

# **Ships and Offshore Structures**

## **Hall of Fame**

### **A Pioneer of Naval Architecture**

#### **William Froude**



**William Froude** (November 28, 1810 – May 4, 1879) was a British naval architect and engineer who exceptionally dedicated to design of ships. He discovered the physical laws, so-called Froude's laws, by which the hydrodynamic performance of the small-scale ship model could be converted to the full-scale ship when both have the same geometrical shape or hull form. Froude started his professional work as a railway engineer and in 1846, he began a new work on ship hydrodynamics. He found that roll motion of ships can be reduced by a deep bilge keel which was later adopted by the UK Royal Navy and now by all the ships. Froude proposed to the British Admiralty a series of ship model tests to determine the physical laws or the relationships between small-scale models and full-scale ships. A towing tank for the ship model tests was built at Torquay, UK near his home after his proposals were accepted by the British Admiralty. He also discovered that the primary components of resistance to ship motions are skin friction and wave formation. The UK Royal Institution of Naval Architects ([www.rina.org.uk](http://www.rina.org.uk)) awards the *William Froude Medal* to an individual of any nationality who has made a conspicuous contribution to naval architecture and/or shipbuilding and whose achievements merit special consideration, as the Institution's highest award for professional achievement.

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