

# Port Adopts Dukc® Innovations

**Melbourne Maritime engineering firm OMC International has licensed its world-leading navigation technology to the Port of Melbourne Corporation (PoMC) to help ensure the safety of large vessels entering Port Phillip Heads, one of the most challenging waters for ship navigation to be found anywhere on earth.**

All 35 Port Phillip Sea Pilots have been equipped with OMC's Dynamic Under Keel Clearance (DUKC®) technology, installed on portable pilot units to help them safely optimise their vessel's speed and manoeuvrability.

OMC's founder, executive director and former Melbourne University academic, Dr Terry O'Brien said licensing the full complement of DUKC® navigation software to the Port of Melbourne will minimise the risk of large vessels grounding in these challenging waters.

OMC has configured accurate and valid algorithms which can safely manage underwater keel

clearance in all conditions. This includes long swells up to five meters significant wave height interacting with currents up to six knots on the ebb which, in such extreme conditions, cause even large ships to plunge downwards several meters.

"The combination of heavy swells, strong currents, complicated bathymetry and hard bottom makes the restricted entrance into Port Phillip Bay one of the most difficult pilotage challenges—and technical challenges for UKC prediction—anywhere on earth," Dr O'Brien said.

"Having the safety of our system proven in these extreme waters shows that DUKC® technology is suitable for even the most challenging waterways worldwide."

Melbourne is Australia's largest and one of the world's top 50 container ports. OMC's technology is now installed in most major Australian ports and also overseas. "DUKC® has caused a paradigm shift in Under Keel Clearance man-



agement, from Static rules to Dynamic analyses of UKC requirements," Dr O'Brien said.

In the past 16 years, it has provided billions of dollars in economic benefits to ports and port users worldwide, and helped prevent ship groundings and environmental disasters.

"OMC has attracted substantial R&D funding during the last decade and will continue to operate as an innovative enterprise offering cost effective, value adding products for safer ship navigation through shallow waterways," he said.