



Handling Special Consignments

Loading and Transportation

International Conference on Insurance and Marine Transportation MAY 2015

AQABA

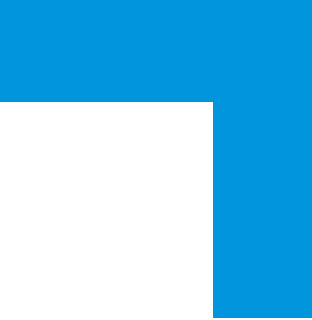
12th May 2015

CAPTAIN ANDREW WALKER



AGENDA

- **THE LOGISTICAL CHAIN**
- **IMPACT OF A LOSS**
- **IDENTIFYING THE RISK**
- **MANAGING THE RISK**
- **ROAD TRANSPORT**
- **BEST PRACTICES TO PREVENT CARGO LOSS DURING ROAD TRANSPORT**
- **CARGO THEFT**



Only the foolhardy believe that a heavy cargo unit's inertia, alone, will restrain its movement during a sea voyage!



Measure, identify and List
Customer requirements and
**provide Efficient
integrated solutions**
towards risk minimization



The logistical chain



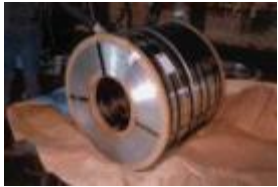
Marine Risk

What are the Risks ?

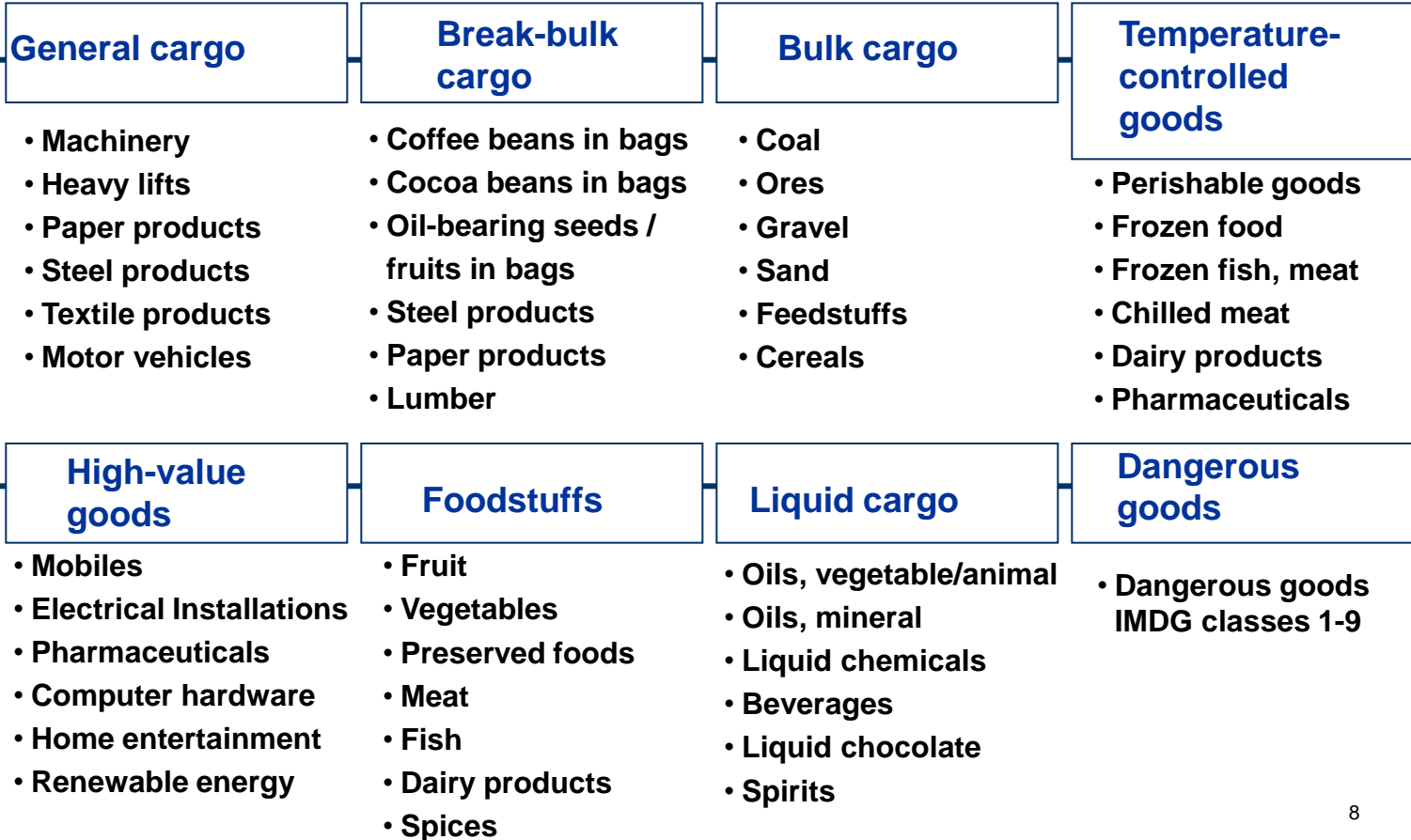
Are you prepared to Gamble?



Cargo - catalyst for world trade



Cargo



Review of the transit chain

Transit Chain

Primary transit lanes & links

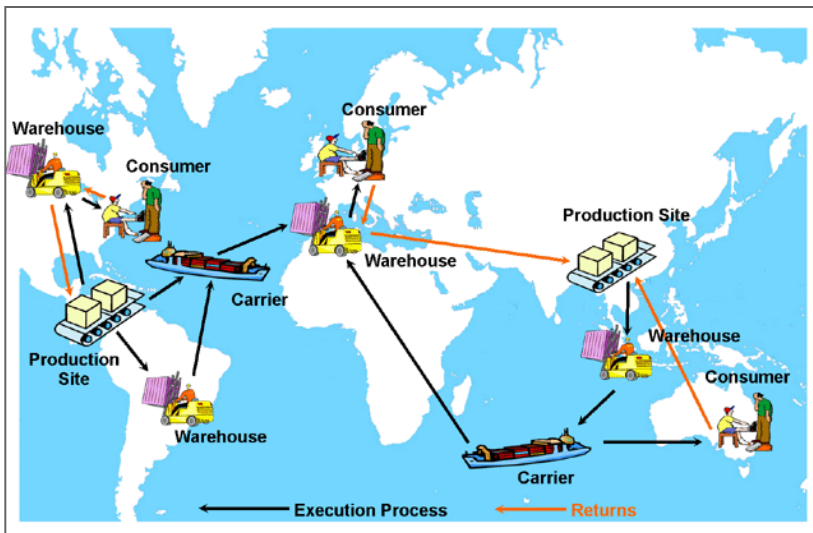
Conveyance mix

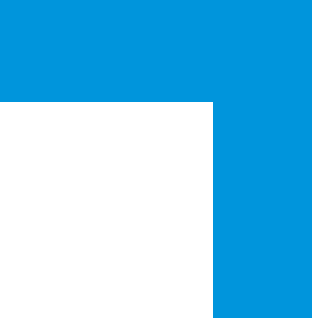
Intermediate ports & storage

Political

Climate/Weather routing

Changing business activity





All parties involved in the logistics process, including packers, loaders, transport companies, operators and drivers, have a role to play in ensuring that cargo is properly packed and loaded on a suitable vehicle.

It is very important to understand that responsibilities for cargo securing are based on international conventions and regulations, national legislation and/or contracts between involved parties.

IMPACT OF A LOSS



Cargo Loss, Theft or Damage – The Negative Impact

Financial impact on the enterprise

- Loss of market
- Loss of sales
- Interruption to cash flow
- Potential increase in insurance premium
- Increased administrative costs

Operational impact on the enterprise

- Interruption to supply chain
- Damage to reputation
(with customers and within the industry)
- Tension in relationships with customers
and suppliers
- Personnel frustration and loss of morale
- Loss of brand image

70%

Of all cargo claims can be prevented!

