

# Thank you for contributing to the TopTier crew survey!

The TopTier Joint Industry Project (JIP) survey carried out Q4 2022 – Q1 2023 aims to better understand the current decision making processes on container ships and to identify the need for additional support and action to improve safety. The response was overwhelming both in quantity as well as in quality, with over 1500 responses.



## TopTier JIP:

- Supported by 40 participants (3 national authorities, 10 major carriers, 7 class societies, 5 lashing manufacturers).
- To identify and recommend improvements for transport, stowing and securing containers and provide the technical understanding that is needed for safe designs and innovations in the future
- Started in May 2021
- 3 Years project

For more information:

<https://www.marin.nl/en/jips/toptier>

## The Response

- More than 1500 responses.
- Large variety of ship sizes, flag states, classification societies.
- Majority of respondents had 10 years of experience.
- Approximately 100 responses from crew on Ultra Large Container vessels.
- Responses are subjective, reflecting the viewpoint of on-board crews.

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This survey has only been made possible thanks to many people helping us. First of all, we want to thank everyone who took the time to fill in the questionnaires, whether online or offline. The response was overwhelming with more than 1500 responses, fully completed questionnaires and open questions answered with detailed explanations, clarifications and anecdotes. This engagement and openness gave us amazing insight to the day-to-day practices on board and what information is available and used.

Secondly, many thanks to the organisations and companies who spread and recommended this questionnaire to crews, making possible the large number of responses.

## Point of attention from crew perspective

The survey responses clearly indicate a number of areas where crews see room for improvement to reduce risk in the transport of containers, both when it comes to operations 'Prior to departure' and 'During sailing'. Below are the main points of attention:

### Prior to departure

- It is difficult for ship's crew to keep an overview of the loading process of hundreds or thousands of containers. There is limited time, complicated communications, small influence on the process and limited control to implement a change.
- The condition of containers, especially corner castings, are considered a concern.
- Respondents indicate problems with automatic twistlocks. Multiple respondents have experienced this type of twistlock opening by itself during heavy ship motions.
- Masters find that terminal crew has a focus on fast rather than safe operation. Installation of lashing gear is not always done adequately by stevedores due to time pressure and lack of experience.
- The final loading plan is often only available in the last minutes before departure or after departure and the final loading plan often does not properly represent the cargo arrangement on and under deck.
- Time pressure during the loading process is high. Roughly 25% of the respondents feel a commercial pressure to depart with potential risks in loading conditions and/or planned route.

### During sailing

- The roll natural period of the ship is an important factor in decision-making, yet the reliability and accuracy of the calculated roll natural period from the loading computer is limited.
- Under way, crews operate in unpredictable circumstances with regard to weather and waves, with a lack of verifiable data about lashing conditions and loads, making decision making difficult.

### The Crew Survey

- Two questionnaires: 'Prior to departure' and 'During sailing'.
- Online and offline.
- Collection between November 2021 and February 2022.
- Interviews for more in depth information.
- Anonymity guaranteed.

### Notice to Mariners

Parametric roll in following seas has been identified as a great risk, and the TopTier JIP has developed resources to help.

- Read the Notice to Mariners for details and a flowchart.
- Watch the video to learn about parametric roll in following seas.
- Use the calculation tool for guidance.

For more information:

<https://www.marin.nl/en/jips/toptier#notice>

Predicting the response of the vessel to weather is hard, especially at night or in confused seas, and as a consequence crews may hesitate to take action.

- The vast majority of respondents claim to know how to prevent, recognise and act on parametric roll but very few ever experienced parametric roll. The actions described on what to do when it happens are diverse.
- Navigation software tools are found to be helpful, however the availability and use of tools is not uniform.

### General

- There is a large diversity in working methods, procedures etcetera, even within one company. Few best practices seem to be defined and there is limited opportunity to learn from each other.
- Captains appreciate being informed by the crew when anomalies are found. It is, however, not that common, which is a cause of concern for captains.

### The TopTier project

The size of deep-sea container ships has increased dramatically over the past decades. In the winter of 2020-2021 over 3000 containers were lost worldwide. This has raised concerns on the safety and environmental impact of modern container ships. The TopTier Joint Industry Project addresses these topics and works with major stakeholders on ways to avoid such loss of containers.

As part of the project an extensive survey has been carried out amongst the crews of container ships. The crew survey consists of two questionnaires - prior to departure' and 'during sailing' - as well as interviews with crew on container vessels. The results of the survey will be used in the TopTier Joint Industry Project to define and develop improvements by means of technological, procedural, process and training solutions. This note is a summary of the full survey report, focusing on the responses and identified points of attention. Our next step is to prioritise them and define concrete recommendations.

