



A Holistic Approach to enhance safety and address the carriage of non-compliant Dangerous Goods

IUMI webinar – October 29, 2020



Agenda

- NCB Introduction
- Disturbing Trends
- Root of Problem
- Industry Challenges
- Holistic approach required to enhance safety
- Conclusion



...Safety of Life and Cargo at Sea...

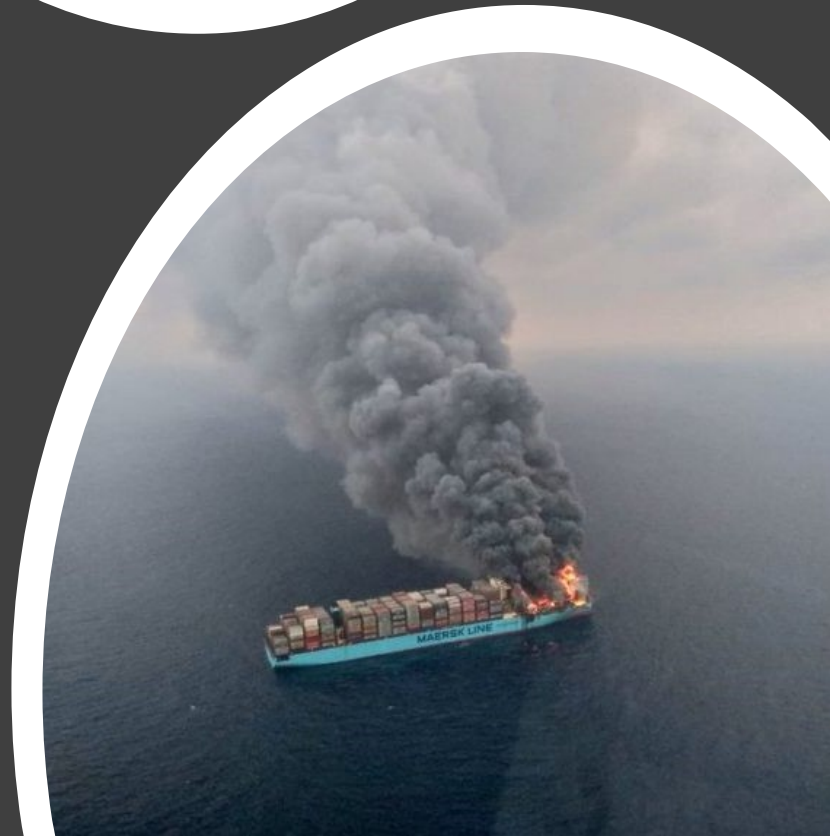
- NCB established in 1952 to render assistance to USCG in discharging its responsibilities under SOLAS 48
- SOLAS 48 addressed the Carriage of Dangerous Goods on Cargo Vessels for the first time
- Catalyst for this primarily was the 1947 Texas City Disaster
- Today, NCB conducts 10,000's of DG cargo surveys and inspections each year
- 2018 EXIS Acquisition rounds out DG service capabilities