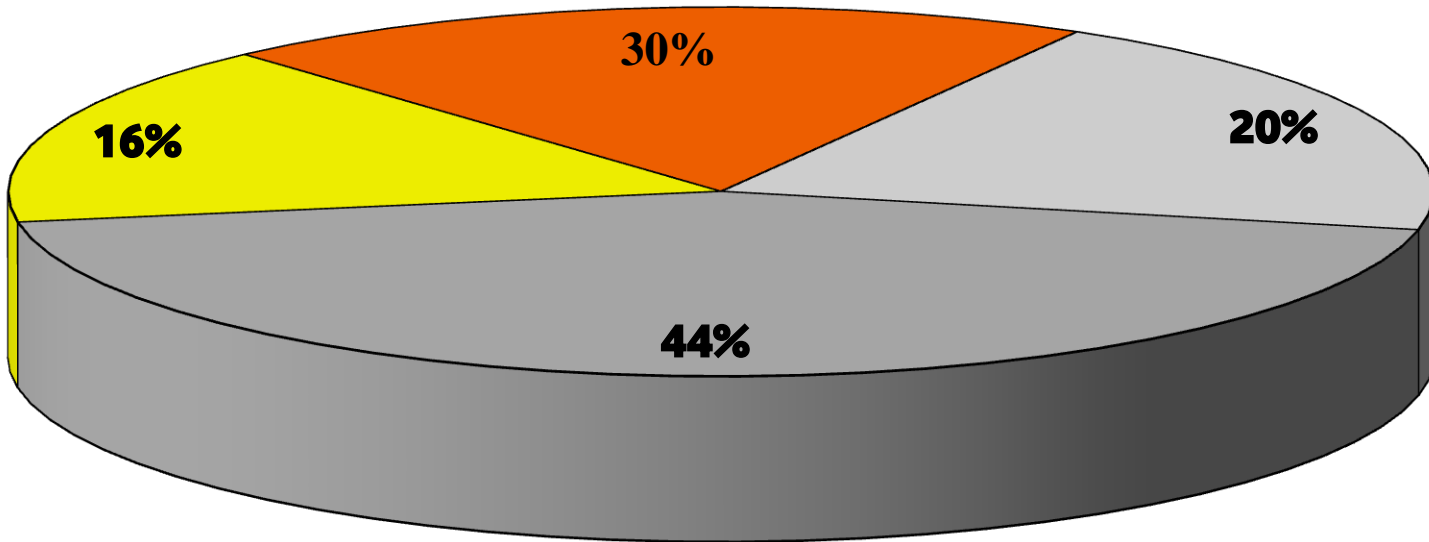


Source: German Insurance Association
www.tis-gdv.de



70% of Loss is Avoidable

□ Robbery □ Handling □ Water damage □ Fortuitous



Cost Of An Incident

- **Interruption to the project**
- **Possible project delay (Damage to reputation)**
- **Interruption to cash flow**
- **Claim amount**
- **Hidden costs; minimum of 150%**
- **Unhappy client**



IDENTIFYING THE RISK



Without good Planning and Risk Assessment , there are inherent consequences



Common Problems

- Adverse weather
- Inadequate procedure/method statement
- Poor quality conveyances
- Lack of competence by contractors
- No main contractor
- Lack of marine input
- Inexperienced contractors & poor cargo securing
- Breakdown of hardware
- Poor control at destination port and to site
- Lack of control by the client
- Commercial bias for each company

MANAGING THE RISK



Planning the Project.

- INCOTERMS?
- 'Kick-off' meeting – All Parties
- Risk Control measures to put in place
- Guidelines
- Analysis of destination
- Review procedures/method statements
- Surveyors work instruction
- Checklists
- Surveyors terms of reference – Reporting , contacts etc
- Future meetings as required

Route Assessment !

Road :

Bridges – Load capacity and bridge heights

Road surface –Type , width and load capacity

Turning Radius

Power Lines

Border crossings – Documentation

Escorts should be considered for oversized equipment particularly on steep, narrow and curving roads

Sea :

History of weather / anticipated weather

Anticipated sea conditions

Seasonal weather i.e Hurricane season

It looks like things are going well.....



OOOPS !!!!!



Involved Parties

- Client
- Main contractor
- Construction sub-contractors
- Shipping line
- Transportation contractor
- Broker, Insurer & Marine Warranty Surveyor
- Freight forwarder (role?)

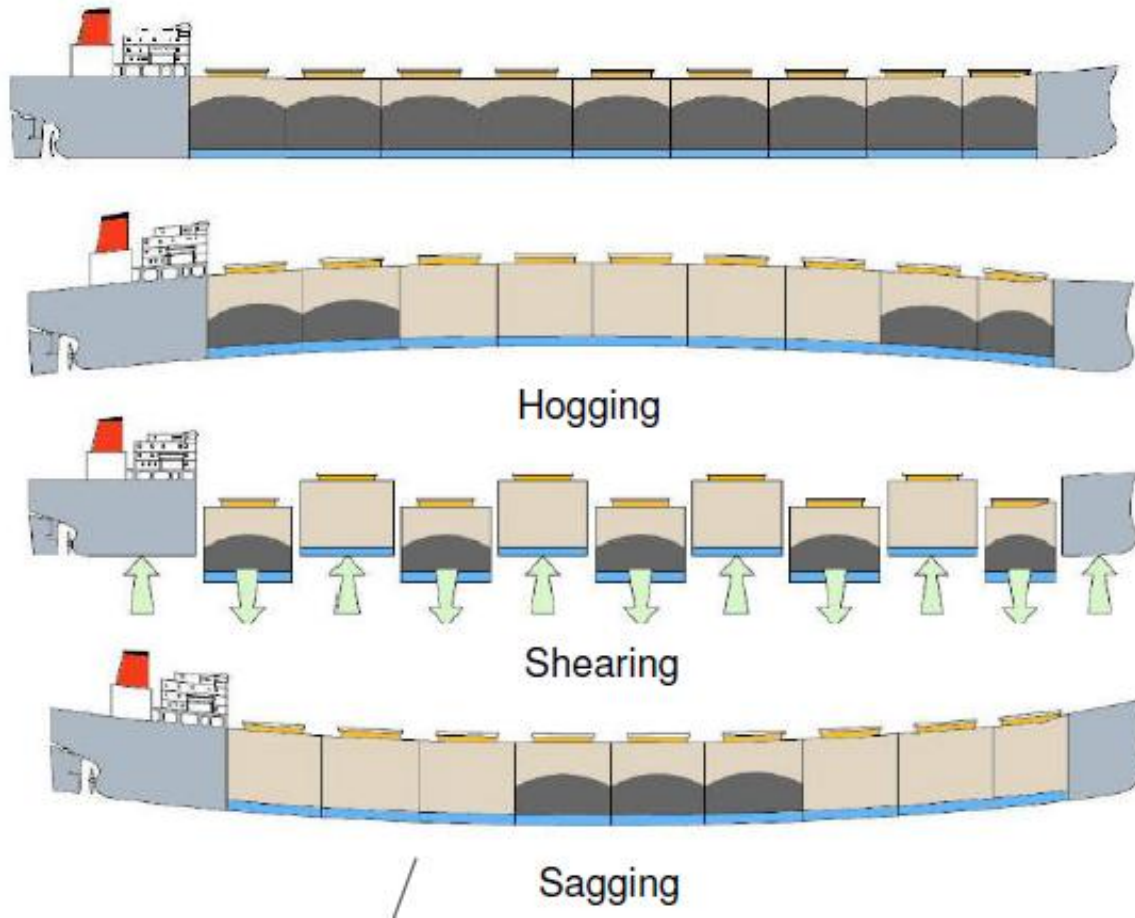
Is the mode of transport suitable ?



VESSELS SELECTION CRITERIA

- All ships grow progressively weaker as they become older due to hogging, sagging, panting and vibrating while moving in a seaway.
- Poor operational and maintenance management largely contribute to the deterioration of vessel's safety conditions, exposing the cargo to unnecessary perils.
- Good criteria on chartering the vessel contribute to reduce these hazards.
- checking vessels' background before on hire
- Ownership, Aging, Flag, Classification Society, Protection and Indemnity Club (P&I Club), Port State Control Inspections, Vessel Trade patterns
- The season, weather conditions and nature of voyage (Length and Passage - sheltered or seagoing water

Primary Stresses on Vessels



Vessel Check and survey

- AIG can check the vessels for you, vessel name and IMO number is sufficient
- AIG uses a 3rd party database, Right Ship. This database is based on authorities flag and port states controls, these are made by authorities from ports all over the world.
- Inspections made by the Class.
- Vessel type, flag, class, P&I club, possible incidents or casualties, etc influences the right ship star and risk bar rating

Vessel Selection Criteria

RIGHTSHIP

<http://site.rightship.com/>

Risk Rating	5 ★★★★★
Action Required	This vessel to be approved by RightShip (due to no previous vetting). Click REQUEST APPROVAL.
Member of	Vessel is an Intertanko member
Date of Risk Rating	14/Jan/10 18:08

Section 4: Rating Calculation	
Total Score + Adjustments	131
Maximum possible Total Score + Adjustments	160
Risk Rating Profile Graphic	
Other Factors Count	0
Rating based on Total Score + Adjustments and Other Factors Count	5
Other Factor which limits Rating	None
Overage blocking applies	No
Final Rating based on	Total Score + Adjustment
Final Rating	5
View Vessel History	

