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**Technology transfer - how dredging and shipbuilding innovations are improving (micro)tunnelling operations**

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**ABSTRACT**

At first glance it may not be obvious but shipbuilding, dredging and tunnelling have many related disciplines. Royal IHC, the global market leader in dredging vessels, has resumed the development of tunnel boring machines about two years ago. Part of the focus of Royal IHC lies with the development of innovative solutions concerning more efficient production methodologies and monitoring serving the aforementioned markets. This publication describes challenges and developments of innovative solutions from shipbuilding and dredging, being applied in the domain of tunnelling. This includes the adoption of an electric drive concept for MTBMs, as well as the use of the non-radioactive density meter, the so-called RF meter, for bentonite slurries. The prototype for a MTBM with a completely new electric cutterhead drive is currently under construction. The RF meter has already been released for dredgers and is currently evaluated on a pilot project on a TBM