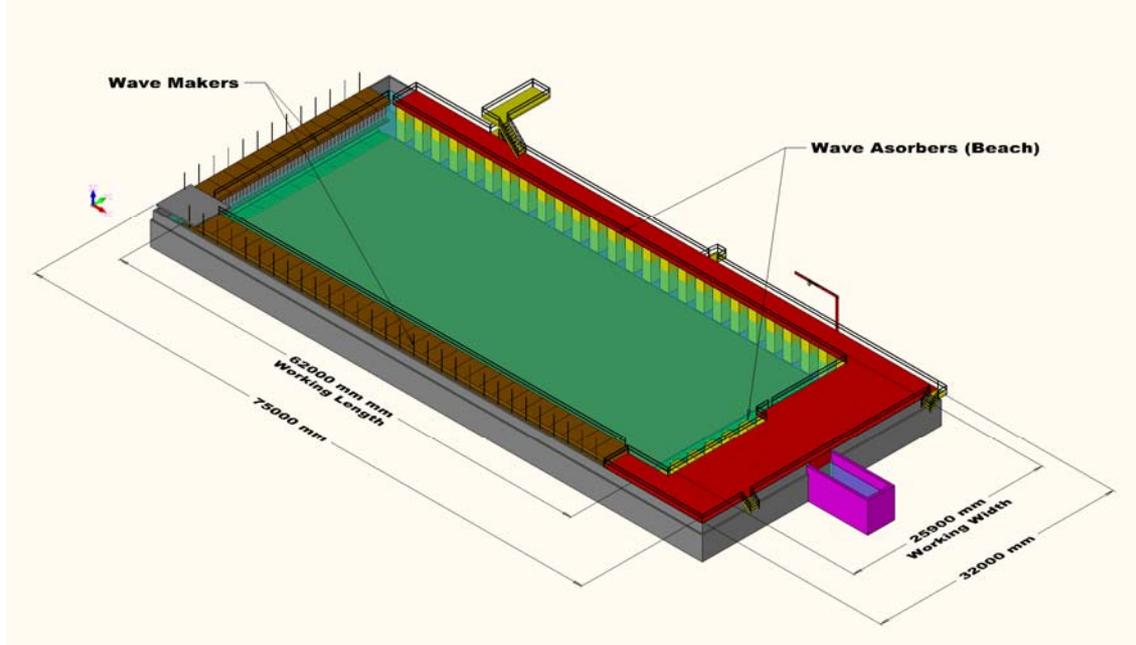


**INTERNATIONAL TOWING TANK CONFERENCE CATALOGUE OF FACILITIES  
TOWING TANKS, SEAKEEPING AND MANOEUVERING BASINS**

NATIONAL RESEARCH COUNCIL OF CANADA  
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OFFSHORE ENGINEERING BASIN (1990)



**WAVE GENERATION:** Regular and irregular long or short crested waves up to 1.0 m high, depending on wave frequency and spectrum. 168 individual, vertically adjustable, hydraulically actuated (1800kW) wavemaker segments. Three articulation modes, flapper  $\pm 15$  degrees, piston  $\pm 400$ mm, and combined. Wave absorbers are vertical perforated sheets on non-wave making walls.

**CURRENT GENERATION:** 10 lanes of independently hydraulically controlled thrusters through sub-floor channels generate a current across the full tank width. Maximum surface current 0.75 m/s (depends on water depth).

**WIND GENERATION:** Horizontal array of 12 fans, horizontal and vertical tilt, independently controlled 3.7kW DC motor for each fan.

**WATER DEPTH:** 0.4m to 2.8m

**MODEL SIZE:** Ship models up to 4.5 m in length, offshore structures 0.5 – 6 m in diameter.

**SPECIALIZED INSTRUMENTATION:**

- Dedicated HD camera/recorder video system with common clock and run name and real-time data annotation. Cameras are movable with options for underwater and surface tests.
- 6DOF model tracking over a wide field of view for seakeeping and manoeuvring experiments as well as close range, high accuracy tracking of moored ships and structures. Multiple bodies can be tracked simultaneously.

**TESTS PERFORMED:**

- Seakeeping, manoeuvring and station keeping of ships; tow out, set down and operation of moored and bottom founded offshore structures.

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Website [www.nrc-cnrc.gc.ca/end/rd/ocre/](http://www.nrc-cnrc.gc.ca/end/rd/ocre/)

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