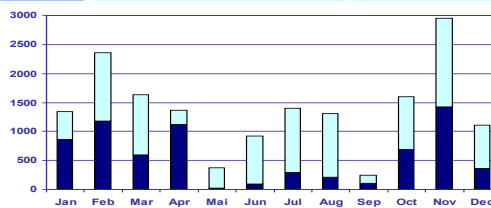
- **Heavy Weather** **42 %**
- **Miscellaneous** **26 %**
- **Collision/Contact** **11 %**
- **Fire** **9 %**
- **Unknown** **10 %**

Source: ISL, 2009; based on data by Jens Gabrysch, Containerverluste auf See, 25.02.2006

Lost Container Survey 1990-2005 by Heavy Weather and Month



Month	Total Cont.	of which Heavy Weather		% Share of HW	Cases with HW		% Share of Cases
		Total Cont.	% Share of HW		Cases	% Share of Cases	
January	1.343	858	63,9%	42	28	66,7%	
February	2.359	1.176	49,9%	40	20	50,0%	
March	1.630	601	36,9%	29	15	51,7%	
April	1.371	1.115	81,3%	20	8	40,0%	
May	379	21	5,5%	12	1	8,3%	
June	923	96	10,4%	15	8	53,3%	
July	1.399	290	20,7%	18	5	27,8%	
August	1.306	207	15,8%	20	6	30,0%	
September	250	106	42,4%	13	5	38,5%	
October	1.601	683	42,7%	33	12	36,4%	
November	2.950	1.424	48,3%	37	18	48,6%	
December	1.114	365	32,8%	43	19	44,2%	
Total	16.625	6.942	41,8%	322	145	45,0%	



Source: ISL, 2009; based on data by Jens Gabrysch, Containerverluste auf See, 25.02.2006

Lost Container Survey 1990-2005 by Region and Reason



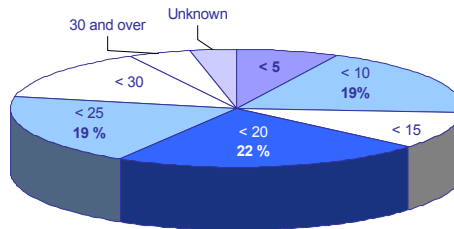
All regions by reason	HW	HW/Mis.	F/E/Mis.	CC/Mis.	Mis.	Others	Total	% Share of total	
Arabian Gulf and approaches	25				307	3	335	2,0%	
Australasia	98					1	99	0,6%	
Baltic	27		5				37	0,2%	
Bay of Bengal			345	94	7	118	564	3,4%	
British Isles, North Sea, English Channel, Bay of Biscay	528	30		267	383	200	1.408	8,5%	
Canadian Arctic and Alaska	19					52	71	0,4%	
East African Coast		212	3	115	57	6	393	2,4%	
East Mediterranean & Black Sea	6	267		301	920	41	1.535	9,2%	
Great Lakes	50						50	0,3%	
Gulf of Mexico	36				50		86	0,5%	
Iceland					400		400	2,4%	
Indian Ocean	17						17	0,1%	
Japan, Korea and North China	40	165		676	213	178	1.272	7,7%	
Kiel Canal						37	37	0,2%	
Newfoundland	23					10	33	0,2%	
North American west coast	52			102	75		229	1,4%	
North Atlantic	483	1.408		1	266		2.158	13,0%	
North Pacific	1.087					605	1.692	10,2%	
Red Sea	30						30	0,2%	
South American west coast	89			7			96	0,6%	
South Atlantic and East coast South America	27	90			85	5	207	1,2%	
South China, Indo China, Indonesia and Philippines	417	766	260	370	1.465	203	3.481	20,9%	
South Pacific						73	43	116	0,7%
Suez Canal						143	13	156	0,9%
United States eastern seaboard	107					70	85	262	1,6%
USSR Arctic and Bering Sea		90					90	0,5%	
West African coast	33	445	5		11	5	499	3,0%	
West Mediterranean	11	224	525			11	771	4,6%	
Unknown						200	200	1,2%	
xxxxsouth of Stiffe Bank			301				301	1,8%	
Total number of lost containers	3.205	3.697	1.439	1.835	4.287	2.162	16.625	100,0%	

Source: ISL, 2009, based on data by Jens Gabrysich, Containerverluste auf See, 25.02.2006

