



# PROJECT REPORT

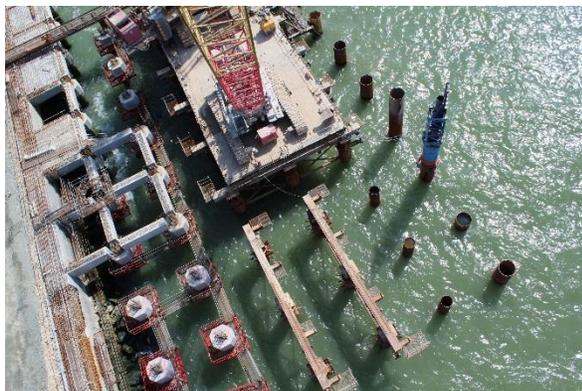
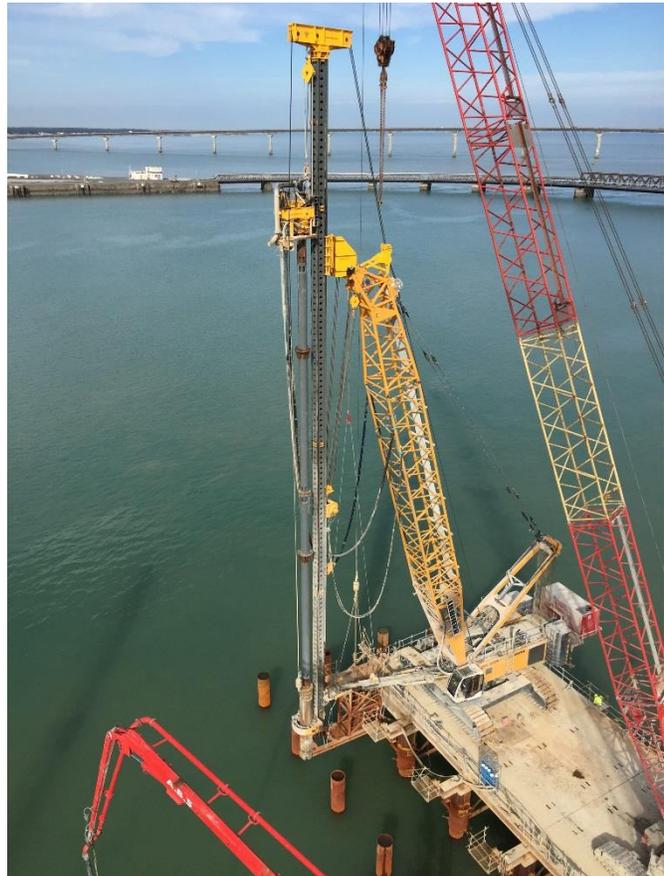
## La Rochelle, France

**Bermingham Personnel:** Stefano Gabaldo

In 2013, Stefano Gabaldo (Director of European Sales) with Bermingham was contacted by Pierre-Tristan Duhamel at Roc-Drill for the purpose of supplying to the Association (Groupement) EMCC/ETPO the required equipment for drilling 914 mm (36") and 1321 mm (52") piles 28 meters (92') long in the port of La Rochelle, France. This is the second phase of an expansion program in the Port of La Rochelle for the purpose of expanding the loading terminal's capabilities.

For the first construction phase, a case advancing system, also supplied by Bermingham, was tested and proved effective and thus specified for the second phase of the project. However, the diameter of the piles was increased which provided a unique challenge: large piles of 1321 mm diameter had previously never been attempted with case advancing methodology. Accepting the challenge, Bermingham worked with Roc-Drill to provide a 120-FT L23 Vertical Travel Lead System that would drill the piles utilizing a BHD-80 (80,000 ft-lbs) Drill to drive a 30-in Down-the-hole-hammer.

Improving on an existing crossover design, Bermingham also developed, specific for the project, a new 360 degree crossover for reverse circulation drilling. The purpose of the crossover is to collect the cuttings from the drilling, re-direct them back into the drill string where they flow out to the top of the drill string and diverted for spoils control and collection. The advantage of the 360 Degree crossover was that it provided a substantially faster 'spoils evacuation time' than traditional crossovers and thus better collection of the substantial amount of cuttings resulting in faster drilling rates.



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Bermingham's VTL and BHD-80 Reverse Circulation System requires several hydraulically powered winches and cylinders. Roc-Drill did have a basic power pack to be used for the drill for the system so Bermingham supplied a Stand Alone Valve (SAV). The SAV acts as a quick and easy solution that does not require customization of a power pack unit. One simply attaches the SAV to the power pack. The SAV has its



own pendant controller that is mounted in the cab of the crane so that the crane operator can control the drilling.

Birmingham's experienced service Technician Ryan Chevalier went to La Rochelle to help with the rig-up and maintenance of the equipment. Roc-Drill has been very pleased with the record breaking achievement of the project that has now reached its conclusion. Birmingham would like to thank Roc-Drill for their order and look forward to a continued business relationship

