Geelong chooses DUKC

As OMC International's founder is honoured again, Australian Port Geelong is adopting the company's DUKC system to handle more cargo through the same channels

Captain Peter McGovern of the Victorian Regional Channels Authority (VRCA) has announced that the VRCA is adopting technology that will allow larger ships with more cargo to access the Geelong Port.

Some vessels will be able to import and export additional cargo, of the order of 3,000 tonnes through Geelong, he says. "As a bulk port, Geelong will benefit appreciably from technology that allows pilots to gauge with pinpoint accuracy the maximum draught ships can operate within the Port of Geelong. Additional draught means bigger loads for bulk vessels. Container ships rarely max out their draught, while bulk ships can be filled completely."

The system is called Dynamic Under Keel Clearance (DUKC). It is a computer algorithm that takes account of real-time conditions to predict whether the Geelong channel can cater for each ship's draught, the depth of water needed to float a ship, at a given time. Information about tides and weather is fed into the DUKC system, which calculates the available under keel clearance and advises pilots to adjust speed accordingly.

"The VRCA has adopted DUKC as a way of admitting large ships with more cargo, without requiring any changes to the channel infrastructure. In the right circumstances, ships may be allowed up to 12m draught and that means a cargo uplift of 1,350 to 3,000 tonnes per vessel. DUKC will mean companies can fill bulk carriers to maximum draught and still safely navigate the Geelong channel", Captain McGovern says.

DUKC was developed by Victorian company OMC International. Its CEO Peter O'Brien says: "We are delighted to add Geelong to the 23 ports we service around the world".

Thys Heyns, General Manager Refining at Viva Energy welcomes the announcement "Dynamic under-keel clearance will allow businesses to safely transport more products into and out of the port. "For Viva Energy, each additional 10cm in vessel draught results in saving of over $1m per annum. "This is just one of many steps, that will help us build a sustainable refinery and this is good for Geelong." By adopting DUKC, the VRCA enables optimal use of the existing channel, safely maximising productivity. "Vessels visiting Geelong last year, particularly those carrying fluids, did not bring a maximum cargo. Once DUKC is fully operational, vessels will carry more cargo without any change to the channel", Captain McGovern states.

O'BRIEN HONOURED AGAIN

In Queen Elizabeth's Birthday Honours List in June, OMC International Executive Director Dr Terry O'Brien has been appointed a Member (AM) of the Order of Australia for "significant service to maritime engineering, to the development of innovative marine navigation equipment and to education".

Melbourne engineer Dr O'Brien, who is the recognised global leader in Under Keel Clearance (UKC) management, says his AM was "an unexpected honour".

"I also see it as recognition of OMC's dedicated and very talented staff who continue to ensure that DUKC technology remains world's best practice in safe and efficient navigation for the global shipping industry," he said. "Their efforts have contributed to DUKC's unblemished 22-year safety record and I accept this AM on their behalf."

Dr O'Brien first used this model after he was contacted by the then British Phosphate Commissioners to work on solutions for mooring the large phosphate ships in Nauru's particularly deep port and also for Christmas Island moorings. In 1987, he left a distinguished 22-year academic career to further commercialise his model and establish O'Brien Maritime Consultants, now known as OMC. By 1993, Dr O'Brien had developed his innovation into a working DUKC system which promised to make commercial shipping more efficient and safer. In 1993, he moved to Brisbane to support the installation of the first DUKC system at Queensland's Hay Point coal terminal.

Dr O'Brien's intellectual property still provides the core ship motion computations in all DUKC products, including the latest web-based DUKC Series 5 which offers state of the art enhancements such as dynamic port capacity modelling. ■