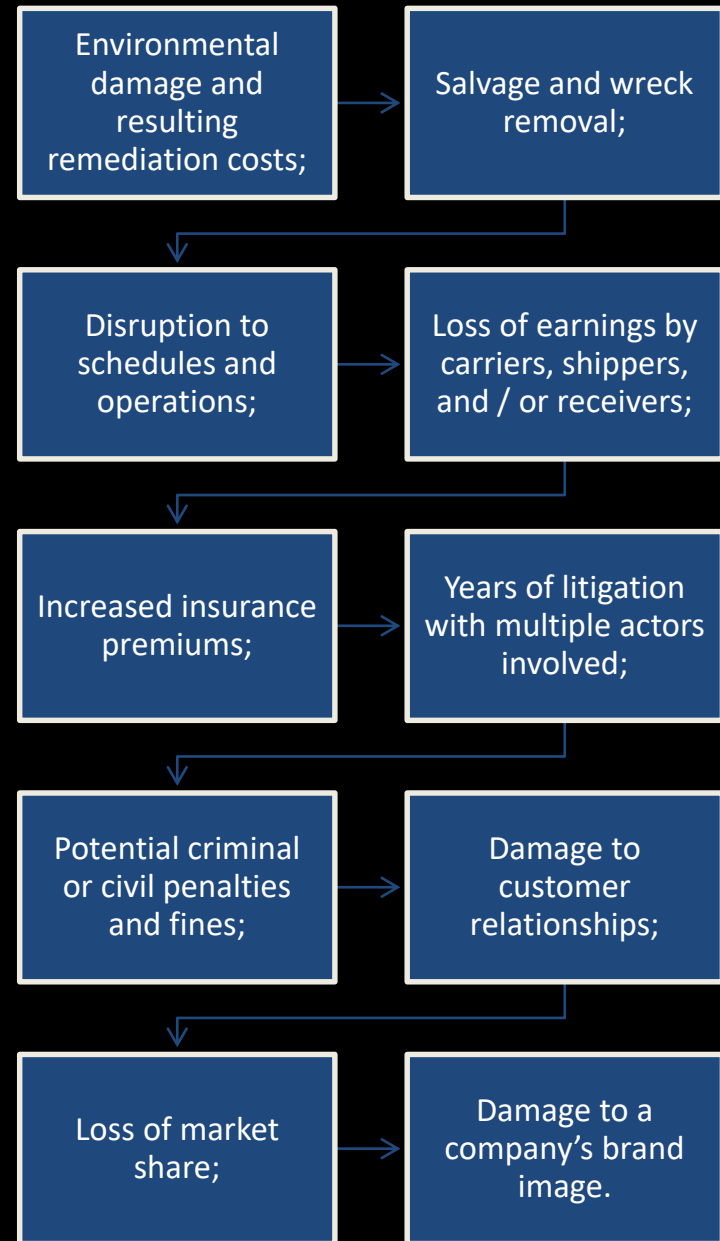
Disturbing Trends

MAERSK HONAM – March 06, 2018

- 5 weeks to control fire
- Mis-declared or undeclared DG cargo is suspected cause
- 5 crew member deaths
- Severe damage to vessel and cargo
- Most likely the largest general average loss in history

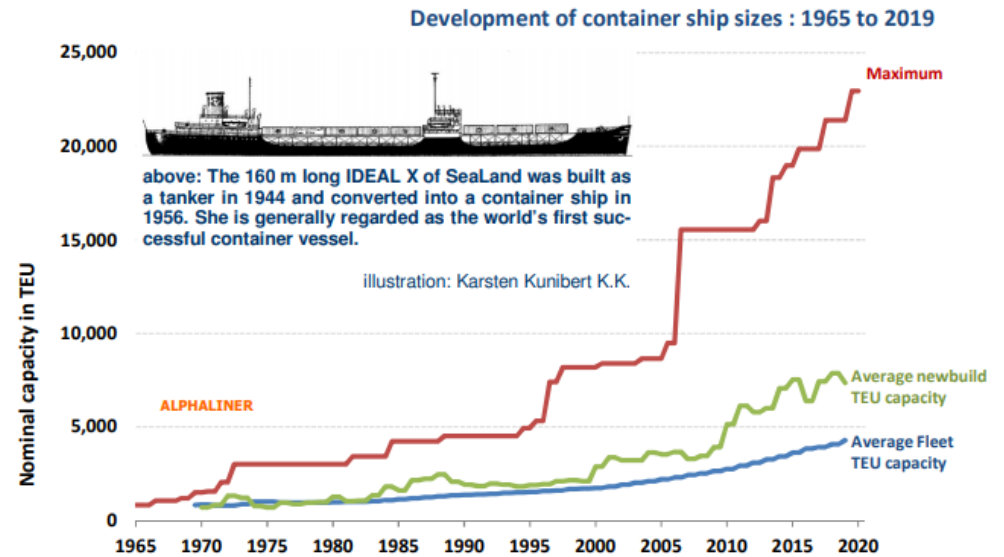


Far reaching Impacts



Increasing Scale

- Since 1968, container carrying capacity has increased by almost 1,500%
- Largest vessels now being built with capacities exceeding 23,000 TEU



Source: ALPHALINER



Increasing Frequency

- Statistics developed by the Cargo Incident Notification System (CINS) have revealed a high incidence of vessel fires.
- TT Club has stated that major container ship fires occur at an average rate of one every 60 days
- This frequency appears to be rapidly increasing as evidenced by a number of high profile incidents in 2019.

Root of Problem

- Container inspections have exposed a high degree of non-compliance including an excessive incidence of poor stowage and securing of cargo within declared DG containers.
- Last year, NCB conducted 32,390 DG container inspections in the US.
- 7.9% of these units (equating to 2,569 containers) were found to be non-compliant due to poor stowage / securing; mis-declared cargo or other related issues.