MOL COMFORT

June 2013

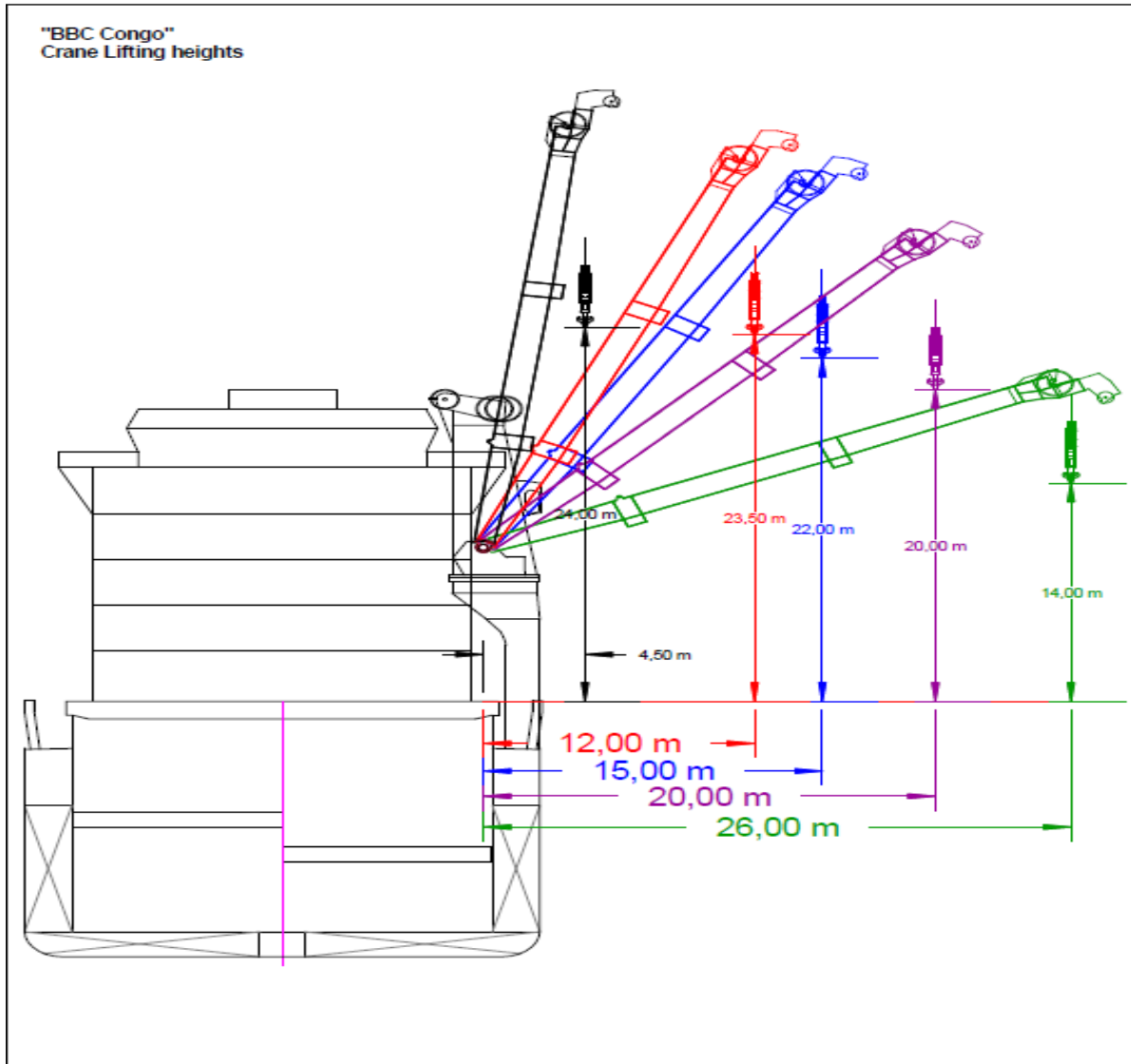


The Vessel

- Capable of Loading proposed cargo
- Use various means of checking the vessel specs
- Type of cranes and crane reach
- Lifting capacity of cranes
- Maximum SWL of the cranes
- Last Load test Certificate

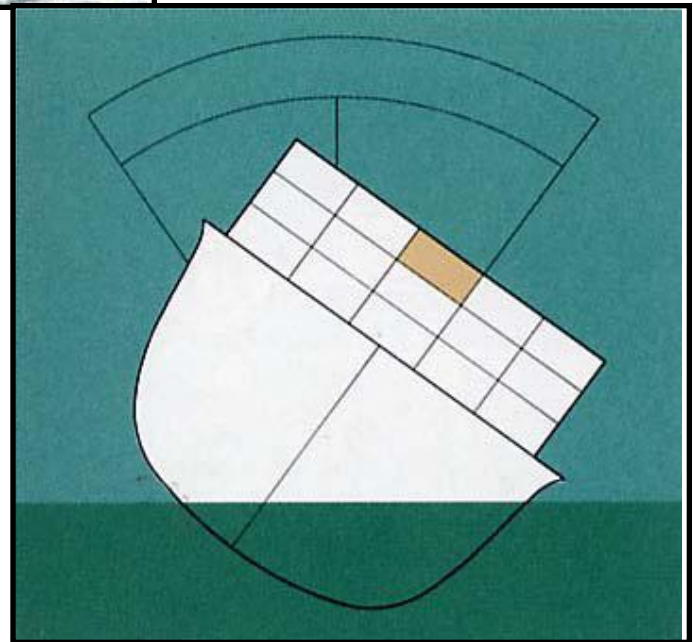
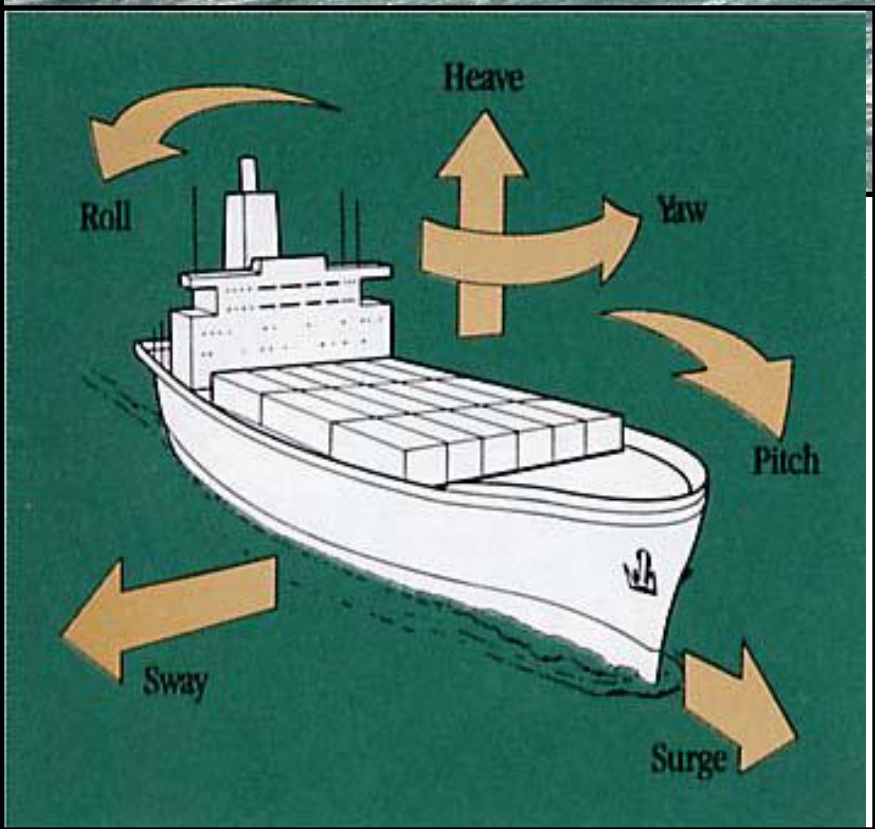


Verify vessel crane capabilities



At sea the cargo experiences rolls up to 45 degrees and force up to 2G which can easily shift the cargo.

