

This is the fifth [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 contains an item on the new simulator for inland navigation at Flanders Hydraulics Research and summarizes our ongoing research on push barge combinations. We hope you will find this interesting and wish you all the best for 2011.

On December 3, 2010 the new simulator for inland navigation was officially inaugurated by the Flemish Minister of Mobility and Public Works Hilde Crevits.

The simulator, named [LARA](#), will play an important role in the research and development of transportation over sea and over inland waterways. The latter have become more important over the years to the point that certain aspects of inland navigation now need to be studied in detail. One key aspect is that larger vessels use the existing infrastructure which leaves smaller margins for manoeuvring. Simulations with [LARA](#) will indicate where problems may arise and where adjustments to the infrastructure may be required. [LARA](#) will also be used to investigate certain innovative transportation concepts.



To accompany this event, which was attended by more than 50 invitees, several speeches were held about the current status of inland navigation and associated aspects such as research and innovation. In addition, an advisory group of experts convened to discuss and give a number of recommendations with regards to investment strategy, training, design and operational criteria. For the interested reader, a full report (in Dutch) of this convention and the speeches that were held in the afternoon is available upon [request](#).



Push barge convoys have a reputation to be less manoeuvrable than conventional inland ships. The very low displacement and high wind areas of the empty barges or the large tonnage and long lengths of fully loaded combinations are some of the factors decreasing the manoeuvrability. As a result, the required path widths and turning circles can increase significantly. Flanders Hydraulics Research received more and more questions to investigate the measures that have to be taken in order to allow push barge convoys in some narrow waterways. To further validate the simulator models that are applied in these studies both onboard measurements and towing tank experiments have been carried out.

Full-scale measurements of the motions in six degrees of freedom were carried out on the pusher 'Lianco' for different configurations and different loading conditions of the barges. The model tests were carried out at 1:25 scale, resulting in a total model length of 7.4 metre. During the tests both the forces on the complete convoy and the forces and moment in the horizontal plane of the pusher acting on the barges were recorded. In the coming months, the full-scale measurements as well as the model scale results will be further analysed. [Read more](#)



More than 60 abstracts were submitted for the *2nd International Conference on Ship Manoeuvring in Shallow and Confined Water: Ship-to-Ship Interaction*, which will be held in Trondheim, Norway in co-operation with NTNU, Marintek and RINA from May 18 to 20, 2011. If you are interested to attend the conference, please visit our [website](#) for early registration and for practical details such as cost price and suggestions for accommodation. The review of the full papers by the Scientific Committee is now in progress and a provisional scientific programme will be posted on the [website](#) in the beginning of March.



*Knowledge Centre
Manoeuvring in Shallow and
Confined Water*

Berchemlei 115
2140 Antwerp
Belgium

T +32 (0) 3 224 60 35
E info@shallowwater.be

Although this newsletter is written with care Flanders Hydraulics Research nor Ghent University are responsible for typos or errors in the content. You are receiving this email because you are subscribed to the Knowledge Centre newsletter. We care for your privacy, this newsletter is sent to you without displaying your e-mail details.

You can [unsubscribe](#) to the newsletter, [subscribe](#) or [invite a friend](#).

www.shallowwater.be
