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OMC launches new website and announces further DUKC[®] expansion plans

OMC International (OMC) has today launched its new website www.omcinternational.com to better inform shippers of the long, incident-free track record and recent award-winning web-based under keel clearance (UKC) management technology, DUKC[®] Series 5.

Executive Director Dr Terry O'Brien OAM said the new website has an animated 'Port Tracker' which maps OMC's strong international presence, including its inroads into South American markets where productivity could be greatly increased with the installation of the latest DUKC[®] technology. Systems are already operating in most major Australian ports, and in New Zealand, Europe and North America.

"OMC has over some years undertaken site visits and preliminary studies in Brazil and Chile and, more recently, are in discussion with a number of African ports on the value of UKC technology," said Dr O'Brien, who is the innovator of the first DUKC[®] system installed at Queensland's Hay Point coal terminal in 1993.

"We are particularly focussed on the South American market because of the potential for DUKC[®] to increase productivity at some ports whilst decreasing the risk of grounding that the larger bulk ships may present. A challenge for many South American ports is the limited depths in the access channels as well as coastlines exposed to swells that can generate significant wave induced ship motions."

Science-based DUKC[®] technology maximises the cargo-carrying capacity of large bulkers, container ships and oil tankers in depth-restricted waters because it scientifically predicts how much UKC (the distance between the seabed and the bottom of the ship) these ships will have as they come down shallow port approach channels.

Under very favourable conditions, DUKC[®] can allow large ships to safely sail up to 1m deeper – allowing them to carry more than 15,000 extra tonnes of iron ore or coal. Every extra centimetre of draft (the depth below the waterline) that a large bulk ship can be loaded means around an extra 150 tonnes of cargo which, depending on the price/tonne, could add more than an extra \$15,000 per cm in revenue.

"The costs of installing a DUKC[®] system are minimal when compared to the huge economic benefits possible," Dr O'Brien said. At Port Hedland, for example, he said DUKC[®] has allowed port users including BHP Billiton and FMG to potentially ship out \$1.1 billion in extra iron revenue per year.

"We are strategically targeting the South American market because we believe that if their bulk ports adopted DUKC[®], they could derive the same economic benefits currently gained

by their rivals, the Australian Pilbara ports,” Dr O’Brien said. “By optimising their clearance depths, the Pilbara ports earn billions of additional export dollars.”

Dr O’Brien said DUKC[®] is already installed in some of the world’s most important waterways, further cementing the company’s reputation as the world leader in real-time UKC management. A customised web-based DUKC[®] Series 5 system is being deployed in the St Lawrence River from Montreal to Quebec City, as part of the Canadian Coast Guard’s (CCG) integrated e-Navigation solution for the St Lawrence River, which is one of the world’s busiest inland waterways. It is also installed in four ports along the 100km stretch of Germany’s Weser River, and the Australian Maritime Safety Authority (AMSA) was the first client to use OMC’s latest web-based DUKC[®] Series 5 to ensure safer shipping through the ecologically sensitive waters of Torres Strait.

“DUKC[®] is an accurate, proven and cost effective e-Navigation (e-Nav) tool for UKC management, operating safely for more than 21 years, and OMC will continue to facilitate its wider acceptance in the maritime world, especially by safety authorities,” Dr O’Brien said.

The roll-out of web-based Series 5 continues and at Port Hedland, the world’s largest bulk export port, Series 5, coupled with revised tidal window models and minimal targeted dredging, potentially yields an extra 71 cm draft on an average ship which equates to around \$1.1 million over and above the benefits from DUKC[®] Series 4 for that ship. As well, Series 5 also offers new products such as DUKC[®] Optimiser, an automated ship scheduling tool which helps maximise total tonnage on the one tide. In April this year, at Port Hedland, under DUKC[®] advice, five ships sailed on the morning tide with a total 1,025,962 tonnes and six ships sailed on the evening tide with a total 1,002,143 tonnes – a record of more than 2 million tonnes of iron ore exported in 24 hours.

Dr O’Brien said OMC’s strong research focus had led to the development of new products, including lightweight ship motion measurement instrument OMC iHeave[®] which measured and analysed motions of 24 ships crossing Columbia River Bar in moderate to high seas and DUKC[®] Chart Overlay, a world-first because it gives pilots dynamic predictive advice about ‘go’ and ‘no go’ sailing areas before sailing and on the fly.

Interestingly, Dr O’Brien, who, after a distinguished 22-year academic career at Melbourne University, founded OMC in 1987 to commercialise his research, undertook one of the earliest environmental impact studies of Western Port Bay in the early 1970’s. Today, OMC is a member of the consortium of companies, headed by AECOM and GHD, who have recently been appointed by the Victorian Government as the successful tenderer to plan the future development of the Port of Hastings.

As the recognised world-leader in real-time UKC management, Dr O’Brien has also been involved with international working groups which set world-standards in channel design. He is the only Australasian member of PIANC Working Group No 49 which updated the PIANC international guidelines for channel design published in 1997. The new guidelines were published in late 2013 and Dr O’Brien was responsible for the channel design components relevant to UKC. Dr O’Brien also chaired PIANC Working Group 54, tasked with looking into the use of hydro/meteo information to optimise safe port access, and a report into that group’s findings has also been published.

Please visit www.omcinternational.com to find out more about OMC's award-winning and world-leading UKC safety products and services. Refresh your browsers to enjoy this new-look website.

* Dr Terry O'Brien was awarded an OAM in June 2010 for services to the maritime industry.

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