

On course

OMC's world-leading DUKC technology taught at the University of Melbourne



Case study examples of OMC International's DUKC technology are being taught for the first time at the University of Melbourne as part of an ongoing partnership that recognises OMC's expertise as the world leader in real-time Under Keel Clearance (UKC) management.

University of Melbourne's Ocean Engineering Professor Alexander Babanin said DUKC content was taught as part of an intensive week-long postgraduate port engineering unit developed with the support of Ports Australia and input from the maritime industry.

This 'Port Access and Navigation' unit, which ran until 29th September, was taught by Melbourne academics and industry experts including OMC. It is an elective in the Civil, Environmental and Mechanical Engineering Master program at the University of Melbourne, and it is also part of the Port and Harbour Engineering Graduate Certificate which is the only formal qualification in port engineering in Australia and New Zealand.

Professor Babanin, the course convenor and original academic developer of this unit previously taught at Swinburne University for 10 years, said the University of Melbourne was fortunate to have partnered with OMC this year to present some DUKC course content to the next generation of maritime engineers.

"Under Keel Clearance is the single most important issue of shipping in ports, channels and shallow areas, which is not taught in standard engineering programmes at universities and so it is a must for this port engineering course," Professor Babanin said. "DUKC is state of the art and we are lucky to have OMC International in Melbourne who help us to teach this specific application.

"We recognise OMC and DUKC technology as world leading. It should be understood that we are not researchers or practitioners of this technology, we teach it, and in this

regard we rely on the standing, reputation and world-wide practice and acceptance of DUKC and OMC as the leader.

"DUKC can certainly become a standard education tool for future port engineers if it is promoted for port engineering courses in other parts of the world."

DUKC was pioneered in the early 1990s by OMC's Executive Director Dr Terry O'Brien AM - a former University of Melbourne academic who established OMC in 1987- and this technology has since been further developed by OMC's team of maritime engineers, some who are University of Melbourne alumni.

OMC's customised DUKC systems are operational in some of the largest bulk, container and multi-cargo ports in the world, including the Pilbara iron ore ports in north Western Australia (beneficiaries include BHP Billiton, Rio Tinto and Fortescue Metals Group) and in some of the world's most important waterways, including Torres Strait and Canada's St Lawrence River from Montreal to Quebec City.

The 'Port Access and Navigation' unit, with DUKC course content, is OMC's second collaboration with the University of Melbourne. Earlier this year, OMC was chosen as an industry partner to undertake a special research project to develop an integrated modelling system for navigational aid in tidal inlets. Professor Babanin said OMC's CEO Peter O'Brien is leading the project and the other industry partners are the University of Melbourne, Pivot Maritime International Pty Ltd (Tasmania) and MetOcean Solutions. (New Zealand).

"The research part of this project concentrates on wave-current interactions and the leadership of OMC as the industry partner is apparent as currents would contribute to the Under Keel Clearance," Professor Babanin said.

OMC, which is celebrating its 30th anniversary this year, moved its Melbourne headquarters to larger premises in Trenerry Crescent, Abbotsford in May to house its growing workforce of more than 50 employees, as well as to allow for postgraduate students and short stay collaborative visits with global maritime partners.

Mr O'Brien said OMC was continuing to hire more staff - including graduates from the University of Melbourne - to meet a growing domestic and international workload. "This is a response to an increasing recognition of our DUKC e-Nav technology as the industry standard for safe and efficient real-time management of UKC," he said.

On 8th June 2015, in the Queen's Birthday Honours List, Dr Terry O'Brien was 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" ■