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**Loss Prevention Bulletin - AVA/2013/0007**

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**June 10, 2013**

**PROJECT CARGO RISK MANAGEMENT**

**AVA MARINE GROUP INC**

Member: AIMU - CMBU - MIABC

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Head Office: World Trade Center | Suite 404-999 | Canada Place | Vancouver | British Columbia | Canada | V6C 3E2  
T: +1.604.641.1204 | C: +1.604.356.3405 | F: +1.604.608.9874 | E: [surveys@ava-marine.com](mailto:surveys@ava-marine.com) | [ava-marine.com](http://ava-marine.com)  
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## What is Project Cargo?

**Project Cargo** is a classification of freight with abnormal dimensions, weights and / or form and is often called "Out Of Gauge (OOG)" or anything that does not readily fit inside a 40' container.

**Project Cargo Risk Management** is an "activity" which goes beyond pure marine / cargo surveying and involves practical intervention in the project cargo risk life cycle. Due to the highly complex nature of this business, the 'project cargo risk management' is necessary to support the survey warranty typically found in project cargo / DSU (Delay in Start-Up) insurance policies.

### Understanding DSU Policies\*

Every year billions of dollars of project-critical equipment is shipped globally where high levels of risk are associated with these consignments due to the sensitive nature of the cargo, complex transport logistics and tight time frames. Failure of a shipment to arrive intact can quickly turn a \$ 40 million cargo loss into a staggering \$ 100 million Delay in Start-Up loss when factors such as re-fabrication, shipping, expenses and lost profits and various other operational costs are contemplated.

Marine Delay in Start-Up (DSU) insurance has been one of the few growth areas in marine insurance in the recent past, due to increased demand for protection, as financiers and project owners realize the potential financial impact on a project due to a delay in critical component delivery to the construction site.

Timely development of project cargo risk management information is critical to the successful planning and implementation of the practical risk management activities.

\*excerpt from Allianz Global Corporate & Specialty brochures

## Project Cargo Life Cycle – The Key Steps

With project cargo, preparation and planning is everything. Lot of questions need to be answered before commencement of any project cargo operation. The following key steps can be used as a quick checklist for initial planning of the project. Even with all these points having been considered there will be probably many 'unknowns' left to resolve during the project cargo life cycle.

**Note:** The following guidance should not be construed as exhaustive.

# The Key Steps

## PRELIMINARY PHASE - REPORTING, COMMUNICATIONS & INSURANCE

- Reporting requirements & communication chains with clients, vendors, contractors etc.
- Meeting with the client's project team members and key contractors
- Emergency and AOH contacts (mobile/satellite) of all key personnel
- In-depth risk analysis & insurance requirements

## PROJECT COSTING

- Freight Ton/Volume estimates and pricing analysis
- Establish the sale price by determining the actual cost of the project and market price
- Cost estimate for mob/demob, actual work cost, cost of aux. equip, subcontractors, margin for risk /unforeseen, overheads etc.

## THE CARGO & IDENTIFICATION OF CRITICAL ITEMS:

- What is the cargo?
- Is it a part of PAMS (pre-assembled modules)?
- Actual weight and dimension of the cargo – not an estimate
- Freight Ton/Volume estimate and heaviest piece of the cargo volume
- Identifying 'critical items' \*
- Carry out a Joint Survey of critical items

\*Note: Key movements of "critical items" of equipment that are difficult to replace and, if lost or damaged in transit to site could delay the construction process and the intended start-up date - would be identified and surveyed to ensure that the risk is properly managed and that exposures are minimised.

## PLAN REVIEWING AND APPROVAL:

- Loading & Lashing plans, including heavy lift inspections
- Review of documentations and marine insurance requirements
- Computer simulation of loading/discharging – meeting stability criteria
- Integrity of lifting gears and lashings
- Lift Points and Transport Saddles
- Location of CoG\* properly marked in relation to the lift points/transport saddles
- Proper weight distribution taken into account to avoid 'point' loading
- Outreach of the cranes or lifting gears
- Availability of Ballast Pontoon for extra stability
- Consulting vessel's Class Society & Flag State if the vessel is to be modified in any way

