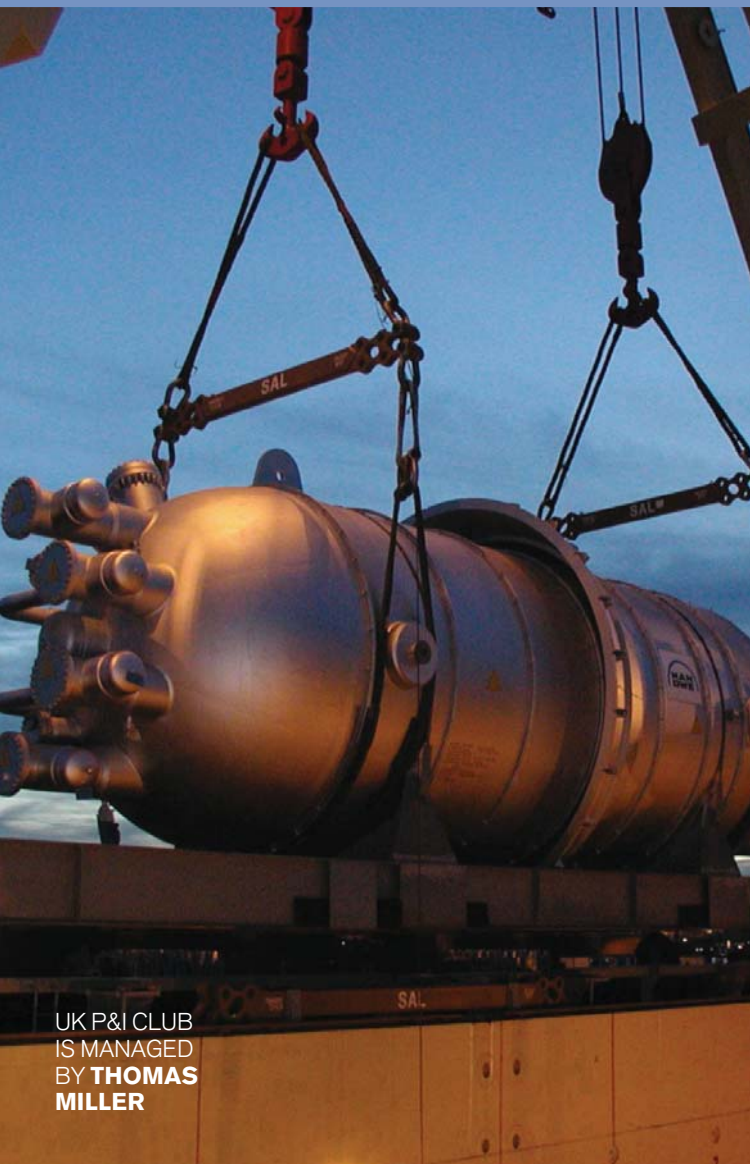
UK P&I CLUB

Allianz

How to handle project cargoes

Guidance on how to safely load, stow, secure and discharge heavy-lifts and project cargoes



UK P&I CLUB IS MANAGED BY **THOMAS MILLER**

Project cargo matters

This checklist is taken from an annex to the *Project cargo matters* booklet (see back page)

Key points

Project cargoes require special attention during loading and transportation. Specialist knowledge and experience in the shipment of such cargoes is required to fully plan and engineer a safe project cargo shipment. All operations need to be carefully managed with agreed responsibilities, risk assessments and toolbox talks.

Vessel types and suitability

Project cargoes typically require specialised vessels with sufficient deck space, heavy-lift capability, 'tween-decks' and 'wall-sided' holds. Multi-purpose or heavy-lift vessels are best suited. Bulk carriers are not suited to this task and this has resulted in large cargo damage claims.

Responsibilities

- The successful transport of project cargoes requires good teamwork
- The responsibilities of each party should be defined and agreed (shipper / charterer / vessel owner / receiver / contractors)
- A proper transport manual or method statement should be prepared and agreed by all parties
- A marine warranty surveyor (MWS) may be involved, on behalf of cargo insurers.

Key rules and guidelines

Mandatory

- Charterparty requirements
- Flag state / Classification society rules
- Stability regulations: Intact and damaged
- IMO CSS Code / Vessel cargo securing manual
- CTU packing guidelines.