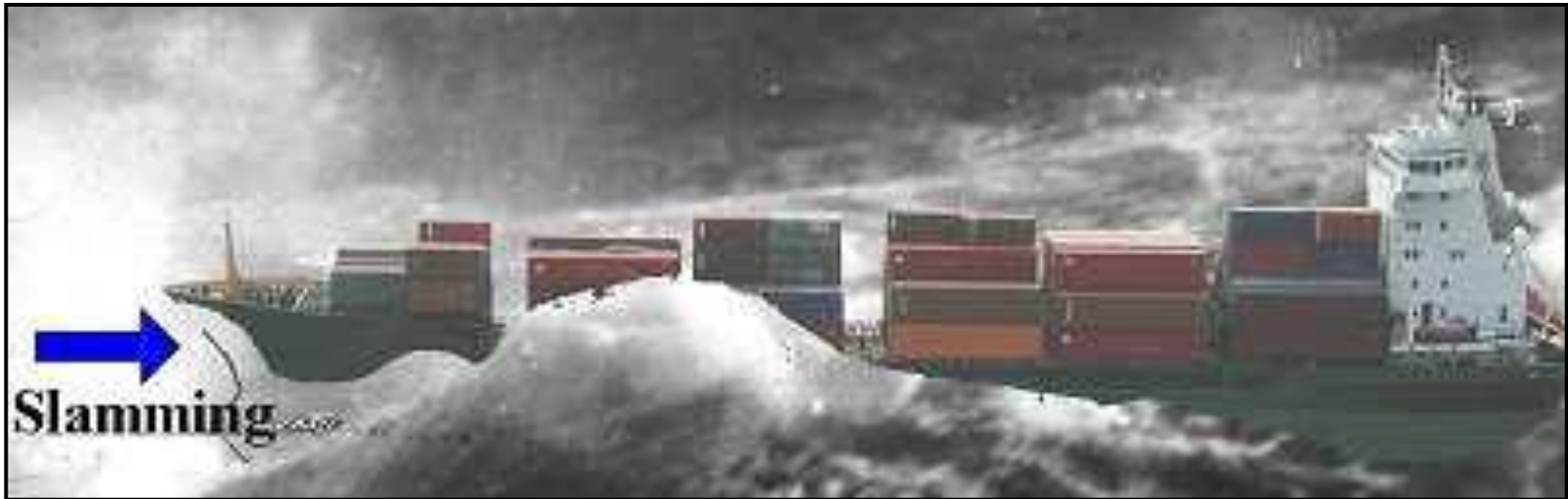




Pitching



Slamming



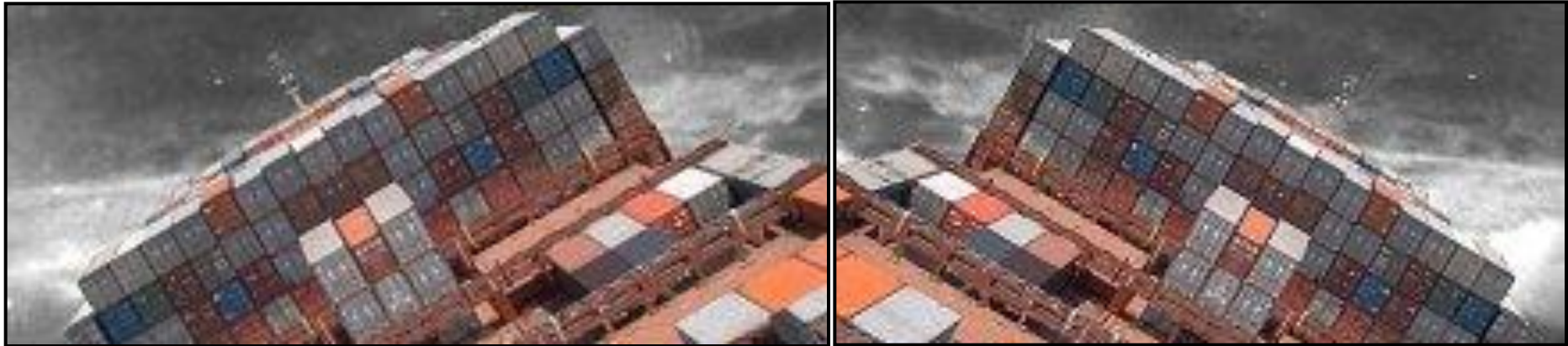
Rolling

Vessels rolls 10 degrees, very easily.



Rolling

Vessels rolls 30 degrees in a storm.







Research the cargo and method of shipment

Ask for the Method statement from the Carrier



Method Statement should involve the following

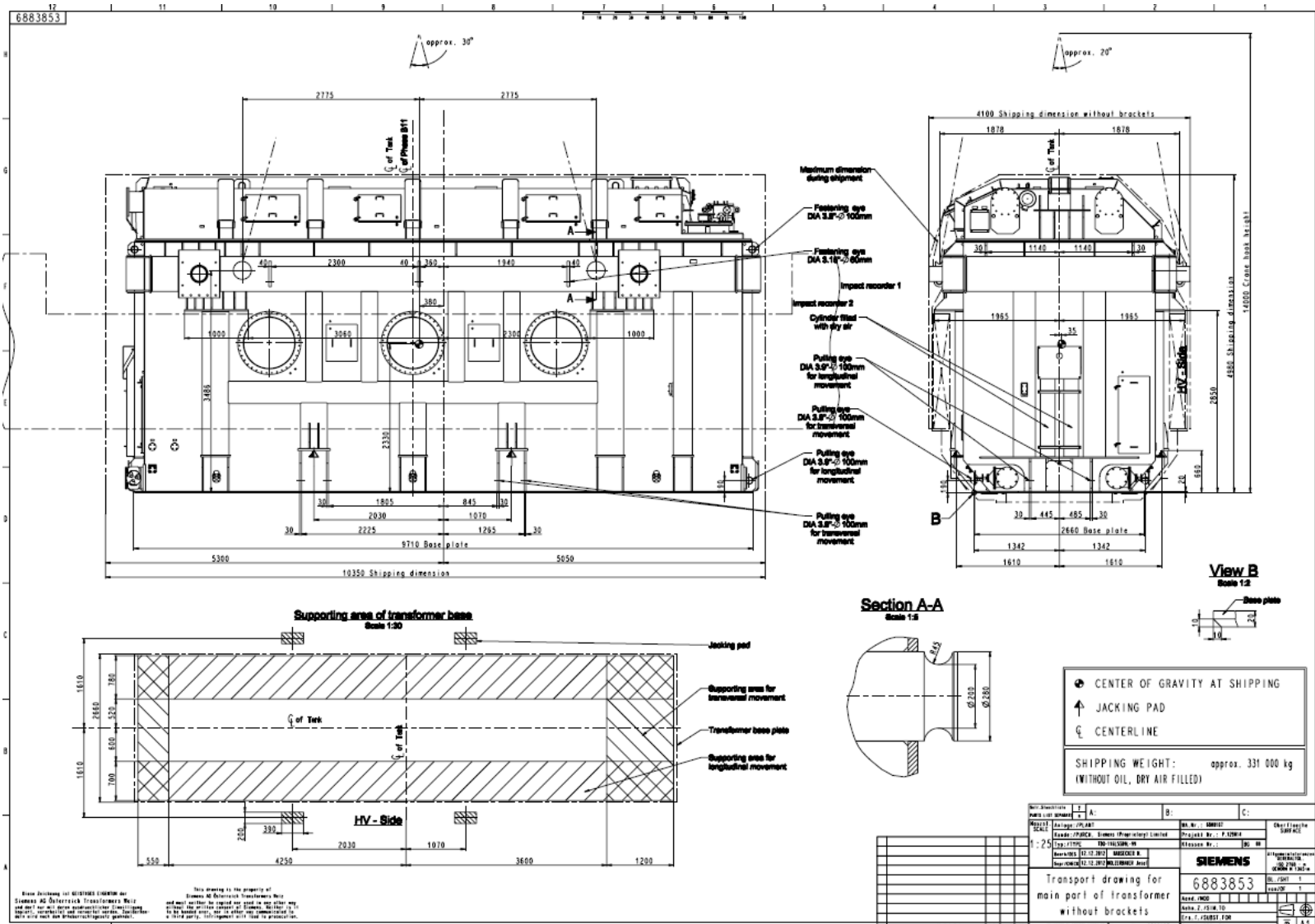
- Weight
- Dimensions
- Centre of Gravity
- Lifting points
- Securing points
- Lashing calculations based on acceleration forces
- Method of lashing – Welded stoppers , type of lashing involved
- Method of lifting

Projects, heavy units and heavy lifts

- Plan already in the designing phase also how to transport the cargo / your lifting and lashing places / hooks
- Official markings such as COG.
- Additional markings, do and not do signs

