Third International Conference on
Ship Manoeuvring in Shallow and Confined Water:

Ship Behaviour in Locks

Ghent, 3-5 June 2013

The 3rd International Conference on Ship Manoeuvring in Shallow and Confined Water will focus specifically on Ship Behaviour in Locks because it is an actual topic that merits attention. A significant number of locks for large sea-going vessels are being designed or under construction all over the world. The new Panama Canal locks are the most famous example for seagoing vessels. With regards to inland shipping, the adaptation of existing canals requires continuing renovation of existing lock complexes.

Lock manoeuvres involve more than just shallow water and bank effects. A series of additional effects such as density currents and the permeability of structures also have to be considered. Ultimately, complex ship hydrodynamics are involved, which are not yet fully understood. Several specific topics can be distinguished such as the behaviour of ships approaching and entering lock chambers, the design of approach lanes to the locks in order to reduce wave reflection and lateral forces and the development of more realistic ship – lock simulation models.

After successful conferences on bank effects (Antwerp, May 2009) and on ship – ship interaction (Trondheim, May 2011), the *Third Conference on Manoeuvring in Shallow and Confined Water* will have a non-exclusive focus on *Ship Behaviour in Locks*. This conference will be organised by the Royal Institution of Naval Architects, Flanders Hydraulics Research and Ghent University – Maritime Technology Division.

Topics

Ship Behaviour in Locks
The *Third International Conference on Ship Manoeuvring in Shallow and Confined Water: Ship Behaviour in Locks* intends to offer researchers and experts the possibility to discuss the latest developments in research and practice related to the behaviour of ships in or near locks, including the following applications:

- Ship hydrodynamics
- Development of ship – lock simulation models
- Design of approach lanes
- Effect of density currents and structure permeability
- Mooring forces

The papers presented on the Conference will cover experience from different points of view:

- Field observations
- Experimental results
- Numerical calculations, including CFD
- Practical aspects
- Simulation models for training and research

Papers concerning the civil engineering aspects of locks are welcome if the main subject focuses on the behaviour of ships in or near locks.

Benchmark tests

With respect to simulation models and numerical calculation methods to determine forces and moments due to ship behaviour in locks, the organisers would particularly welcome papers which focus on comparisons between the output of numerical models and benchmark model test data obtained at Flanders Hydraulics Research. A selection of the model test results has been made available by the project management and is scheduled for publication in the proceedings of MARSIM 2012. The data can be obtained by mailing to info@shallowwater.be to request a digital version of the benchmark data.

Related topics

Papers discussing related topics in the field of hydrodynamics of ship manoeuvring in shallow and confined waters will be considered as well:

- Shallow water effects on ship manoeuvring
- Ship - bank interaction and other confined water effects
- Ship - ship interaction
- Squat and other vertical motions in shallow water
- Ship – fender interaction

First call for papers

Authors are invited to submit an abstract of 250 – 300 words to info@shallowwater.be before 31 August 2012. The official language of the conference is English and the abstracts will be reviewed by an international scientific committee. Once accepted, authors will be expected to write and submit a full paper, which will also be reviewed by the international scientific committee.

Please log on to for more information:
http://www.shallowwater.ugent.be/EN/kc_conf_locks_EN.htm

UNIVERSITEIT GENT

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flanders HYDRAULICS RESEARCH
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