Guidance

- DNV-GL Rules for Marine Operations
- DNV-GL Noble Denton Guidelines.

Cargo condition

- The cargo must be adequately packed and protected for its voyage to protect it from damage during sea transport
- Cargoes shipped inside containers should be properly packed (stuffed), with appropriate shoring and internal securing
- The cargo should be inspected at loading and any damage recorded and noted
- The cargo must have adequate number and strength lifting and securing points.

Cargo footprint and stowage location

- Project cargoes are often high volume, but relatively low deadweight
- The 'footprint' of the cargo is often large and does not allow 'over-stow'
- The positioning of the cargo and its sea-fastenings must be considered in relation to the strength of the deck, lashing locations and securing points, any adjacent cargo holds or bunker tanks and the requirements for protection from the sea / elements.

Cargo securing

- Sea-fastenings must provide restraint against sliding and tipping for transverse, longitudinal and uplift motions
- The vessel must have adequate securing points (D-rings etc) to provide adequate securing for the cargo. Where securing points are being fitted, follow normal hot work procedures and consider the location with respect to fuel tanks etc
- All securing gear must be rated for its SWL, MBL and have an inventory
- 'Soft' sea-fastenings (e.g. wire lashings, chains etc) are adaptable, cost effective, reusable and easy to maintain. Proper rigging and re-tightening on voyage is required.

- ‘Hard’ sea-fastenings (stoppers etc) are effective for sliding restraint and larger items, but generally only useable once and may require specialist design and fabrication
- ‘Hard’ and ‘soft’ sea-fastenings should not be mixed in each mode of restraint, e.g. there should not be a mix for sliding or tipping restraint.

Heavy-lifts

- A detailed lifting plan is essential. It should address rigging arrangements, safe working loads (SWL), lifting points and the stability of the lift
- Cranes must be well maintained, following manufacturer’s recommendations. Operating limits should be adhered to
- Heavy-lifts and in particular tandem lifts (using more than one crane) require experience and appropriate training.

Vessel strength/load spreading

- Consideration must be given to the vessel’s load limits for hatchcovers, tween-decks, tank tops etc
- Heavy cargo units should be placed over the frames of the vessel and additional load spreading may be required (grillages)
- Wooden dunnage (solid wood of good quality) should be used to provide friction and assist load spreading
- The global longitudinal strength of the vessel must be checked for all key stages of the loading and discharge operations and for the voyage condition
- For long cargoes, care is required to avoid transferring vessel longitudinal bending loads into the cargo. Specialist expertise may be required to design the sea-fastenings.

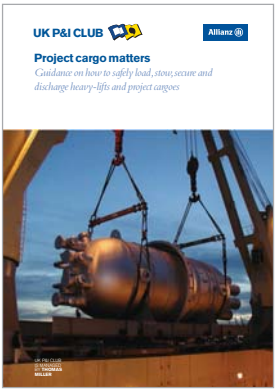
Vessel stability

- The vessel must comply with the IMO Code on intact stability at all times. Damaged stability scenarios should also be assessed for high value cargoes
- Even if the IMO intact stability criteria are met, a vessel with high GM will be ‘stiff’ and impart high forces to the cargo. The design of the seafastenings must consider this and efforts made to reduce GM

- The use of ‘slack’ ballast tanks to reduce GM is poor practice and can lead to structural damage.

Voyage planning and contingencies

- The voyage should be critically assessed for the route, likely weather conditions, areas of navigation danger, exposure to weather, as well as areas of known piracy activity
- The voyage route should include contingency plans in case of emergency events or forecasted weather exceeding the limits defined in the stowage and sea-fastening calculations
- During the voyage, the stowage and securing of the cargo should be regularly checked (as far as safely possible).



Project cargo matters

Further, in-depth information can be obtained from the above publication. This publication is the result of joint industry collaboration between the risk management/ marine risk control departments of the UK P&I Club and marine cargo insurers Allianz AGCS with expert independent input from Cwaves, a London-based marine surveying and consultancy company.

This collaboration came about due to increasing concerns about the lack of expertise, skills and resources being deployed in this complex area of shipping activities and a repeated number of significant damage losses to ships and cargoes combined with a series of near miss incidents in recent years.

The information contained in this publication is intended to provide guidance only and is not intended to replace, nor should it be used for, specific expert advice on the transportation of project/heavy lift cargoes.

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