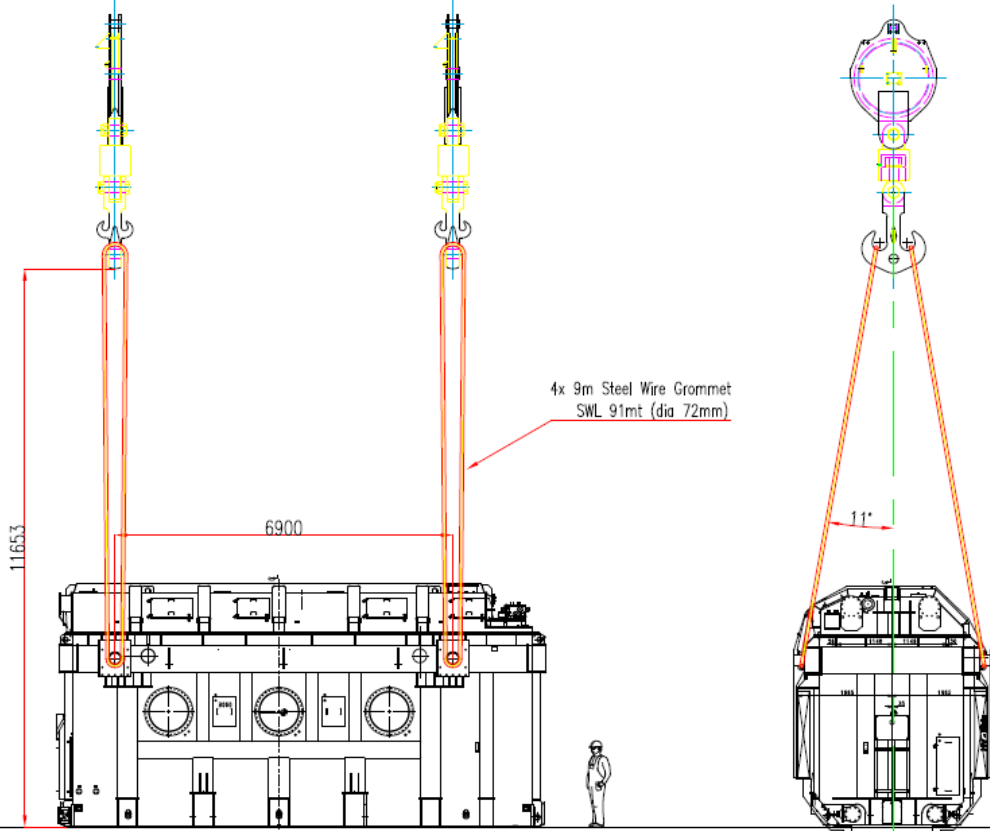


Method of Shipment



Crane 3
abt. 166mt

Crane 2
abt. 166mt



4x 9m Steel Wire Grommet
SWL 91mt (dia 72mm)

11653

6900

11°

BBC Chartering

VESSEL NAME:	BBC CONGO
DRAWING TITLE:	RIGGING DETAILS
DRAWING NO.:	Rigging01 BBC Congo
PROJECT NO.:	2024
SCALE:	1:1
DATE:	01 OF 02

CARGO

SIEMENS

ANTWERP

VEHIC (0) | LENGTH (0) | WIDTH (0) | HEIGHT (0) | REV

DESCRIPTION

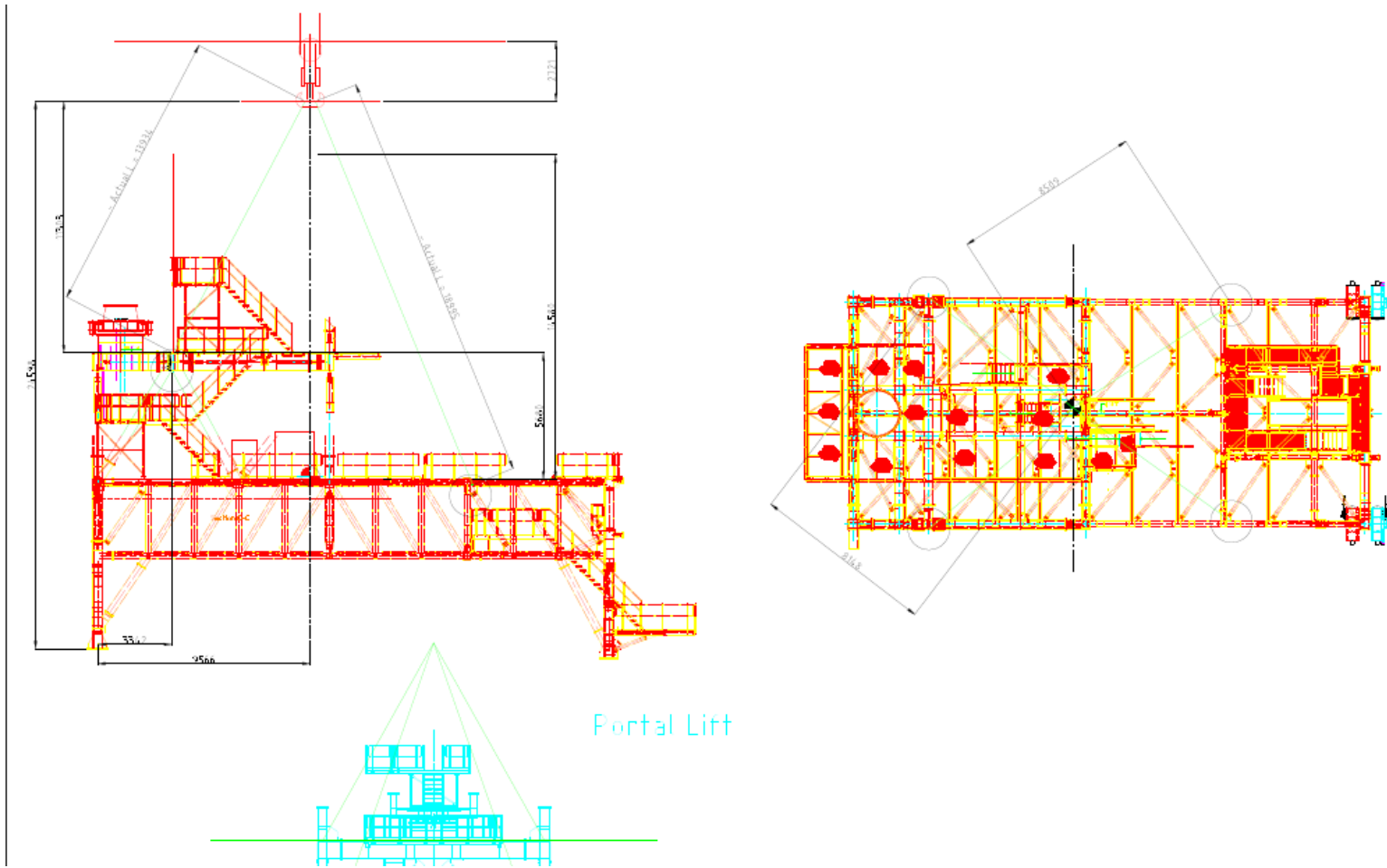
DATE | DRAWN | CHECK

PROJECT NO. | SCALE | NTS | UNITS | MW (UNO) | SHEET | 01 OF 02





VERIFY LIFTING POINTS ON CARGO



A 638 metric ton petroleum reactor falls during offloading



Ports

- Suitable access to the port with no obstructions
- Secure storage facilities
- Have knowledge of the Local Port Regulations
- Have knowledge of the Local lifting regulations - Daylight restrictions etc
- Availability of Mobile Heavy lift cranes in the port – Back up plan !!



The Lift.....



- A lift plan is required for every lift. If the lift deviates from the plan, make safe and stop the operation.
- Hazard identification and risk assessment are an integral part of planning a lift.
- An assessment of the lift and determination of the lift method, equipment and number of people required are critical to planning of the lift.

Judicious heavy lift operations

Choice of operator(s)

Review of Lifting plan.

Stability calculations.

Accelerations calculations.

Lashing and securing plans.

Proper material.

Judicious and professional handling.

Securing arrangements





The People Factor.....

- All persons involved in planning/performing lifting and maintaining lifting equipment shall be trained and competent for their role.
- Refresher training and periodic assessment is necessary to assure competence.



