

Former Penshurst man Terry O'Brien wins a place in maritime hall of fame

By EVERARD HIMMELREICH

Nov. 24, 2014, 4 a.m.

THE treacherous narrow entrance to Port Phillip Bay is among the countless ports throughout the world made safer by a former Penshurst man.

Terry O'Brien, who was raised in Penshurst, was this month inducted into the Australian Maritime Hall of Fame for his work in developing a system that ensures cargo ships have sufficient clearance under their keels to move through shallow entrance channels and waterways. Dr O'Brien, a former Melbourne University lecturer, received the prestigious accolade in front of more than 500 guests at this year's Australian Shipping Awards in Sydney.

His company's DUKC technology ensures a ship cannot sail unless it is safe to do so, preventing damage not only to the huge ships but also to the environment. The DUKC technology is so accurate that even under extreme weather conditions, it allows a 250,000-tonne bulk carrier to negotiate a shipping channel within a metre's clearance to the seabed.

In many cases, DUKC allows large ships to go deeper than permitted by the traditionally conservative 'guesswork' static rules, allowing ships to load more cargo and sail with wider tidal windows.

Dr O'Brien, the father of Western Victoria upper house MP

David O'Brien, said he had not seen inside a commercial port until his 20s when he worked on a solution for the deep water mooring of the ships loading phosphate ore in the deep waters of the Pacific island of Nauru, and Christmas Island.

At the time, he created a numerical method of modelling waves, currents and ship motions that led him to develop a simulation package for the motion of ships. He used that model to create the DUKC products that are now used in some of the largest bulk, container and multi-cargo ports in the world, including Port Phillip Bay. The DUKC system has also minimised the dredging of many ports that has been done to give access to bigger ships.

Dr O'Brien said the DUKC system had also enabled shipping to become more efficient with every centimetre of allowable draft under the water enabling larger ships to load an extra 150 tonnes.

He also used his accolade to campaign for research and development funding, saying government support had been critical in getting his DUKC technology to commercial stage.