

IUMI 2010 ZURICH

12 – 15 September

Misuse of the Standard Box by Flexibags and the Results

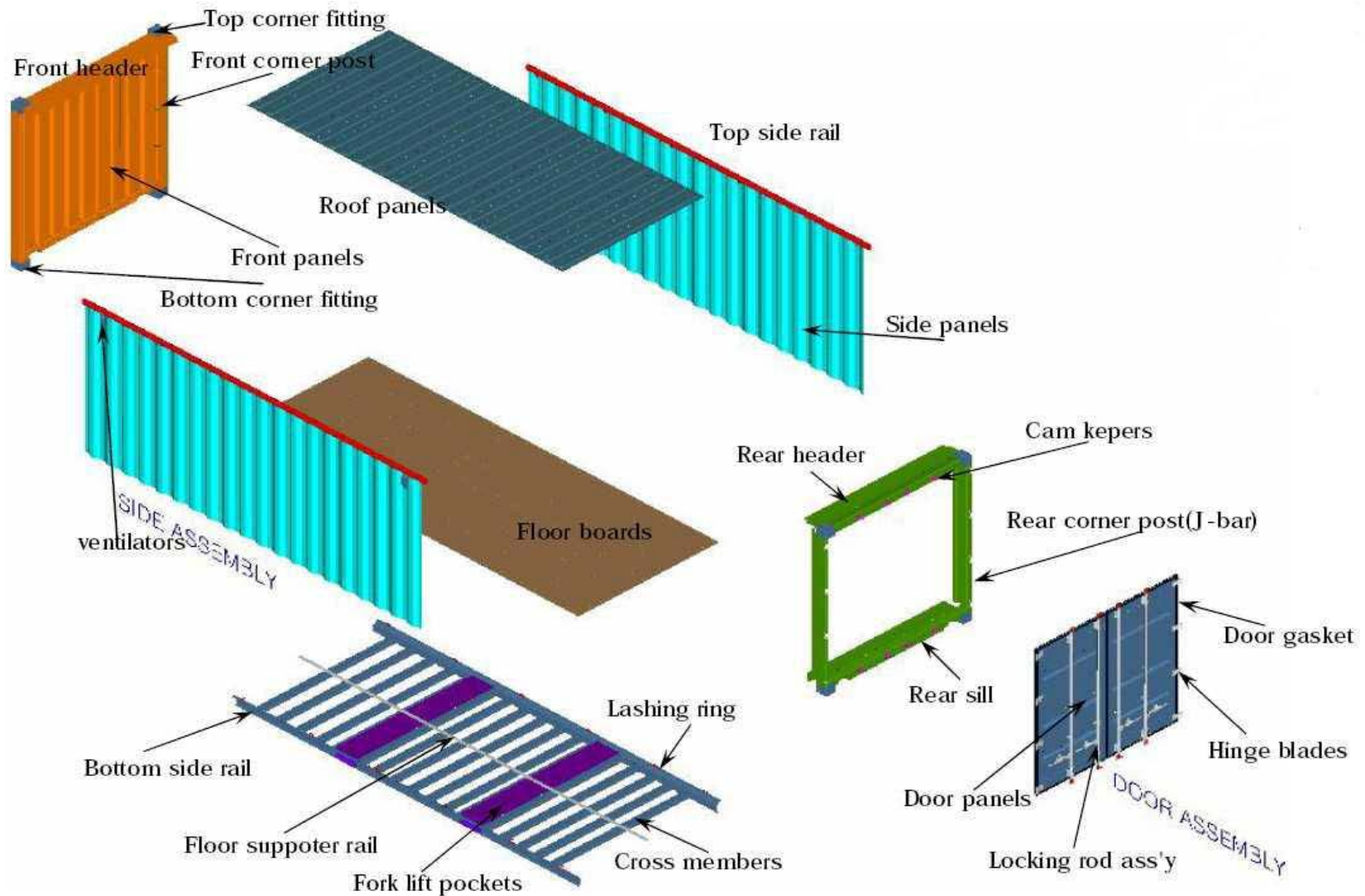
Hapag-Lloyd AG
Captain Hans-Joachim Grasshoff
September 2010