LIFTING EQUIPMENT

- Equipment shall be fit for its intended purpose and operating conditions and shall be designed to a recognized standard.
- Equipment shall be fitted with appropriate safety devices.
- Any safety devices installed on lifting equipment shall be operational and not overridden.
- All required inspections of equipment as per required legislation must have been carried out



Project Cargo



Project Cargo

- Sizable, Expensive, Time pressure, Long Replacing time,
- Transport Planning already at the designing stage
- Active follow up during all phases
- Define your critical items and specified items (such as heavy items)
- Ready to act if needed
- Have margins
- Lifting and lashing points
- Cargo insurance
- ALOP, DSU Insurance
- Think twice - lift once





Road Transport



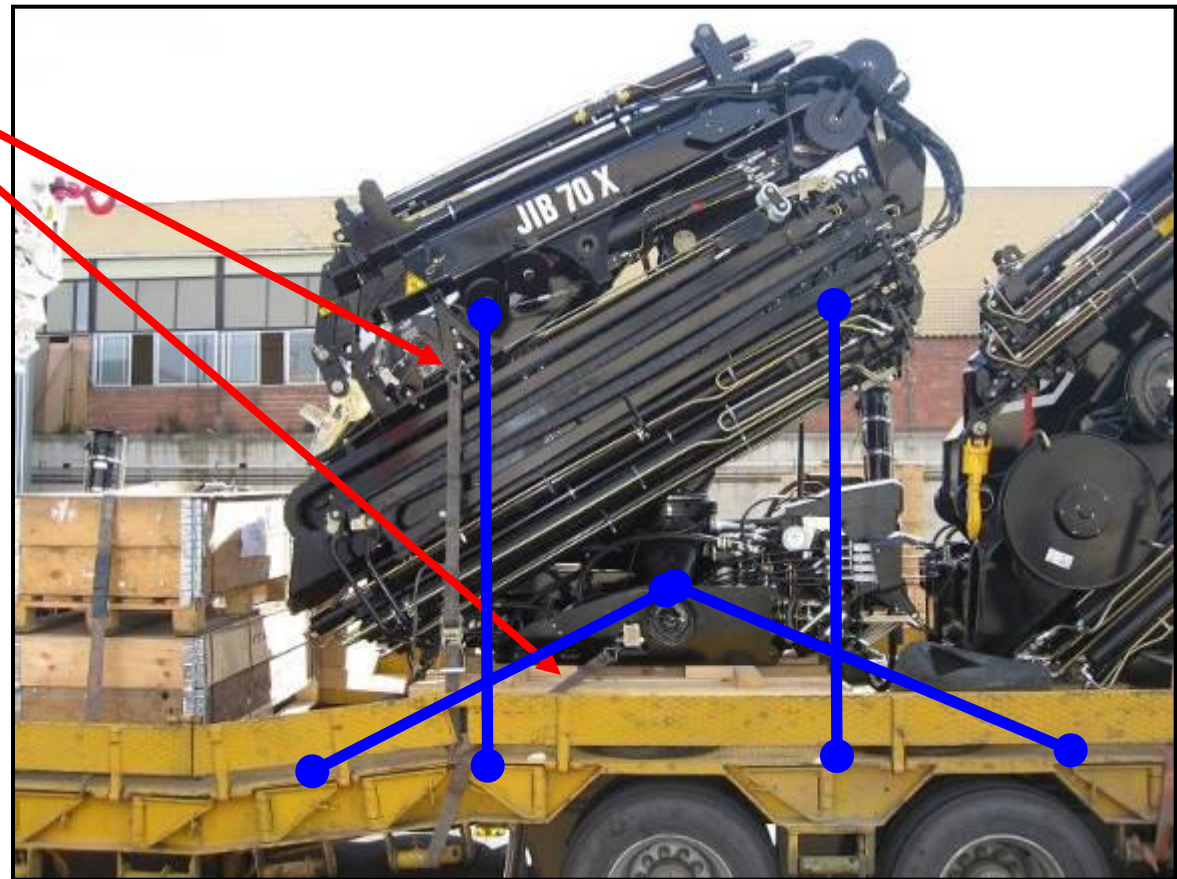
No Lashings



Lashing of machinery

Design lifting and lashing “eyes” in designing phase

- Only 2 lashings
- High COG
- Proposed lashings
- Proposed lashing eyes



Steel coils

- Evaluate to use cradle when transporting steel coils by road

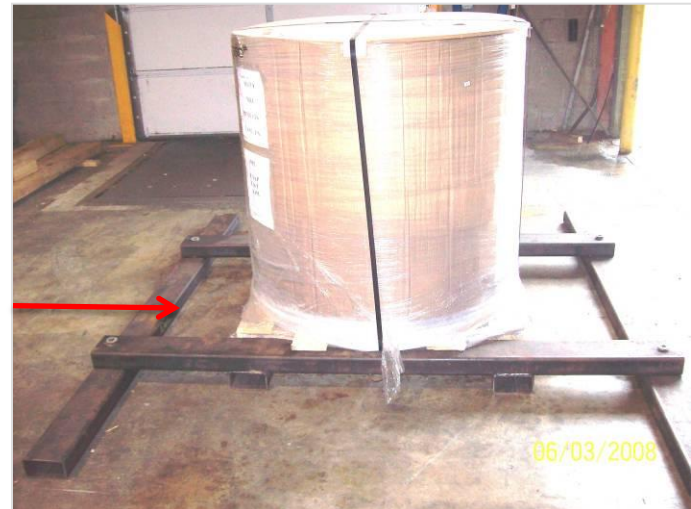


Marine Loss Control Program Aluminum Coils

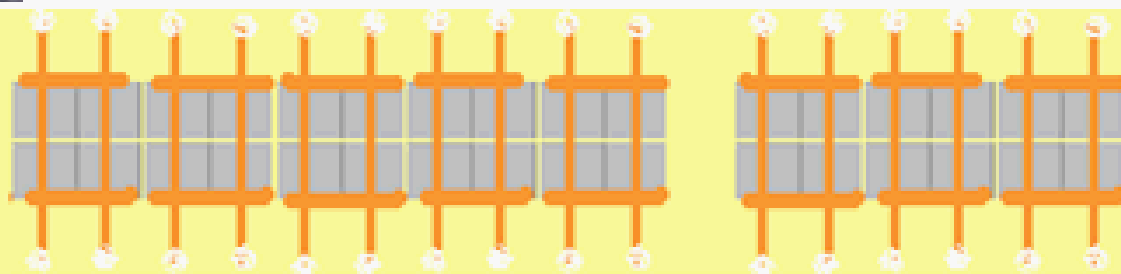
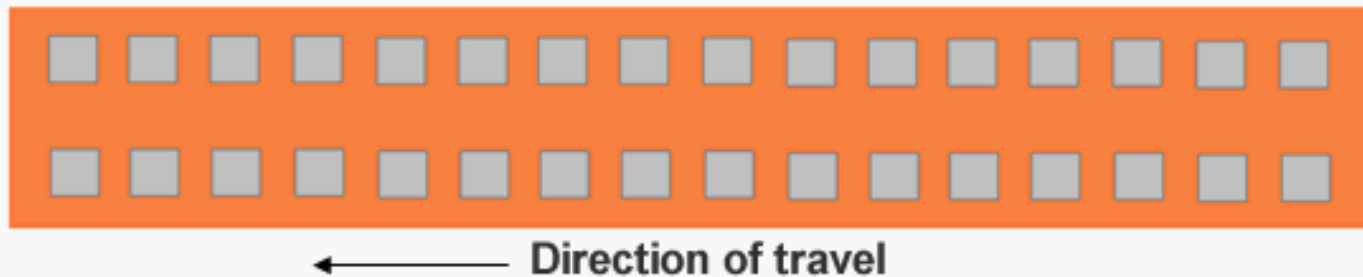


Inadequate Securing
Improper Weight Distribution

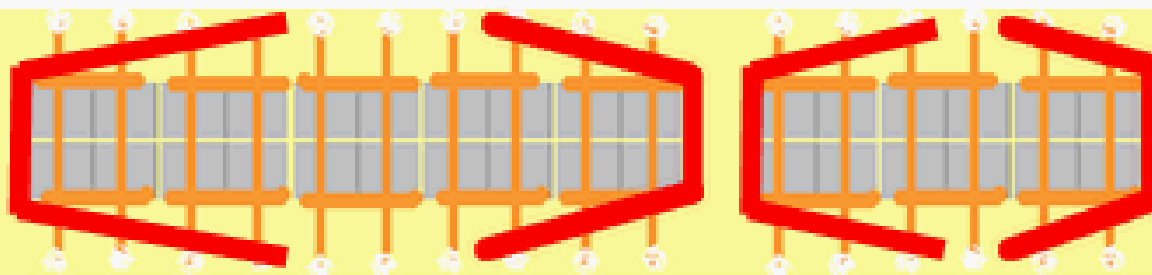
MLCE recommendations included testing for CoF based on various configurations and materials, improved skid design and additional blocking and bracing



