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OMC enters North American market to improve ship safety

OMC International (OMC) continues to strengthen its global presence by winning its first North American contract, a DUKC[®] * desktop study, for the Columbia River Bar, a treacherous waterway known as the ‘Graveyard of the Pacific’, the company announced today.

Executive Director Dr Terry O’Brien OAM said this study was a very exciting step for his Australian family-owned maritime engineering company and again confirmed OMC’s reputation as the world leader in under keel clearance (UKC) management systems.

The Columbia River Bar Pilots DUKC[®] Desktop Study, commissioned by the Columbia River Bar Pilots with funding from the Oregon Department of Transportation, is expected to be completed by the end of August.

“Massive sea swells can make conditions at the mouth of the Columbia River similar to the challenging waters of Melbourne’s Port Phillip Bay entrance where ships have been transiting safely under DUKC[®] advice since mid-2009,” Dr O’Brien said.

“This aptly nicknamed Bar, at the mouth of the Columbia River which flows into the Pacific Ocean, has claimed about 2000 ships and 700 lives since 1792. It is still known as a dangerous crossing for ships of all sizes, particularly when very strong river currents collide with massive ocean waves, because the wind direction and ocean swell can sometimes change from calm to life-threatening in as little as five minutes. This can force ships to sometimes turn sideways.

“In Melbourne, huge long swells of up to 5 metres significant wave height, combined with currents up to 6 knots on the ebb (which occurs at low water), cause, in extreme conditions, ships longer than 250 metres to plunge several metres downward. The history of shipwrecks since settlement began at Melbourne in 1835 attests to the reality of Port Phillip Heads as one of the world’s most challenging waters for ship navigation.

“Having our technology already proven in Melbourne’s extreme waters, I am very confident that this desktop study will be followed by the commissioning of a customised DUKC[®] system for the Columbia River because our technology will ensure maximum safety for large vessels moving in and out of its waterways.

“This technology mathematically predicts how much UKC ships have as they come down shallow channels. In most cases, it allows large vessels to load more cargo and/or sail with wider tidal windows. It is so accurate that, under extreme weather conditions, a 250,000 tonne carrier could negotiate a channel within a metre’s clearance to the seabed.”

* DUKC[®] (*Dynamic Under Keel Clearance*)

DUKC[®] is the only proven system worldwide that has the capacity to accurately determine the critical vertical component of navigation (what you can't see under the water).

This technology is already on its way to becoming a standard safety implementation at Australian ports and is also in a number of ports in Europe and NZ. Almost all of the iron ore and most of the coal exported from Australia are shipped out under DUKC[®] advice.

A customised DUKC[®] system is already installed for Germany's Weser River system to help improve German port efficiency after OMC signed a contract with Germany's Federal Waterways and Shipping Directorate in 2008. This system covers the estuary port of Bremerhaven as well as the three ports on the lower reaches of the river, Nordenham, Brake and Bremen.

Dr O'Brien said this new North American contract for the desktop study again confirms the paradigm shift that DUKC[®] has caused in UKC management, from static rules to dynamic analyses of UKC requirements.

"I believe that static rules are coming to the end of their usefulness because they have dramatically failed at some ports and it is getting increasingly harder for port and water authorities around the world to ignore the proven safety benefits of our DUKC[®] technology as a risk management tool," he said.

"I believe it is also increasingly unacceptable for ports without DUKC[®] systems in place to believe that they're foolproof because they have so far enjoyed an unblemished safety record. Just look at what happened in New Zealand. In 1993, two tankers bringing crude oil in from the Middle East grounded within three months of each other, in the Marsden Point channel, on a shoal, yet there had been no grounding in the preceding 30 years of operation.

"Subsequent analysis by OMC showed that if a DUKC[®] system had been in operation, the system would have advised that these sailings not take place on those days due to inadequate UKC and the two incidents would not have occurred." The port installed a DUKC[®] system on safety grounds in 1994.

OMC is also gearing up to celebrate the first anniversary next month (March) of the opening of its South American office in Bogota, Colombia. Senior engineer and South American Manager Dr Matthew Turner has been travelling extensively within Argentina, Brazil and Colombia.

"Our decision to open an office in this region has been more than justified by the interest we are receiving from maritime authorities, ports and port operators," Dr O'Brien said. "I believe the next few years will be very exciting for OMC in South America."

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