Lost Container Survey 1990 - 2005 by Ship Age (Classes)



Age class (years)	Total	% of Total	Cases	% of Cases
0-4	1.191	7,2%	31	9,6%
5-9	3.159	19,0%	48	14,9%
10-14	1.696	10,2%	54	16,8%
14-19	3.706	22,3%	51	15,8%
20-24	3.212	19,3%	70	21,7%
25-30	2.345	14,1%	30	9,3%
30 Years and more	771	4,6%	16	5,0%
Unknown	545	3,3%	22	6,8%
Total	16.625	100,0%	322	100,0%



Source: ISL, 2009, based on data by Jens Gabrysich, Containerverluste auf See, 25.02.2006

Lost Container Survey 1990 - 2005 by Ship Type



Shiptype	% Share of Total		% Share of Cases	
	Total		Cases	
Bulker	100	0,6%	3	0,9%
General Cargo	7.652	46,0%	113	35,1%
Container	7.054	42,4%	154	47,8%
RoRo	1.040	6,3%	28	8,7%
Others	397	2,4%	12	3,7%
Unknown	382	2,3%	12	3,7%
Total	16.625	100,0%	322	100,0%

- General Cargo **46 %**
- Container **42 %**

Source: ISL, 2009, based on data by Jens Gabrysch, Containerverluste auf See, 25.02.2006

Lost Container Survey 1990 - 2005 by ship size (GT class)



GT-Class	Bulker	General Cargo				RoRo	Others	Unknown	Total	% Share of Total
		General Cargo	Container							
5.000	2	4.519	1.580	497	201			6.799	40,9%	
10.000		2.123	934	26	2			3.085	18,6%	
15.000		159	131	27	66			383	2,3%	
20.000	79	623	352	466				1.520	9,1%	
25.000		40	105	13				158	1,0%	
30.000	19	52	336	4				411	2,5%	
35.000		10	215					225	1,4%	
40.000			713					713	4,3%	
45.000			321					321	1,9%	
50.000			25					25	0,2%	
55.000			449					449	2,7%	
60.000			862					862	5,2%	
65.000			516					516	3,1%	
70.000			404					404	2,4%	
75.000										
80.000				50				50	0,3%	
85.000				28				28	0,2%	
90.000				33				33	0,2%	
Unknown		126		7	128	382		643	3,9%	
Total	100	7.652	7.054	1.040	397	382		16.625	100,0%	






Source: ISL, 2009, based on data by Jens Gabrysch, Containerverluste auf See, 25.02.2006

Lost Container Survey 1990 - 2005 by Flag



Lost Containers by Flag	Total	% Share of total		Cases	% Share of Cases	
PAN	2.491	15,0%		34	10,6%	
CHN	1.520	9,1%		15	4,7%	
ATG	1.405	8,5%		18	5,6%	
RUS	841	5,1%		6	1,9%	
LBR	738	4,4%		12	3,7%	
MHL	678	4,1%		4	1,2%	
DIS	616	3,7%		5	1,6%	
TWN	596	3,6%		14	4,3%	
DEU	569	3,4%		22	6,8%	
HKG	549	3,3%		6	1,9%	
Others	6.071	36,5%		170	52,8%	
Unknown	551	3,3%		16	5,0%	
Total	16.625	100,0%		322	100,0%	

Top 5 Flags

				
Panama 15 %	China 9 %	Ant & Barb. 9 %	Russ. 5 %	Liberia 4 %

Source: ISL, 2009, based on data by Jens Gabrysch, Containerverluste auf See, 25.02.2006

Lost Container Survey 1990 - 2005 by Dangerous Goods



Shiptype	Total Container	of which Dangerous Goods			Total Cases	of which Dangerous Goods		
		Total Container	% share of DG Total	% share of ship type Total		Cases	% share of DG Total	% share of ship type Total
Bulker	100	0	0,0%	0,0%	3	0	0,0%	0,0%
General Cargo	7.652	1.001	38,2%	13,1%	113	13	27,1%	11,5%
Container	7.054	1.386	52,9%	19,6%	154	22	45,8%	14,3%
RoRo	1.040	82	3,1%	7,9%	28	9	18,8%	32,1%
Others	397	147	5,6%	37,0%	12	2	4,2%	16,7%
Unknown	382	2	0,1%	0,5%	12	2	4,2%	16,7%
Total	16.625	2.618	100,0%	15,7%	322	48	100,0%	14,9%