Ingots

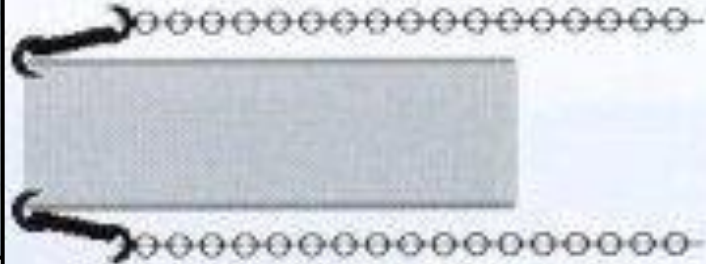
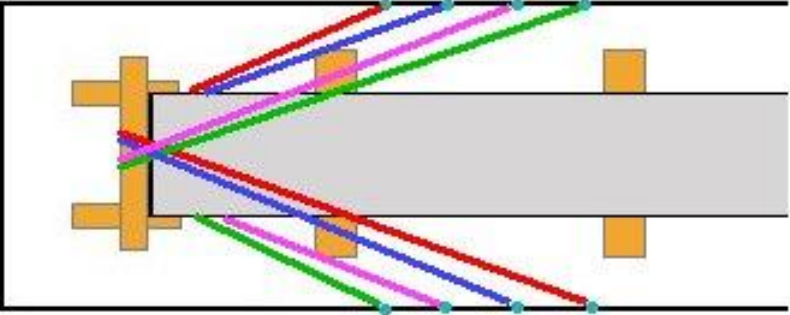


← Direction of travel



← Direction of travel

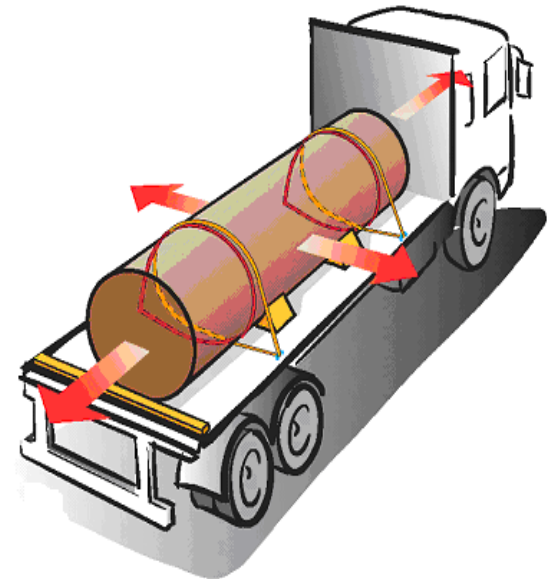
Steel pipe



Mechanical Stresses

Acceleration forces exerted by cargo during road transport:

- Forces acting forward (braking)
 - up to 1.0g
- Forces acting sideways (turning)
 - up to 0.5g
- Forces acting backwards (speed increases)
 - up to 0.5g
- Forces acting vertically (road conditions)
 - up to 1.0g



Improper Load Distribution

Vehicle rollover and or cargo tipping over is one of the most frequent accidents encountered due to incorrect load distribution and or unknown COG



Best Practices to Prevent Cargo Loss During Road Transport



Properly Distribute the Load

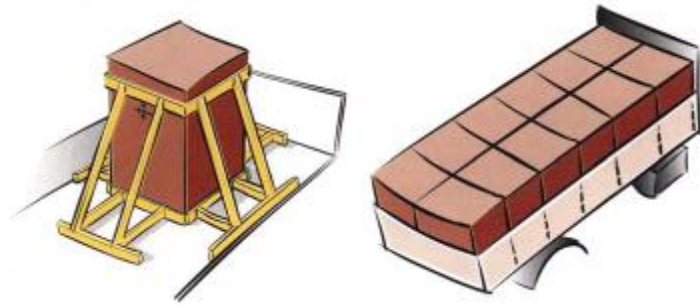
- Before the vehicle is loaded and a loading plan is developed, the weight / dimensions and the horizontal location of the center of gravity for each piece of cargo should be provided / determined
- Ensure that the cargo is distributed in such a way that the centre of gravity of the total cargo lies as close as possible to the longitudinal axis and is kept as low as possible. Consideration should be made for speed, road conditions and terrain to be encountered to ensure stability en-route

Properly Distribute the Load

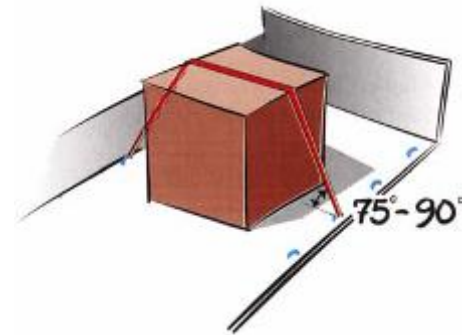
- When any load is placed upon a vehicle, the maximum authorized dimensions, axle and gross weights should not be exceeded
- Minimum axle loads should also be considered to ensure adequate stability, steering and braking

Adequately Secure the Load

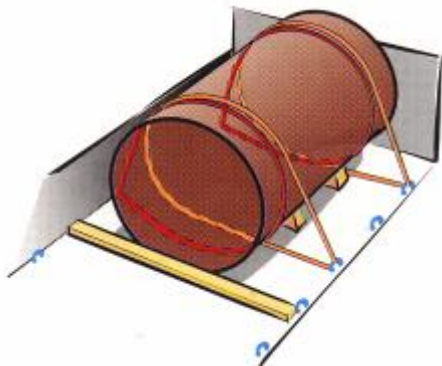
- Determine the securing method's best adapted to the characteristics of the cargo



