



Do not depart port without knowing the final cargo weight distribution

In the past there have been serious incidents where the car carriers have capsized as a result of inadequate stability. More concerning was the fact that the crew were also caught unaware. It has more to do with the way the shore side does the cargo planning and execution than the role of the crew, who play little or no part in this.

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Car carriers are on a tight schedule with quick port rotations and operate in a very different manner when compared to other vessel segments such as tankers and bulk carriers, where the cargo planning is done onboard. On car carriers, it is the shore side that does it with no involvement of the ship's crew. Their role, and typically that of the Chief Officer is limited to ensuring that the vessel can achieve adequate stability based on the proposed pre-stowage plan, and this is done by adjusting the ballast onboard. On paper the ultimate responsibility for safety of the vessel may rest with the Master, however in reality there may be several impediments for the Master to exercise his responsibility and this is what needs to be addressed by both owners and operators.

The challenge

The biggest challenge here is that the stowage location and/or weight of the cargo actually loaded onboard could differ significantly from the pre-stow plan and these changes might not be communicated to the ship's crew in time before departure from port. Either the crew are not given a copy of the final stowage plan or if provided then there may not be enough time for the crew to check and ensure that vessel has adequate stability. The result is that the ship departs with inadequate stability, i.e with a small or negative metacentric height (GM).

Recommendations

- Operators should ensure that the weights of the vehicles mentioned in the stow plans are not estimates. Accurate weight declaration of the cargo should be prioritized prior to loading.
- Vessel operators should have a procedure in place to advise the vessel if there are changes to the preliminary / pre-stow cargo plan. Responsibility for communicating this would typically rest with the person in charge of tallying the cargo (plan clerk, checker or supervisor), usually appointed by the operator.
- After the cargo operations are complete, ship's crew should be given a copy of the final stow plan with accurate weight of the cargo and stowage location. The final departure stability condition should be calculated using the final stow plan.
- The vessel should not unmoor until the final stability calculations are complete. If this is not done, the crew should be empowered to delay the departure.
- Any concerns should be communicated to both the vessel operator and the ship owner / ISM manager and rectifications made prior to unmooring operations.

Useful links

Poster: [Carcarrier CargoPlan LowRes.pdf](#)