

Towing Tank Testing



Flanders
State of
the Art

Manoeuvring in Shallow and Confined Water

- Shallow and confined areas are key locations on trade routes: channels, locks, ports, Suez & Panama Canal, ...
- New fuel technologies (LNG, hydrogen, electric) require new ship types to visit existing ports
- Ship behaviour changes drastically in shallow and confined conditions: bank effects, squat, interaction effects
- Vital part in the development of robust autonomous control algorithms
- Towing tank tests form basis for accurate shallow and confined manoeuvring models + optimization of ship performance in shallow and confined areas (EEDI/EEXI)

What we do

Flanders Hydraulics specialises in towing tank tests with scaled ship models in shallow and/or confined water ($h/T \leq 4$, ITTC); 4 – 8 m ship models

Flanders Hydraulics has two towing tank facilities:

- Towing tank for manoeuvres in Confined Water (Antwerp, Belgium)
- Towing tank for manoeuvres in Shallow Water (Ostend, Belgium)

Key advantages

- Both facilities offer fully automated 24/7 testing, essential to meet the industry's expected time scales.
- Tools available to perform mathematical model validation and ship simulator studies in real- and fast-time.
- Easy access to highway, railway and waterway network (< 5 km). Ostend-Bruges Cargo airport at 10 km from Ostend site.
- Tank bottom and side accuracy within ± 1 mm, meaning that minimum clearances of 10 mm with respect to the boundaries can be measured accurately (ITTC). Accurate results at a UKC of 10% and lower.

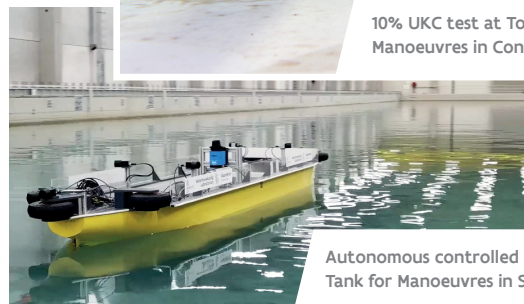
What we offer

Towing tank tests in shallow and confined water

- Flexible test program based on client's needs
- All test procedures according to most recent ITTC guidelines (7.5-02-06-02, 7.5-02-06-01, 7.5-04-02-01, ...)
- Captive and free running modes
- Camera registration available



10% UKC test at Towing Tank for Manoeuvres in Confined Water



Autonomous controlled ship, Towing Tank for Manoeuvres in Shallow Water