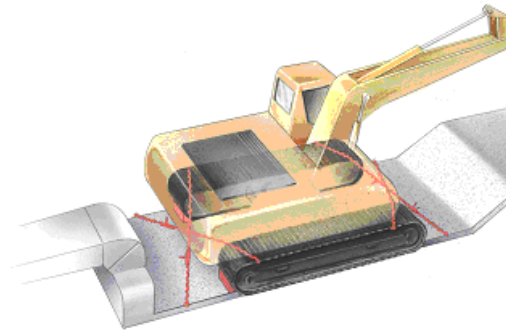
Blocking



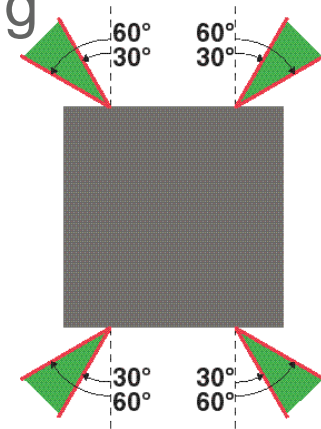
Over-top Lashing



Half Loop Lashing



Direct Lashing



Adequately Secure the Load

- Ensure Cargo Transport Unit has adequate lashing points for intended cargo

- Use Proper Lashing Equipment

- Web Straps
- Steel Banding
- Chain
- Wire Rope



- Apply Adequate Number of Lashings

- IMO Quick Lashing Guide (Road and Sea Area A) is an excellent reference

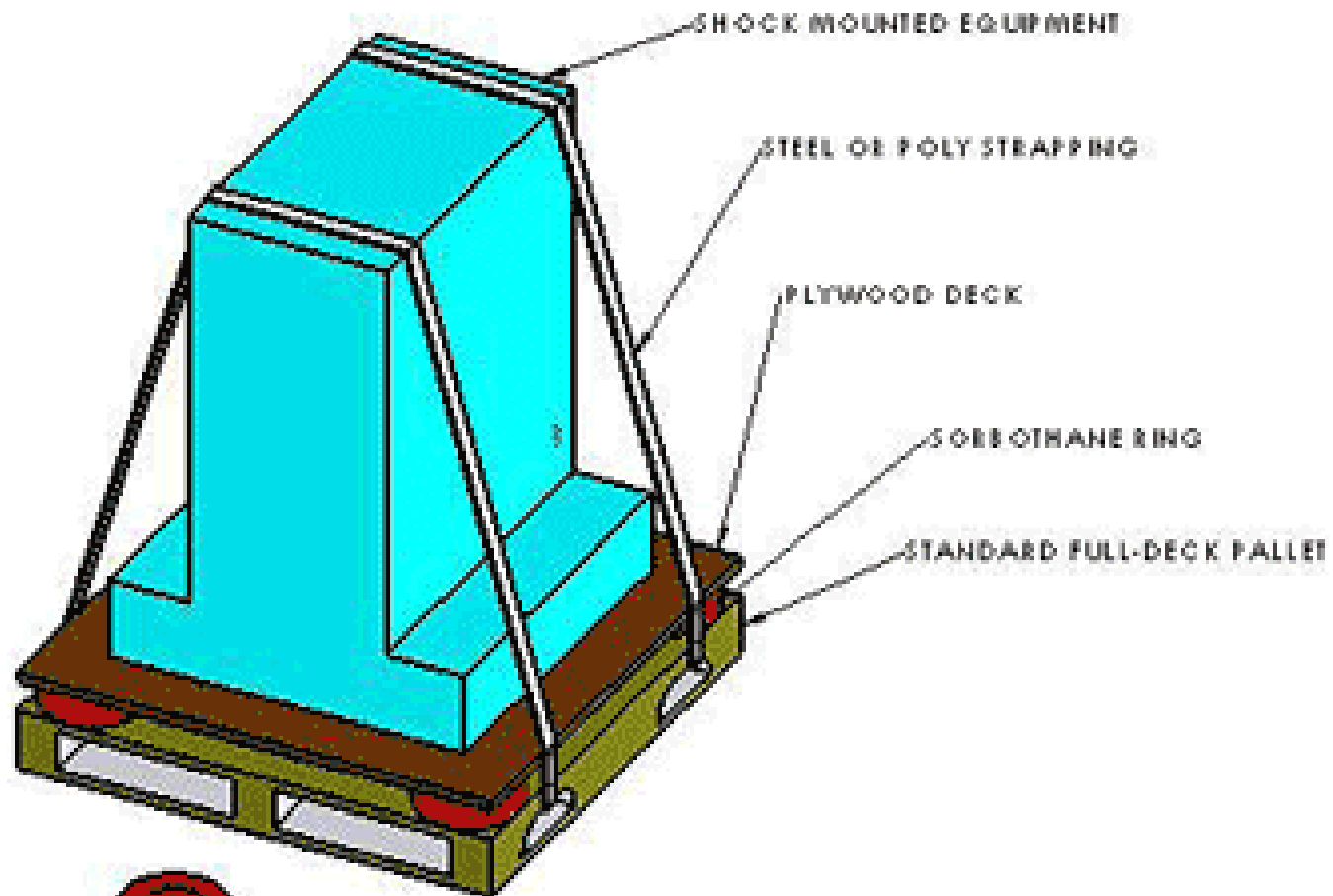
- Wherever possible, use equipment which supports the cargo securing such as friction mats, walking boards, straps, edge beams, etc

- Ensure loading is supervised by someone properly trained and experienced in cargo securing

- Ensure the cargo securing is checked regularly, wherever possible, during the journey. The first check should preferably be done after a few kilometers drive at a safe place to stop. In addition the securing should also be checked after heavy braking or another abnormal situation during driving.

Ensure Cargo is Sufficiently Protected

- Ensure that the securing arrangements do not damage the goods transported. Use chafing gear, edge protectors or similar as required.
- Maintain speeds that are appropriate for the conditions en-route to minimize heavy vibration or jolting.
- Use suitable cushioning materials or air-ride equipment for cargos sensitive to vibration or jolting.

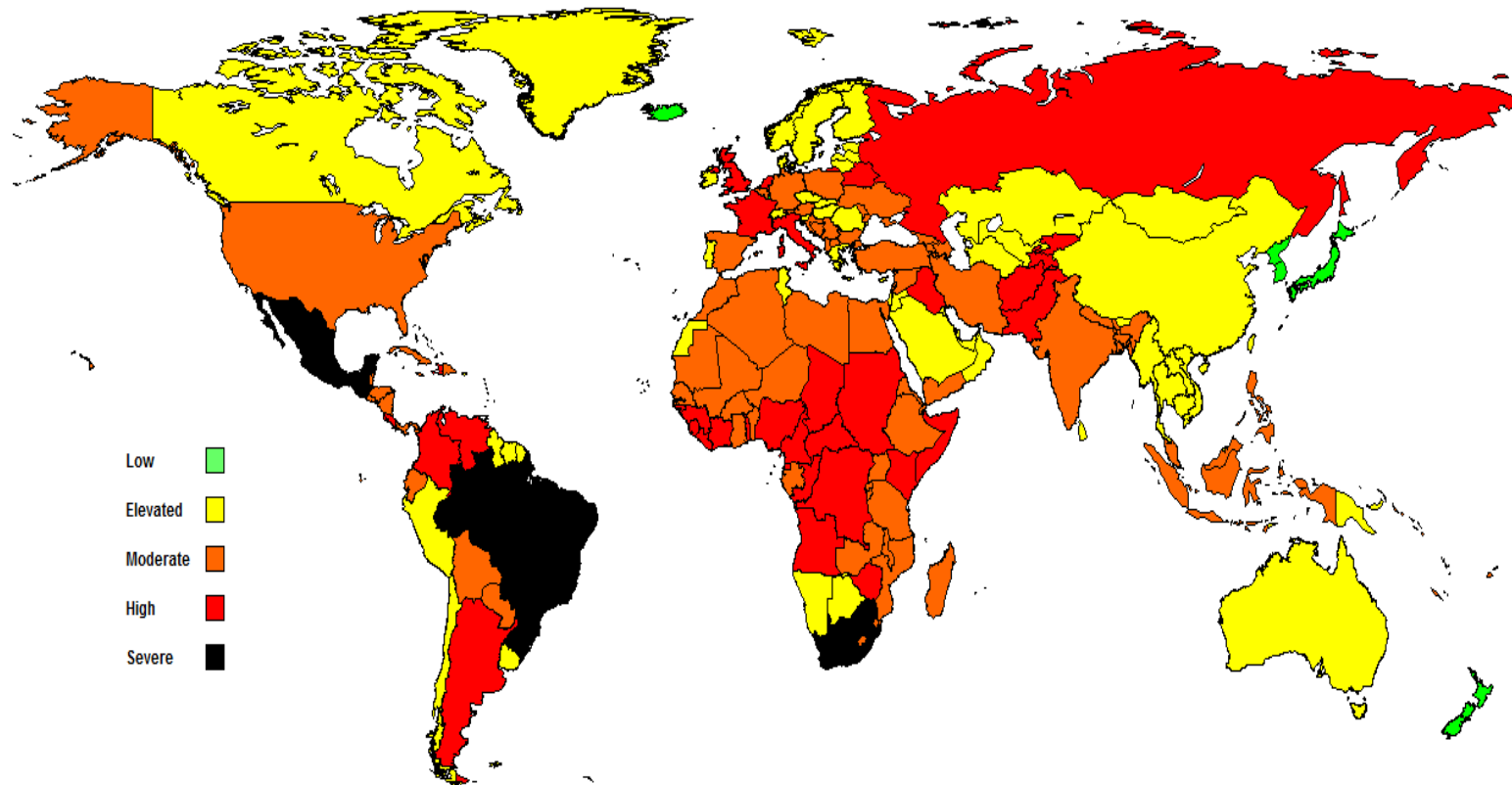


SORBOTHANE ISOLATION RINGS CAN BE VARIED BY SIZE, DURETOMETER AND COLOR TO HANDLE NUMEROUS LOAD COMBINATIONS.

CARGO THEFT



Security – Cargo Theft Risk



Mexico, Brazil, South Africa, United States, Russia, India and United Kingdom are the countries most at risk for cargo theft globally

Security & fight back against Logistics crime

- Theft problems growing
- Whole trailers containers are stolen by using violence
- Information leakages, internal information
- Theft of finished products and their use in the pirate industry
- Theft of raw materials and metals (copper, steal, etc.)



Security & fight back against Logistics crime

- Two drivers
- Careful choice of rest places, Secure parking areas (“own” logistic terminal amongst the route)
- Careful choice of subcontractor / audition avoid long chains of subcontractors
- TAPA Audits
- GPS follow up in container / truck from the dispatch and or e.g. Euro-watch
- GPS / GSM activated locks inside the container trailer
- Boxtrailer vs. tarpaulin trailer
- Contingency plan
- Armed escort



Fake Carriers

- No open or website brokerage of loads allowed
- Brokerage only to known and previously identified carriers, and no brokerage at all for HVTT (High Value Theft Targeted) loads
- Driver to be pre-identified to the shipper by the carrier and must arrive with government issued photo ID, carrier ID, both of which are to be copied at the point of shipment. If anyone other than the pre-notified driver arrives, load is not released.
- Trucks to be clearly identified with the name, logo and government registration numbers of the carrier. Temporary information on the tractor is sufficient to refuse to release the load.
- Clearly, these requirements supplement that standard HVTT requirements (guards, tracking, etc. etc.)

Establish Security Protocols

- Be aware of vulnerabilities and security threats
- Plan for the unexpected (driver illness, vehicle breakdown, etc)
- Establish regular communications and / or tracking (geo-fence)
- Never leave the load unattended
- Park in secure areas
- Develop a driver qualification program (Continuous training)



THANK YOU



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