



# **Tanker safety**

Lisbon 11 May 2010

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# Tankers will always be judged by the last accident



#### Tanker Incidents and accidental pollution



Based on data from LMIU, ITOPF + others

#### Average age tanker fleet above 10,000 dwt



Based on LRFairplay

# Tanker incidents by type

% of total



Source: INTERTANKO, based on data from LMIU, ITOPF + others



# Tanker incidents 2009



dwt range	Number	%	Rate			
Below 10,000	107	47%	0.014			
10-29,999	43	19%	0.025			
30-99,999	60	26%	0.020			
100,000+	17	7%	0.010			
Total	227	100%	0.016			
Decade built	Number	%	Rate			
Decade built Unknown	Number 6	<mark>%</mark> 3%	Rate			
Decade built Unknown Built 1970s	Number 6 32	<mark>%</mark> 3% 14%	Rate 0.012			
Decade built Unknown Built 1970s Built 1980s	Number 6 32 43	% 3% 14% 19%	Rate 0.012 0.017			
Decade built Unknown Built 1970s Built 1980s Built 1990s	Number 6 32 43 48	%        3%        14%        19%        21%	Rate 0.012 0.017 0.015			
Decade built Unknown Built 1970s Built 1980s Built 1990s Built 2000s	Number        6        32        43        48        98	3%        14%        19%        21%        43%	Rate 0.012 0.017 0.015 0.017			

□ Collision/contact □ Grounding □ Fire/Explosion □ Hull & machinery □ Misc/unknown

Rate is number incidents divided by number tankers in the segment

Worst incident 2009 may be collision/fire Formosa Brick collision in the Straits of Singapore Aug 2009 9 fatalities and Elli that broke in to two at the entrance Suez Canal.



#### Tanker hull & machinery incidents

Number incidents 500 □ Engine Hull & Machinery 400 300 Split engine and other Hull & Machinery as from 2002 2010 is a projection 200 based on 110 days 100 0 

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Based on data from LMIU, ITOPF + others



#### Tanker hull & machinery incidents

#### Number incidents

Year	<10 years	10-24 years	>25 years	Total	Average age
2002	4	3	15	22	17.5
2003	3	3	8	14	18.4
2004	2	2	7	11	18.0
2005	9	5	20	34	17.6
2006	12	3	17	32	14.3
2007	20	3	25	48	13.2
2008	25	10	24	59	15.6
2009	8	13	22	53	16.7
2010*	6	3	5	14	17.5
Total	89	45	143	287	15.6

2010 figures are for 110 days

Based on data from LMIU, ITOPF + others

## Tanker incidents and rate by flag





#### Hull & machinery incidents Engine – on average 48%, last 2 years 67%





Tankers firstly judged by oil pollution



# Accidental oil pollution into the sea spills per tonne-miles 1970-1980



Source: INTERTANKO/ITOPF

Record low 2008 and gain - record low 2009

#### Average number of large and small oil spill



Source: INTERTANKO/ITOPF

**JKO** 



#### Accidental oil pollution into the sea and tanker trade



Source: INTERTANKO/ITOPF/Fearnleys



#### Incidents attended by ITOPF over the past 5 years

Number



Source: ITOPF



#### Tanker accidental pollution 1974 – 2009 by cause



Based on data from ITOPF



#### Estimated total average annual U.S. Oil Spillage



Storage and consumption include: Non-Tank Vessels (Cargo Ships) (2%), Other vessels (5%), Gas stations and Truck stops, Residential, Aircraft, Inland EPA-Regulated facilities (77%), Coastal facilities (Non-Refining), Inland unknown, Motor vehicles, Others Transport includes: Inland pipelines (80%), Tanker trucks (10%), Railroads (2%), Tank ships (4%), Tank barges (percentages are percentages for the period 1998-2007 for the particular segment. (Percentages in graph is the tank ships percentage of total spillage for he period).

Pollution from tankers in the US have been strongly reduced both in absolute terms

and as a percentage of total spillage in each period

Based on data from USCG



# Pirates have become a great hazard



#### Tanker piracy incidents 2008-2009 110 incident 2008 – 83 incidents 2009









# Handling riks



#### Involves:

- Identifying and understanding risks
- Mitigating or eliminating risks where possible
- Avoiding unacceptable risks
- Balancing risk & reward to arrive at the best business decision

#### **Goals:**

- To protect people, the environment and property
- To avoid involvement in a catastrophic incident
- To prevent business disruptions
- To improve quality of available tonnage.



Elli was split in half and sank near the Red Sea entrance to the Suez Canal, 80 miles east of Kairo, Egypt, Friday Aug. 28, 2009.



# Flirting with disaster

#### Why accidents are rarely accidental



- Short term thinking about money is a factor in many incidents
  - While the most common explanation of accidents are operator error, a more frequent cause is **faulty design** of the socio-technical system (i.e. people and tech. in combination) in which the operator is embedded.
  - Without an institutional **recognition of risk**, an emphasize on safety is unlikely, and in the absence of focus on safety, it is impossible to achieve it
  - Disasters uncontrollable domino effect in a interdependent system- hazards expand faster than people are able to cope - OBE\*
- Disasters are often foreseen, and warned but not strong enough
- Be aware improving safety also encourages risk taking

Book Marc Gerstein 2008 \*Overtaken By Events



## Why is risk management important



#### The industry yearly pay approximately:

- \$320 m people claims
- \$240 m cargo claims
- \$150 m pollution claims
- \$140 m collision claims
- \$130 m property claims
- \$ 980 m total claims which shipping may need some
  \$ 9.98 bn in freight income to cover

#### ..and if performance record is bad:





- Charterer will avoid you
- Authorities may detain you
- Insurers will charge you

i.e. in the end:

Reduced income and higher costs

Today everybody asks for performance evidence

Source :UK P&I Club