IMO 2018 Consolidated Inspection Results

- Participating members included: Lithuania, China, Republic of Korea, Chile, Finland, Sweden and USA
- A total of 72,408 containers inspected
- *44% of the total inspected by NCB*



**INTERNATIONAL MARITIME
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The NCB Container Inspection Safety Initiative

- Objective:
 - Collect and analyze data which can be used to determine the extent to which safety issues exist and determine course of action to best promote safety compliance
- Plan:
 - Inspect import containers which originate from ports lacking a robust compliance inspection program to determine future inspection targeting priorities
- Desired Results:
 - Globally increase the number of containers inspected
 - Increase safety awareness and regulatory compliance of shippers, freight consolidators and export container packers
 - Reduce shipboard incidents due to non-compliance of Dangerous Goods regulations

CISI Results

- The over-all failure rate of containers involved in the initiative (DG and non-DG / Import and Export) was approximately 55% including 43% for poor securing of cargo within the containers.
- Approximately 6.5% of the DG containers were noted with mis-declared cargos.
- For DG containers exported from the US; the failure rate was 38%.
- When compared to the annual average of 7.9% for regular inspections, this may be a strong indication that shippers and consolidators are more likely to comply with applicable regulations if there is a reasonable chance that their shipment will be inspected.



- 2.5% of imported DG containers inspected under the CISI were found to be mis-declared cargoes that represented a serious safety risk to crew and vessel.
- When extrapolated to the roughly 5.4 million containers shipped annually that contain declared DG cargo; the potential risk to life, vessel and cargo is unacceptably high and difficult to ignore.

One startling
statistic!



Roots get deeper....

- NCB conducted 3,286 DG stowage and segregation reviews on board container vessels on behalf of vessel operators over past 3 years
- 24% of these inspections were noted with stowage or segregation errors relating to regulatory requirements and / or vessel's Document of Compliance
- 71% of these inspections also uncovered discrepancies on vessel's dangerous cargo manifest

Industry Challenges to Safety

- Complex, “just in time” supply chains
- Expanding trade volumes including DG cargo
- DG compliance viewed as mandate vs integral part of safety culture
- Lack of understanding and / or knowledge of applicable regulations and industry standards
- E-commerce “unsophisticated” shippers
- Lack of harmonization between modes of transportation or international regulations and the multitude of national DG requirements
- Enforcement in many countries hampered by bureaucratic hurdles and lack of resources
- Outright bans on products by shipping lines or port authorities





Industry Challenges to Safety

- Evolution of carriers into full logistics service providers
 - Siloed corporate structures
 - Reliance on manual systems or multiple “legacy” systems
- Commercial pressures and the intensifying pace of transportation
 - Undisciplined “cut-off” times for DG cargoes
- Lack of robust DG container inspection programs
- Proliferation of carrier alliances and vessel sharing agreements
 - Vessel operator restrictions
 - Charter vessel restrictions
 - Port / terminal restrictions
 - Exposure to carriers with substandard DG processes and procedures (vessels are only as safe as the weakest link!)

A Holistic Approach is required!

Establish a corporate culture for DG compliance

Establish a Dangerous Goods Department

Establish a compliant DG training program

Establish disciplined "cut-off" times

Establish a booking process for DG cargo

Establish a DG documentation process

Establish a DG planning process

Adopt a risk-based strategy for stowage of DG cargo

Establish a Receiving In-gate process for DG cargo

Establish a DG container inspection program

Establish a vessel inspection process for DG cargo

Create one common, centralized DG data base



Conclusions

- A comprehensive, holistic DG program should set a high, minimum, benchmark for achieving regulatory compliance
- The incorporation of digital tools and centralized data bases is a critical component of any comprehensive holistic program
- The development of a robust safety culture with strong management backing is crucial to the successful implementation and ongoing effectiveness of a company's DG program.
- Liner companies must also work together in order to address DG regulatory issues.

Telephone Game

- Manufacturer
- Shipper
- Forwarder
- NVOCC/consolidator
- Co-consolidator / freight station
- Liners Shipper (nvocc)
- Partner Line

- NCB White paper https://www.natcargo.org/Holistic_Approach.html

Nevertheless, Song added, "I firmly believe that, tackling the misdeclaration and non-declaration of dangerous goods and fires on board container ships must be a collaborative effort, not only regulators, but also shippers, carriers, freight forwarders and all the stakeholders in the supply chain must share the responsibility, everyone has a role to play."

Clearly, Song is talking about prevention here and it is a refrain that will be supported by most of those in the industry, with the understanding that fighting fire on a cargo ship begins with prevention, and that means knowing what cargo you are carrying and the properties of that the cargo.



Bingbing Song believes that tackling fires on board container ships must be a collaborative effort.



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...Safety of Life

and Cargo at Sea...

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