Source: ISL, 2009; based on data by Jens Gabrysch, Containerverluste auf See, 25.02.2006

Lost Container Survey 1990 - 2005 Selected Major Cases



Casualty Date	Vessel's Name at time of incident	Location	Built	Flag	Short Discription of Casualty	Lost_Contain	AGE
24-Nov-97	MSC Carla	North	1972	PAN	Broke in two in bad weather	800	25
24-Feb-87	Tuxpan	North	1982	MEX		605	5
16-Apr-94	Tabasco	North	1980	MEX	30 33N 35 30 W, 10	545	14
01-Aug-00	Hasat	West	1996	TUR	Had engine-room fire in 36	525	4
19-Feb-96	Gu Cheng	South	1985	CHN	In distress and taking water	485	11
07-Apr-90	Eal Diamond	West	1987	DIS	with a cargo of coffee, cocoa	445	3
09-Mrz-97	Disarfell	Iceland	1982	ATG	Lost 15 containers and	400	15
10-Nov-00	Elena	East	1974	RUS	Yelena; Sustained hole in	400	26
27-Okt-98	APL China	North	1995	MHL	Reported adrift in mid-	388	3
30-Jun-95	Alexandria	Japan,	1982	LBR	In collision with mv Xin Hua	384	13
31-Jan-00	OOCl America	Nnrth	1995	HKG	Sustained heavy weather	350	5
19-Jul-00	Prime Value	Bay of	1981	PAN	Grounded on sand bank in	345	19
04-Jul-93	Kapitan Sakharov	xxsouth of	1980	RUS	south of Stiffe Bank,	301	13
14-Okt-96	Gichoon	South	1978	ATG	Grounded on rocks S of	285	18
28 Feb 90	Oriental Explorer	North	1976	TWN	Pacific, major loss of	285	14
25-Nov-99	Eliza	South	1982	MHL	Had fire & explosion in 10	260	17
20-Mrz-95	Pelhunter	East	1977	GRC	Mediterranean Sea	260	18
22-Dez-90	Robert	British Isles,	1983	DEU	Bremerhaven	260	7
25-Feb-01	Hui Feng	South	1995	CHN	Sank in 23 33.1 N 117 41 E, at	235	6
18-Nov-98	Jing Shui Quan	South	1997	CHN	Sank in 24 09.1 N 118 32.8 E	230	1
07-Jul-98	Tiger Force	Arabian	1991	MLT	Had ingress of water into	223	7
07-Nov-91	Apollonia Faith	East	1977	CYP	Mediterranean Sea	210	14
us-Ukt-92	miandiri	Japan,	1984	PAN	Busan	210	8
27-Feb-93	Isla de la Gomera	East African	1977	ESP	Moroccan coast, Gross 1123	200	16
26-Jul-99	Palmariner	East	1979	GRC	In collision with m ro-	200	20
11-Nov-98	Seabarge Trader	x	0			200	1998
28-Feb-97	Meratus Mas	South	1978	IDN	Listing heavily and sank in 05	172	19
14-Nov-95	Gigek	South	1976	MYS	Sank off Vietnam in 09 21.7	166	19

Source: ISL, 2009; based on data by Jens Gabrysch, Containerverluste auf See, 25.02.2006

Lost Container Survey - Selected Major Cases (Update)



Date	Name	Type	GT	Built	Location	Cause	L. C.	Remarks	Source
10.07.06	TIANJIN	C.C.	10.649	1985	(island) off Yosu, Korea	H.W.	171	Typhoon "Ewiniar"	Lloyd's Agents
19.07.05	CLOUD	G.C.	5.355	1982	Kahosung Harbour	H.W.	130	typhoon	Cesam report
								moderate weather conditions,	Coastguard
18.02.06	VERDI	C.C.	65.427	2004	In the vicinity of Cape Finisterre	H.W.	80	parametric rolling?	Solent MRSC
13.02.06	NEDLLOYD	C.C.	94.724	2004	near Terschelling	H.W.	58		RCC
15.01.06	DERINCE	C.C.	54.193	2006	Korea - Busan - Seattle	H.W.	52		Lloyd's Agents
								C. with dangerous cargoes, leaking drums, flammable and corrosive	
19.10.08	EXPRESS	C.C.	46.009	2002	Atlantic	H.W.	51	materials	Lloyd's Agents
22.02.06	OTELLO	C.C.	91.410	2005	Bay of Biscay	H.W.	48		Lloyd's Agents
18.01.06	MERCURY	C.C.	41.442	1987	Busan - Seattle	H.W.	43		Lloyd's Agents
05.02.08	APL PEARL	C.C.	65.475	1998		H.W.	41		Coastg. San Francisco
31.05.06	CHINA SEA	C.C.	53.453	2002	Far East - Rotterdam (14.06.06)	H.W.	40		Lloyd's Agents