Water-barrel



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1. The 20' Standard Container and Flexibag
 2. Multimodal Transports
 3. Direct and indirect Claims
 4. Future Perspectives and which Measures are taken.
Direct and indirect Claims

The 20' Standard Container



Flexibag Pressure Test with Air



Flexibag Installation

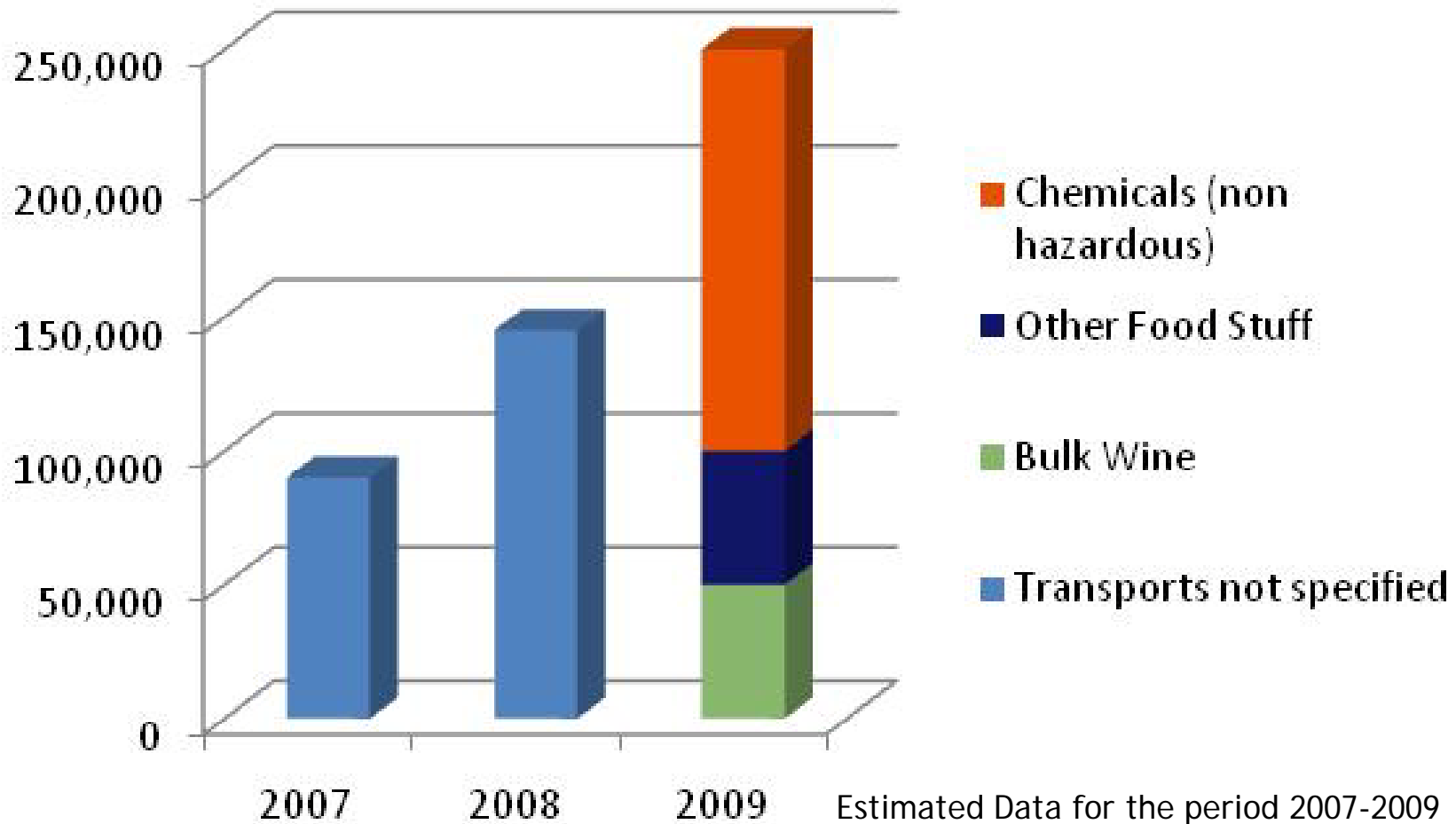


Loading of a Flexi Bag with Wine



Expansion of the Flexitank Transports

Appr. more than 250,000 Flexitank Movements were recorded in 2009



A continued Growth is projected for the next Years

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Risk potential in the Transport Chain

