



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

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IVODGA Panel – October 6, 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...

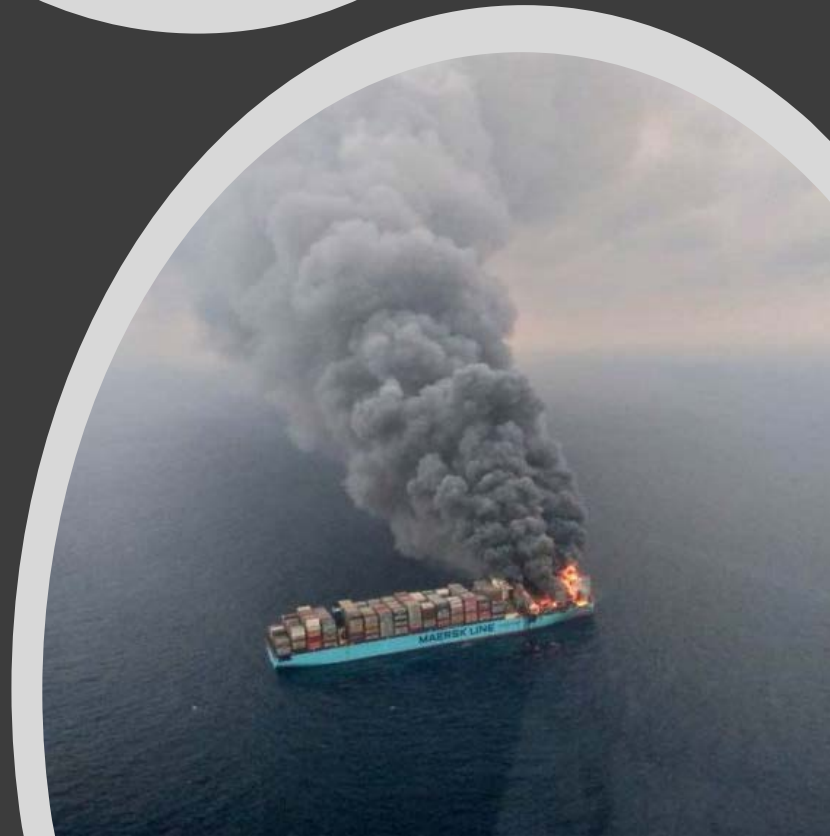
- NCB established in 1952 to render assistance to USCG in discharging its responsibilities under SOLAS 48
- SOLAS 48 addressed the Carriage of Dangerous Goods on Cargo Vessels for the first time
- Catalyst for this primarily was the 1947 Texas City Disaster
- Today, NCB conducts 10,000's of DG cargo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



