

This is the 31st [newsletter](#) of the *Knowledge Centre Manoeuvring in Shallow and Confined Water*, which aims to consolidate, extend and disseminate knowledge on the behaviour of ships in shallow and confined water. This newsletter presents an item on tests that were recently carried to study parametric rolling in shallow water.

The phenomenon of parametric rolling is quite notorious. It is a potentially dangerous ship motion which results from a specific combination of forward speed, metacentric height, and waves with wave lengths of order a ship length in head and following waves.

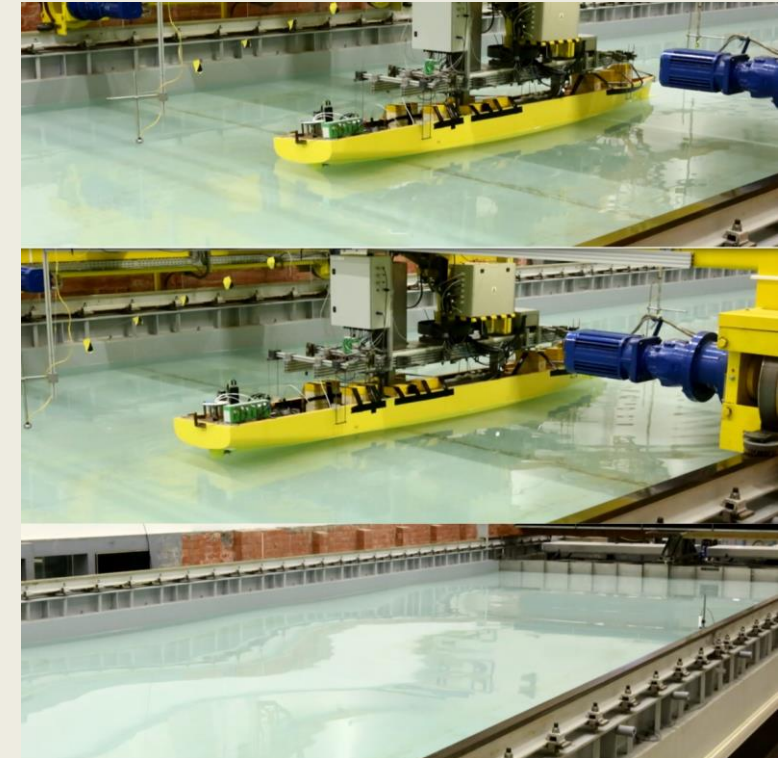
Container ships are more sensitive to parametric rolling as their hull forms have a pronounced bow flare, a flat transom stern and a wall-sided mid-ship section, which all increase the risk of parametric rolling occurring.

Although this phenomenon has been mostly observed in deep water, wave lengths triggering its occurrence are also present in coastal zones. However, in such regions they usually have smaller wave amplitudes. Hence, the risk of parametric rolling is mostly believed to be negligible.

A model of the [KCS container vessel](#) has been tested for manoeuvres in shallow water waves in the [Towing](#)

[Tank for Manoeuvres in Shallow Water](#). One of the objectives was to investigate if parametric rolling can occur in shallow water with waves having very limited amplitudes, corresponding to port approaches and sailing in coastal zones. The experiments confirm that parametric rolling indeed occurs for certain combinations of wave conditions and forward speeds. A short video can be found on the [website](#).

The Knowledge Centre has taken part in the [Maritime & Naval Test & Development Symposium](#), which was held from 6 to 8 June 2017 in Amsterdam, The Netherlands. Prof. Vantorre presented a paper entitled “Ship model facilities for shallow and confined water in Flanders”. This conference is the world’s only conference dedicated to discussing the latest and next-generation validation tools and techniques designed to help guarantee the durability, performance and sea-worthiness of new vessels of all sizes.



[Flanders Hydraulics Research](#) has a [job vacancy](#) for a nautical researcher. Applications should be submitted by June 30, 2017.

The construction of [Flanders Maritime Laboratory](#) in Ostend is advancing. At present, the floor reinforcements of the 174 m long 20 m wide shallow water [towing tank](#) are being put in place (photo courtesy of the Department of Mobility and Public Works). A technical visit to the new maritime research gives you another reason to attend the [5th MASHCON](#) conference, which will which will be held in Ostend from 20 to 22 May 2019.



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