Transport Chain

- **Truck** uneven roads, braking hard, narrow curves - The trucker should have experience in handling liquid cargo transports.
- **Rail** heavy collisions during shunting the wagons, up to 4G.
- **Barge** apart from the loading and discharging process relative safe.
- **Terminal** rough handling is usual, container bridge, loading, discharging, straddle-carrier.
- **Ocean Vessel** constant movement, can be extreme due to bad weather.

August 2009 in Hamburg

- A dog had crossed the street, the trucker kicked the brakes. The wave in the flexibag was so strong that the bag burst and many thousand liter red wine were floating the street.

Imagine what will happen if this is olive oil instead of red wine.



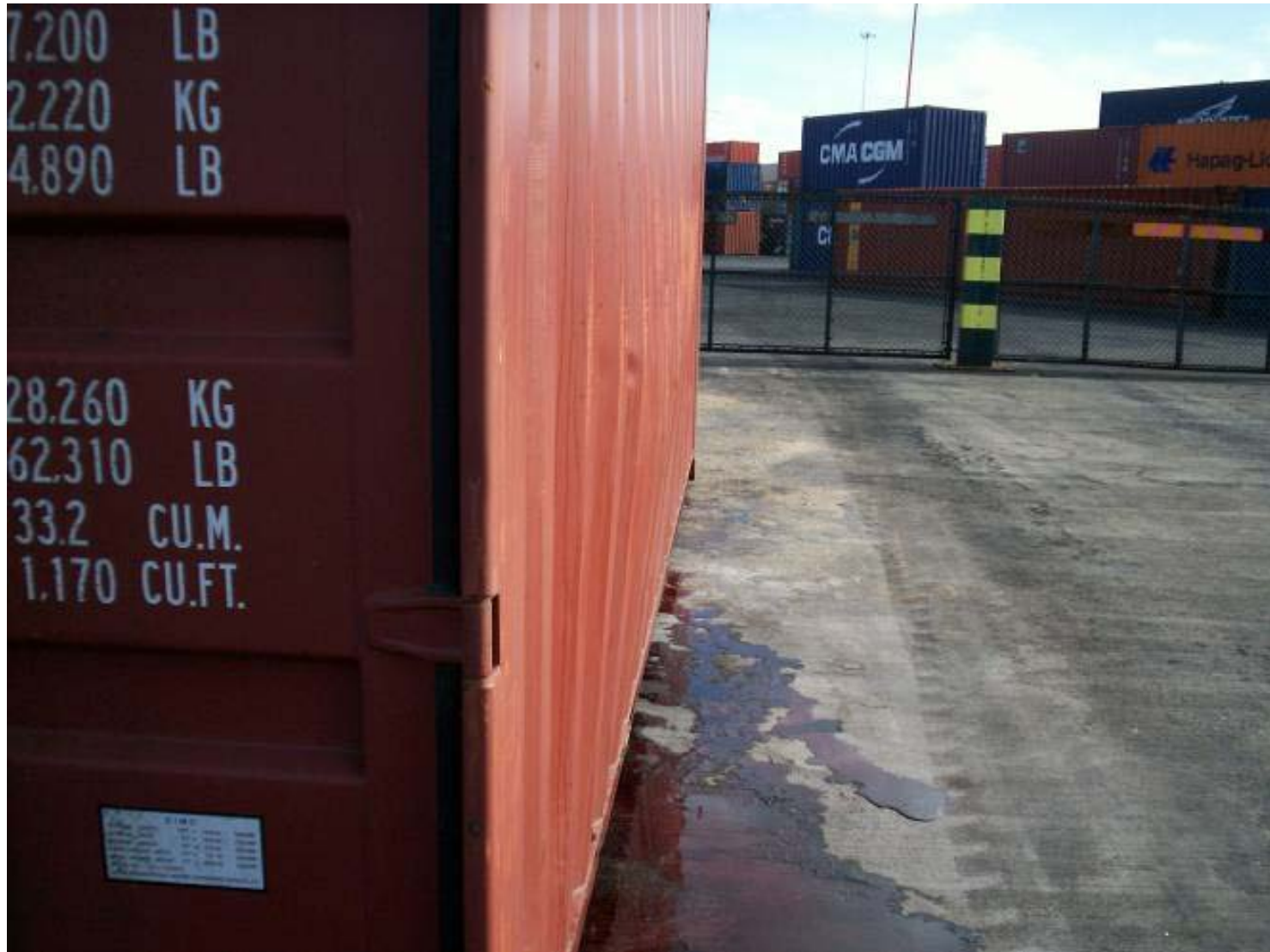
Damaged on the Train



30 cm bulging and this will definitely reduce the stability of the container



Damaged and leaking at the Terminal





Ship Rolling

Vessel with 30°

Maximum speed
Sideways = 25 km/h

Rollingperiod
= 15 sec

Maximum speed
Sideways = 34 km/h



Rolling during the Voyage

Rolling Period	Rolling / min	Rolling / hrs	Movements in Total
15 sec	4	240	480
20 sec	3	180	360

Trip from Oakland to Antwerp = 26 days including 4 days in ports

$360 \times 24 \times 22 = 190.080$ movements



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Leaked Liquids in the Cargo Hold



Cleaning of the Cargo Hold after the Oil Leakage



Latex on Deck



Cleaning of the Hatch Cover



**m.v. xyz faced with 65 leakings
Affecting 300 containers and 4 hatches
as well ships bilges heavily contaminated**



**Total costs all in more than USD 500,000.00
(vessel as well off schedule 2,5 days)**

Leaking Container loaded Base Oil

- 12 container loaded with baseoil. The liquid bite the flexibag and after some days all container were leaking

