



► Instruction video: to recognise and avoid parametric rolling you need to pay attention to the direction of the waves, the wave length, the roll period and the wave interval.



Beware of parametric roll in following seas

With major industry stakeholders on board, the Joint Industry Project TopTier has been launched to address concerns about the safety and environmental impact of modern containerships.

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Watch and learn how you can recognise and prevent parametric rolling



Watch the video to learn about parametric roll in following seas.



Read the Notice to Mariners and a flowchart for details.



Use the calculation tool for explicit guidance.



The size of deepsea containerships has increased dramatically over the past decades and the loss of containers and their impact on marine life and coastlines worldwide has raised public and political concerns. Authorities and the industry are urged to evaluate container fastening devices and to improve regulations and practices to avoid the loss of containers at sea.

A high-level incident review is being conducted in the first phase of the project, with 44 incidents between 1994 and 2021 evaluated. A series of incidents where there were exceptional container losses occurred during the winter season 2020-2021 and initial results show that parametric rolling in following seas was especially hazardous.

The TopTier JIP took the initiative to develop a Notice to Mariners to inform seafarers about this hazard. The document describes how a container vessel's crew and operational staff can plan, recognise and act to prevent parametric rolling in following seas. The description is accompanied with a

An unfavourable combination of a low GM, close to following sea conditions, a rolling period twice the wave encounter period, and a wave length more than half the vessel's length may trigger parametric roll in following seas. It may develop very suddenly and unexpectedly, therefore the combination of the above conditions should be avoided. If the onset to parametric rolling nevertheless occurs, immediate, but gradual, course change is required.

flow chart to support the identification of an unfavourable combination of conditions at an early stage to allow them to take action before parametric rolling builds up.

In addition to the Notice to Mariners, an instruction video has been made, as well as a 'roll risk estimator' in an Excel format. Both can be found at www.marin.nl/jips/top-tier.