\*Center of Gravity of the Load

### **FEASIBILITY STUDY:**

- Pre-inspecting of facilities and sites – is the infrastructure adequate?
- Technical review of quay construction & renovation work if any
- Quay heights, quay strength and water depths
- Worst case stability scenarios taken into account throughout the voyage
- Utilization of specially constructed temporary quay
- Port & Transport Security
- Port location (swell conditions)
- Routes including inland transit routes
- Obstacles such as overhead wires, bridges, slope gradients, road camber
- Weather and Political Climate
- Extreme winter weather consideration, e.g. ice navigation
- Tidal ranges at load/disport
- Vessel suitability by Loss Control Inspections/Surveys \*
- Review of the Ships database at sea-web.com or similar site for quality vetting of vessels
- Specialist experience of the crew with loading/lashing of heavy, oversized units
- Deep-sea lashing & securing standards executed with minimal facilities
- Short notice availability & responsiveness to constantly changing shipping schedules
- Co-ordination of survey packaging, loading and security inspections worldwide

\*Note: Feasibility study may also require a loss control survey to determine the seaworthiness and integrity of lifting gears, lashings and confirming vessel's compliance as per Safety Management Certificate (SMC); Cargo Gear & Safety Construction & Equipment Certificates amongst other things. This would give a general idea of the upkeep of the vessel, its firefighting capabilities and crew competence in an event of accidents or casualties.

### **TRANSPORTATION (MULTI-MODAL):**

- Rail
- Specialized Heavy Lift Vessels
- Tug & Barges
- Cranes - Floating & Mobile
- Heavy Lift low bed and multi-axle land carriers & Self Propelled Modular Trailer (SPMT)
- Pre-booking of contractor's plant and equipment such as cranes and jack ups

### **LOAD-OUT OPERATIONS:**

- Preparation and loading to specialist road transport vehicles at manufacturer premises
- Supervision of transshipment from specialist road transport to barge/vessel
- Load, stow and secure supervision on barge / vessel
- Condition and load bearing capacity of the ground
- Adequate load spreading mats
- Crane capacity rating (load moment) and load radius
- Possible obstacles during slewing of cranes
- Boom clearance with load
- Wind load taken into account

### **THE PASSAGE:**

- Practical intervention to the key stages of the project
- Continuous monitoring of stability of the barge/vessel
- Weather monitoring
- Efficient & timely communications with clients, surveyors, underwriters because as the project progress, the true exposure of critical items and the Delay in Start-up (DSU) insurance changes.

### **UNLOADING OPERATIONS:**

- Supervision and control of barge/vessel unloading operations
- Supervision of transshipment from barge/vessel to specialist road transport
- Load, stow and secure supervision on trailer
- Constant co-ordination with multiple interests to achieve successful outcome
- Condition and load bearing capacity of the ground
- Adequate load spreading mats
- Crane capacity rating (load moment) and load radius
- Possible obstacles during slewing of cranes
- Boom clearance with load
- Wind load taken into account

### **CONTINGENCY PLANNING:**

- Availability of specialist equipment and personnel – at short notice – in remote rural areas
- Availability of cargo lashings (heavy lift D shackles, chains etc.)
- Availability of mobile cranes, multi-wheel trailers, in case of breakdown en-route
- Availability of hydraulic pumping units / rams for load transfer en-route
- Availability of intermediate storage sites e.g. due to adverse weather conditions
- Availability of alternative port (if a key port becomes inaccessible)
- Key personnel equipped with Global Satellite Phone at remote locations
- Contingency plans for deterioration in Delay in Start-up (DSU) exposure

*Projects of this nature are highly complex and often involve remote or difficult destinations and even though all aspects of the transit planning and implementation have been attended to with a high degree of professionalism, practical risks still remain.*

*The author has been fortunate to have worked with highly experienced people during his seafaring days, whose expertise commands his greatest respect, both then and today. It is largely due to them that he has developed the knowledge about doing things the "right way" which he endeavours to put this unique experience into practice today as a marine surveyor.*

Disclaimer: This loss prevention bulletin is based on the author's own research, knowledge and experience in the subject matter and should only be used for reference rather than being taken as a legal advice for any particular case or used for any other purpose.

**About AVA MARINE GROUP:**

AVA Marine is a professional marine surveying and consultancy firm – founded and led by its principal marine surveyor Kaivan H. Chinoy. The Company provides a comprehensive range of specialist marine surveying, marine loss control & consultancy services primarily in Western Canada and the West Coast of the United States

To learn more about our marine surveying capabilities, visit our website at [ava-marine.com](http://ava-marine.com)

AVA Marine | Bunker Detective is also the member of the AIMU (American Institute of Marine Underwriters), CBMU (Canadian Board of Marine Underwriters) and MIABC (Marine Insurance Association of British Columbia) and the IBIA (The International Bunker Industry Association)

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