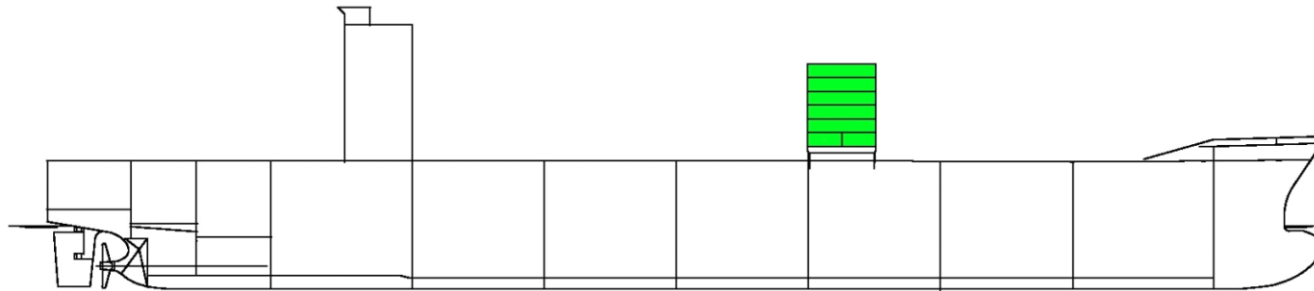




Indirect Damages

ACCIDENT ON PAN MAX CONTAINER VESSEL

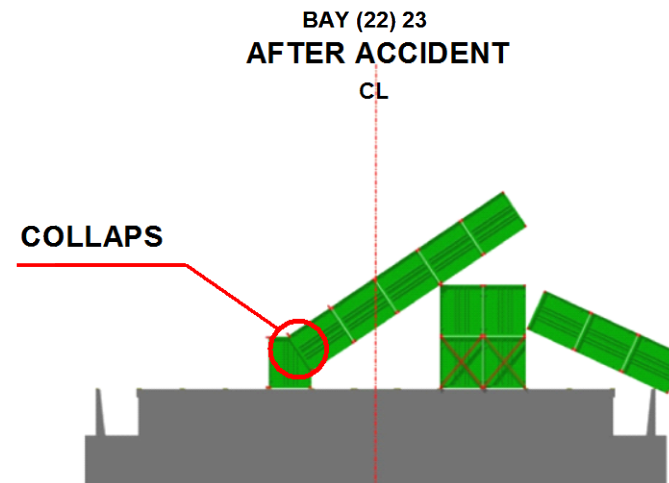
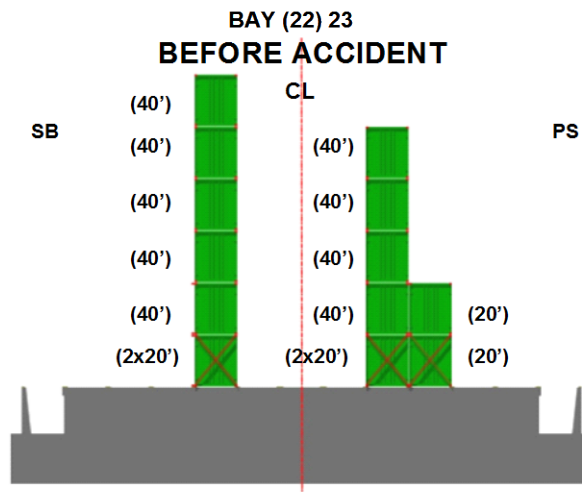
62	58	54	50			46	42	38	34	30	26	22	18	14	10	06	02	40' BAY												
	59	57	55	53		47	45	43	41	39	37	35	33	31	29	27	25	23	21	19	17	15	13	11	09	07	05	03	01	20' BAY



MAIN PARTICULARS

Length over all 259.80 m
Breadth (moulded) 32.25 m

Depth (moulded) 19.30 m
Draught scantling 12.50 m



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Collapsed 20' Container



Vessel Pictures



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Liquids which are transported in the Flexibag

Respective Liquids

- Wine and fruit juice
- No DG classified, chemical liquids
 - Harmless, neutral, water-soluble liquids
 - Oil products, organic and synthetic
 - Water pollutant substances
 - Liquids which are not or badly biodegradable.
 - Liquids which change their aggregate state if they get contact with air.
(For example Latex)

- We have established a working group with the C.O.A. (Container Owner Association) to set standards for a safe transport of flexibags in container.
- The quality of the flexibags will be improved with the rail tests.
- The combination bag, container and bulkhead is going to be improved continuously.
- Customers and Shipping companies will get a better choice.
- Flexibags with low quality should not be used.

The shipping companies can have a share in the improvement of the transport with flexibags by selection criteria for the bag, MSDS*, routing, stowage on the vessels.

- Stow flexibags on safe positions.
- flexibags are special cargo.
- Declaration is required, for planners to know where to stow the container.

* MSDS = Material Data Safety Sheet



The Wagon on the right Hand Side bounds into the Container Wagon with Speed



Torn Flexibag after Rail Crash



Sidewall bulged about 15cm in the first pannel





What can the insurance companies do?

The flexibag is not a replacement for tank containers.

- He is just a plastic bag with all advantages and disadvantages.
- Safety has to be increased
- Quality of the flexibags must be improved.
- Max payload must be reduced below 20.000 kg or Ltr.

- Customers such as chemical industry, have to be informed and alerted..
- Dangerous cargo and marine pollutant not in flexitanks.
- Problematic cargo not in flexitanks.



**Thank you very much for your
attention !**

Observed already, before even the ship was sailing !!



Bitumen ?
Absolutely
NO GO !!!



Cargo Sun Flower Oil

Sun Flower Oil
Cleaning costs
US \$ 15,000