Source: ISL, 2009; based on data by GAUSS Bremen

Empty Share of Containers (Major Northrange Ports)



Year \ Port	Year \ Port	Year \ Port	Year \ Port	Cont.	TEU	TEU empty
1990	1990	1990	1990			
1991	1991	1991	1991			
1992	1992	1992	1992			
1993	1993	1993	1993			
1994	1994	1994	1994			
1995	1995	1995	1995	1.145.348	1.549.113	267.251
1996	1996	1996	1996	1.291.029	1.761.422	282.000
1997	1997	1997	1997	1.348.708	1.835.595	356.993
1998	1998	1998	1998	1.360.432	1.876.292	347.880
1999	1999	1999	1999	1.597.338	2.208.173	342.686
2000	2000	2000	2000	1.679.517	2.329.135	392.232
2001	2001	2001	2001	1.886.865	2.653.909	439.944
2002	2002	2002	2002	2.104.988	2.969.189	484.442
2003	2003	2003	2003	2.274.051	3.265.750	505.663
2004	2004	2004	2004	2.481.476	3.614.246	647.769
2005	2005	2005	2005	2.761.399	4.082.334	639.170
2006	2006	2006	2006	2.848.325	4.218.176	725.882
2007	2007	2007	2007	3.180.292	4.777.151	767.629
2008	2008	2008	2008	3.610.569	5.445.438	904.222
1990-2008	1990-2008	1990-2008	1990-2008	4.000.752	6.063.747	978.602
1990-2008	1990-2008	1990-2008	1990-2008	4.247.675	6.488.029	1.057.955
1990-2008	1990-2008	1990-2008	1990-2008	4.581.550	7.018.799	1.089.837
1990-2008	1990-2008	1990-2008	1990-2008	5.296.355	8.176.614	1.143.931
1990-2008	1990-2008	1990-2008	1990-2008	5.630.598	8.662.891	1.367.095
1990-2008	1990-2008	1990-2008	1990-2008	53.327.267	78.996.003	12.741.183

1990-2008	221.103.668	343.651.063	54.585.270
2008	21.491.860	34.712.985	6.184.938
% empty('90-'08)			15,9%
% empty('08)			17,8%

Source: ISL, 2009; Port Database (2008 preliminary)

Wadden Sea Forum; WG Shipping, 6th Meeting, 31 Aug. 2009, Bremen

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Selected Measures for Reduction of Lost Containers



- **The Box itself**
 - Practicable methods for determining the weight of containers accurately
 - Lashing deck containers securely on board the ship
- **Inside the Box**
 - Stowing cargo securely and safely in containers
- **Information Services**
 - Making more use of weather information services
 - Making more use of route advisory services
 - Adjusting the course and speed of the ship to its loading condition and the weather situation
 - The use of wave radar (danger of parametric rolling) could likewise help to reduce losses

Source: ISL, 2009; based on data GAUSS Bremen

Wadden Sea Forum; WG Shipping, 6th Meeting, 31 Aug. 2009, Bremen

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Further more Contacts



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General Remarks (from the Discussion)



- Large casualties known in the shown survey
- Probably only smaller casualties unknown, but with larger number
- No data available in the survey about crew number and knowledge
- Influence on casualties by crew size
- To pick up the real weight of a container-box at the crane is to late
- No Cost/Benefit relation to fit all boxes with transmitters for position finding by annual transport volume of 500 Mio. TEU
- Existing rules for cargo handling and storing as well as ship operation in bad weather conditions should be „better“ followed
- Easy „low cost“ single transmitter buoys (for position finding) should be developed for quick handling of the crew (at the drop down point on board) for boxes containing dangerous cargo
- ...
- ...



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