BRITANNIA LOSS PREVENTION

GUIDANCE

MAY 2024

CARRIAGE OF BREAK BULK AND PROJECT CARGO

RECENTLY, THE CLUB HAS EXPERIENCED SEVERAL INCIDENTS INVOLVING DAMAGE TO BREAK BULK CARGO.

THESE DAMAGE CLAIMS PRIMARILY FALL INTO TWO CATEGORIES:

- Inadequate loading, stowage and securing of break bulk cargoes which has resulted in cargo damage due to cargo shifting and stow collapsing. Additionally, it can cause stability problems for the ship.
- When vehicles are incorrectly stowed, lashed and carried as non-dangerous cargo – for more detailed advice please see our guidance on the carriage of vehicles in bulk carriers/general cargo ships.

All ships carrying any type of cargo, except solid and liquid bulk cargoes, must have a Cargo Securing Manual (CSM) approved by the flag administration. The CSM must outline all lashing and securing arrangements, and devices onboard the ship, detailing their correct application and the recommended methods for securing of cargo.

Shipowners must ensure that they load, stow, and secure all non-bulk cargo in accordance with the ship's approved CSM. They must always consider the applicable recommendations of the "Code of Safe Practice for Cargo Stowage and Securing" (CSS Code), as well as the "International Maritime Dangerous Goods Code" (IMDG Code) for dangerous cargo in packaged form.

If a certain cargo is not covered or allowed to be loaded by the ship's CSM, shipowners should consult the Classification Society to obtain approval and then amend the CSM accordingly. This may also necessitate altering the physical lashing arrangement and/or providing additional lashing equipment. Contemporary break bulk and project cargo trading often includes specific requirements for stowing and securing cargo. When considering carrying such cargo on bulk carriers, it's important to remember that these ships are generally not designed or equipped like general cargo or multi-purpose ships. Moreover, bulk carrier crews may lack experience in stowing and securing break bulk or project cargo, necessitating meticulous planning and supervision.

BREAK BULK AND PROJECT CARGO

As a general definition, **break bulk cargo** refers to goods that are loaded individually onto a ship in individually counted units and are not contained within shipping containers. These goods are typically loaded into drums, bags, pallets, sacks, barrels, or crates. Examples of break bulk cargo include machinery parts, steel coils, bags of coffee, or crates of machinery.

Project cargo refers to large, heavy, or oversized items that require special handling and transportation due to their size, weight, or complexity. This type of cargo is often associated with large construction projects, infrastructure developments, or industrial projects. Examples of project cargo include wind turbine components, heavy machinery, oversized pipes, or equipment for oil and gas projects.

Project cargo could be of high value and requires customised transportation solutions and could involve coordination with multiple transportation modes, such as sea, road, and rail.

IMPROPER STOWAGE AND SECURING

THERE HAVE BEEN SEVERAL INCIDENTS WHERE VEHICLES AND HEAVY PROJECT CARGOES HAVE BEEN STOWED ON TOP OF BAGGED CARGO WHICH DOES NOT ALWAYS PROVIDE A FIRM ENOUGH BASE FOR SAFELY STOWING OR SECURING THE HEAVIER CARGO ON TOP.

In many instances, wheel-based cargoes are improperly secured to other cargo instead of being properly fastened to the ship as required by the ship's CSM. Vehicles are frequently tied to unauthorised lashing points on bulkheads, tank tops, decks (including the main deck and hatch covers), and occasionally even to each other. Regular checks and tightening of lashings during transit are not always conducted, increasing the risk of cargo shifting in the stow and potential damage due to the failure of a single lashing or lashing point in the chain.

Insufficient dunnage, chocking, and shoring are often provided for vehicles, steel coils, and project cargo when they are stowed alongside bagged cargoes.

THE CREW SHOULD BE AWARE OF THE FOLLOWING PRIOR TO CARRIAGE:

- A list of the proposed cargo must be obtained from the shipper/charterer, including any stowage or lashing requirements, and restrictions (SOLAS, Chapter VI, Regulation 2 and CSS Code sub-chapter 1.9)
- A risk assessment must be undertaken to assess the carriage considerations, cargo care, stowage, lashing requirements and any limitations
- Any ship, including bulk carriers, must carry an approved and current CSM if it transports break bulk or general cargo. This manual must adhere to a standard at least equivalent to the IMO guidelines and be suitable for all cargoes onboard. If necessary, the CSM should be revised and officially approved to ensure it encompasses the intended cargo for carriage
- Where applicable, the ship's loading instrument should be capable of performing calculations for break bulk cargo and loading different grades of cargo in the same hold. It should be noted that a heavy break bulk cargo may generate a point load, which would not otherwise occur with a bulk commodity over a larger area
- Responsibilities for stowage and lashing should be clarified and agreed in the charterparty in line with the ship's CSM, and appropriate instructions should be issued to the master
- Although other parties are typically involved to carry out the loading and lashing, it is ultimately the ship master's responsibility to ensure that the cargo is safely handled, stowed and secured in accordance with the relevant regulations

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- If required, a suitable port captain or preload independent cargo surveyor should be appointed to assist the master. The CSS Code highlights the need to utilise the appropriate specialist knowledge in order to comply with the requirements for the stowage and securing, taking into account the structural strength of the particular ship and the expected weather conditions during the intended voyage
- During the voyage, remember that if break bulk stowage is proposed on top of "jumbo bags" (properly known as FIBCs, for flexible intermediate bulk containers), it's likely that the FIBCs will settle, making them an unstable base for securing additional cargo. FIBCs also have limited capability to withstand top loads.

