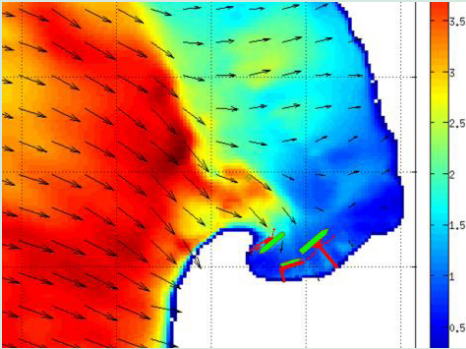


“Where will our knowledge take you?”

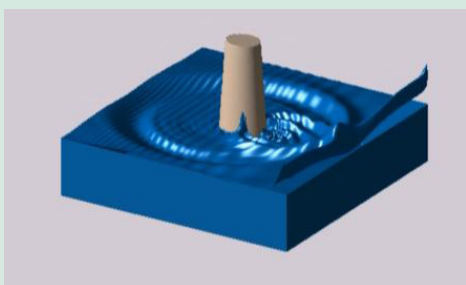
Wave Expertise



MetOcean and wave penetration studies are required for the design of port layout, channel and breakwater or downtime predictions



Knowledge of severe conditions can help increase the operability of a port or marina.



Wave forces on structure are required to design mono-piles (source TU Delft).

BMT ARGROSS has special knowledge in terms of wave modelling and analysis. The knowledge of our experts covers the following types of ocean waves:

- Wind seas and swells
- Ship induced waves
- Infra-gravity waves
- Seiches (harbour resonance)
- Storm surges
- Tides
- Tsunamis

Our standard products cover:

- Normal wave statistics (operational conditions)
- Design criteria (extreme wave conditions, wave-structure interactions)
- Advanced modelling of historical/artificial events
- Advice on wave activity reduction and extreme events survival

Our clients are usually involved in:

- Ports, terminals and marina developments
- Coastal defences and coastal management
- Offshore wind farm design and certification
- Offshore oil exploration and production
- Wave energy applications

Since the client needs range from general advice for location selection to detailed design, our products are customer oriented and usually chosen for a fit for purpose approach. To this end, we use tools with various levels of complexity to deliver the right answers, ranging from fully non-linear wave models to simple parametric models.

Representative projects carried out in the past by our staff are:

- Advanced hurricane modelling in the nearshore area near Pascagoula (USA), definition of design criteria
- Metocean conditions for an offshore wind farm in the Irish Sea
- Wave and surge modelling in the Dutch Wadden Sea
- Seiches in the Port of Rotterdam, definition of hydraulic boundary conditions
- Hurricane modelling near Barrow island, Australia
- Sarawak field development - fine scale hindcasting of historical storm events