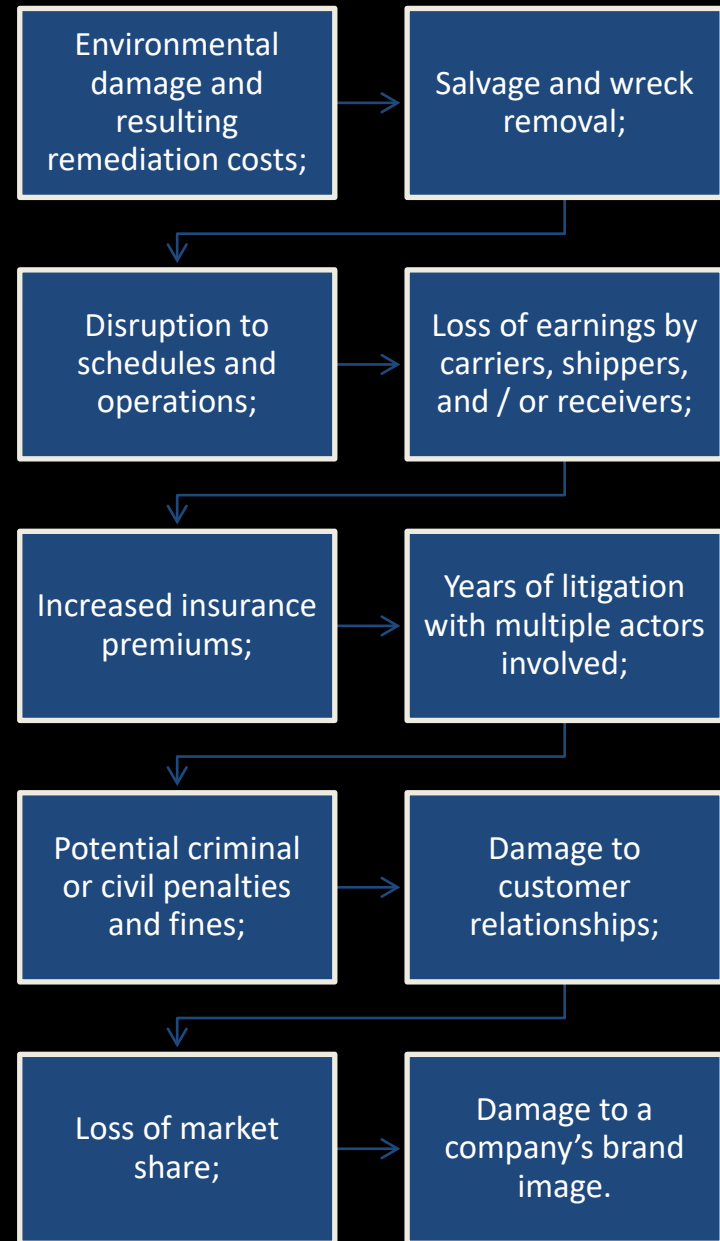
# Disturbing Trends

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

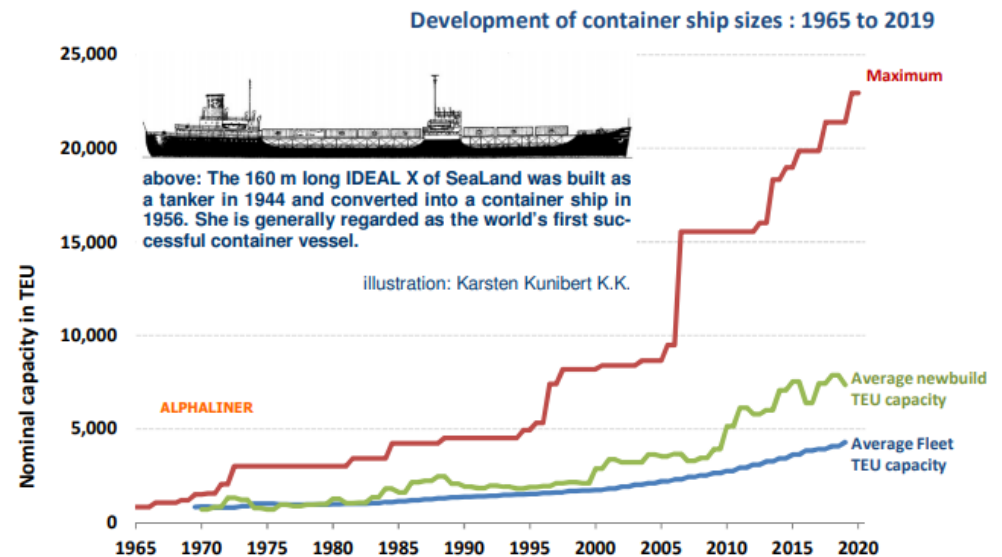


# Far reaching Impacts



# 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



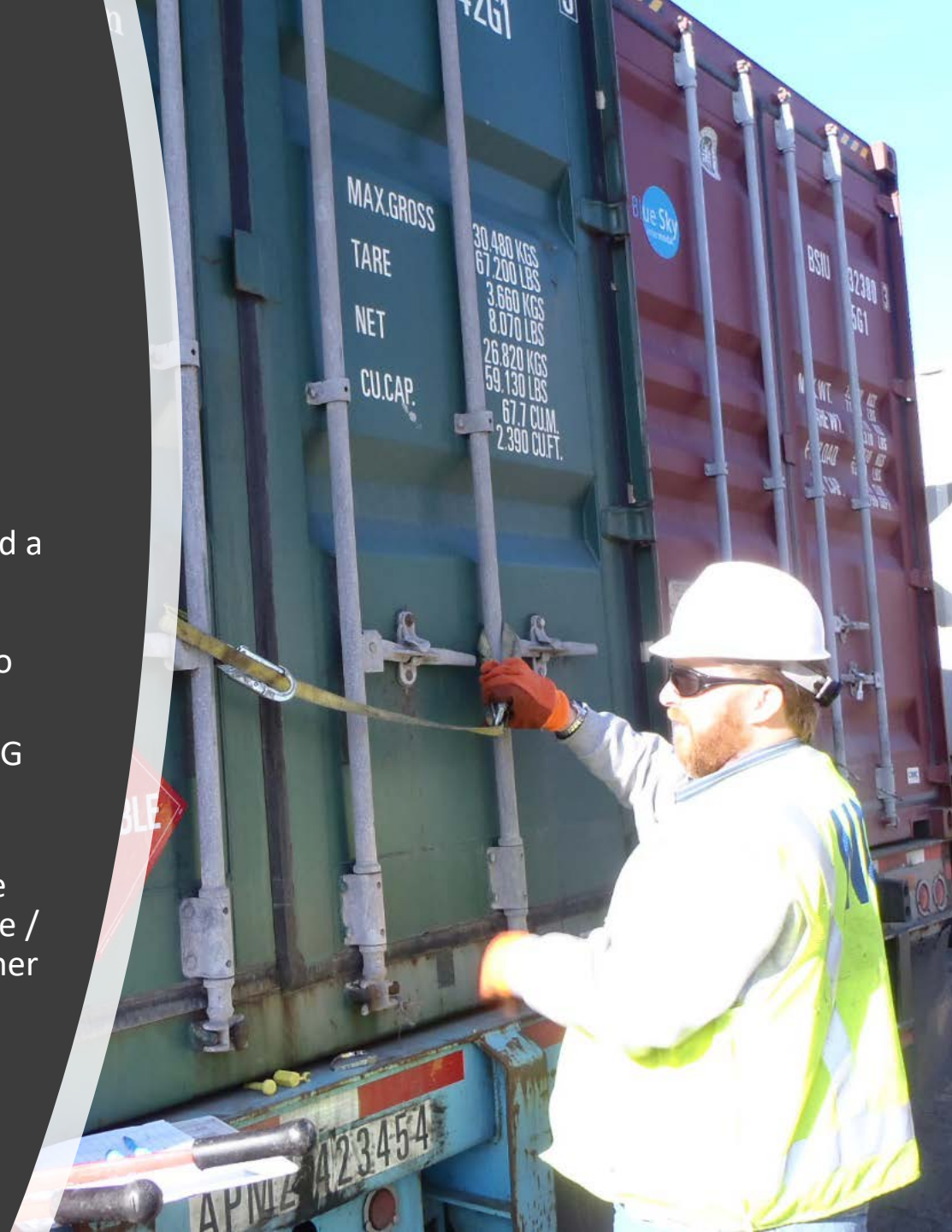


# Increasing Frequency

- 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  
ORGANIZATION**

# 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 “mom and pop” 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



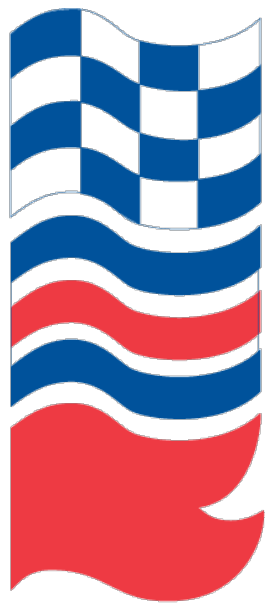
## Conclusions

- 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





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