PRE-LOADING CHECKS:

- The CSM must detail all lashing and securing arrangements and devices provided onboard the ship, including their correct application and recommended methods for securing cargo approved for transportation by the ship
- The securing points fitted to the ship must be strong enough to withstand the expected dynamic loads and should be appropriately located against the ship's structure
- Any additional lashing points in the cargo holds or on deck should be approved by the appropriate Classification society/Flag state administration. Where welding is required to install additional securing points, it should be performed by qualified welders and the welds should be inspected and tested as appropriate. The relevant safety procedures for hot work must also be followed
- All hot work in cargo holds or on deck should be conducted prior to loading any adjacent cargo. If hot work is necessary either in, above, or adjacent to existing cargo, precautions must be in place to prevent heat damage or fire
- Suitable dunnage and certified lashing equipment must be provided, taking into account the dimensions, weight and stability of the cargo, the expected weather conditions on route and the requirements of the ship-specific CSM, the CSS Code and/or SOLAS, as appropriate
- The ship must comply with intact stability requirements at all stages of the voyage. The metacentric height (GM) and other applicable requirements should be considered at the planning phase, so that they always remain within acceptable limits
- Consideration should also be given to weather conditions the ship may experience throughout the voyage, so that the motion of the ship and acceleration on the cargo is minimised as far as possible
- The cargo should not exceed the maximum load of the tank top/decks/tween decks, as appropriate. Additional load spreading may be required so that the maximum point load is not exceeded. In any case, the cargo should be appropriately located with regard to the ships structure
- Break bulk cargo in general should be typically stowed in a fore-and-aft direction rather than athwartships. If stowed athwartships, additional securing of sufficient strength may be necessary
- For vehicles, the brakes should be set on and the wheels blocked to prevent shifting. Full details of how to secure vehicles is covered by the CSS Code, Annex 4
- For large and heavy items, a detailed transport manual or the method statement should be provided. The method statement should contain all procedures required for the safe carriage of the entire shipment, including handling/lifting plan, stowage requirements, lashing and securing requirements (including the gear, lashing points etc.), ship's stability requirements, as well as the voyage plan and the relevant contingency procedures. For reference, please read the IUMI article regarding the use of method statement in heavy lift cargo.

DURING LOADING:

- All loading and lashing must be supervised by the ship's staff to ensure that the cargo is stowed in compliance with the approved loading and lashing plan
- Appropriate lashings should be attached to approved lashing points only. The stowage plan should duly consider the availability of securing points. The securing lugs and pad-eyes should be properly aligned with the lashings so that they are not subject to forces acting out of the nominal direction
- Dunnage, chocking and lashing must be checked and verified to the master's satisfaction prior to signing any relevant documentation
- It is advisable to consider the interaction between dunnage, cargo and lashing in case the cargo is moving at sea. There have been cases of fires developing in cargo moving in adverse weather due to friction, where the ignition occurred in dunnage ground to fine dust
- Lifting is a critical stage of the operation with elevated risk of damage to cargo and ship, as well as injury. It is essential to ensure the inspection and maintenance of the cranes and lifting gear is fully up to date, the records are in order, and that the manufacturer's recommended operational practices are complied with. The limiting conditions of the lifting plan, such as wind, ship motions, slewing speed etc. must be complied with.

LOADING ON DECK:

- Loading a cargo on deck of a bulk or general cargo ship may have an impact on cover. Therefore, shipowners should contact the Club's underwriting department for advice in due course before accepting the cargo to make sure their P&I cover is not prejudiced
- General Cargo or Bulk carriers are often not designed to carry cargo on decks and is carried at the shipper's risk and therefore, need to be stated in the charter party
- Ensure that the tank top and hatch cover strength are designed to carry break bulk cargoes. Verify that the decks, particularly the hatch covers, possess adequate strength to support the cargo weight. Take necessary measures to distribute the point load of the cargo if needed
- When fully loaded, general cargo or bulk carriers may have a low freeboard. Therefore, it is important to consider the risk of cargo damage due to green seas on deck and sprays when carrying cargo on deck.

Any additional lashing points welded on deck need to be duly approved by the class/flag and certified lashing material provided for cargo lashings. **For more information on considerations for loading on deck please also see our loss prevention guidance on loading containers on bulk carriers and carriage of windmill turbine blades.**

ON ROUTE:

- Regular checks of the cargo and lashing must be carried out, particularly prior to and after any heavy weather. Additional lashings should be applied as and when necessary during the passage and lashings must be re-tightened as required
- It is recommended that spare lashing, dunnage and any other equipment deemed necessary (such as airbags) are available in case the cargo requires additional securing during the voyage
- The relevant safety procedures, including enclosed space entry, should be observed when carrying out cargo checks. If it becomes necessary to enter the cargo space or climb onto the cargo to make any lashing adjustments, it is strongly recommended to carry out a thorough risk assessment to minimise the risk of an incident or injury
- If any cargo damage is noted, the owners/managers, P&I and other relevant parties must be notified promptly and properly documented and filed onboard.

LOADING ON DECK:

- The discharge operation should be monitored by the ship's staff and any damage noted and signed for
- Photographs and other evidence should be obtained and preserved for investigation and for any claims mitigation that may be necessary.

In conclusion, the decision to carry break bulk cargoes ultimately rests with the individual shipowner. They bear the responsibility of ensuring the vessel's readiness for departure by adhering to statutory and class regulations and properly staffing it with trained crew. The master and crew must possess a thorough understanding of the ship's stowage and securing capabilities, conducting risk assessments for all cargoes. Special emphasis is placed on the safe carriage of break bulk cargoes. It's imperative to update the ship's SMS to include specific procedures for handling such cargoes, with consultation from relevant authorities for further guidance on the ship's CSM.

For more specific guidance on steel cargoes please also see our insight on the handling and carriage of steel cargoes.

FOR FURTHER INFORMATION

For further information, please do not hesitate to email lossprevention@tindallriley.com.

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