

**Title:** Challenging Shallow Water DP Jacking Operations – Design and Operational Feedback

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**Abstract**

For decades the critical importance of functions offered and ensured by electrical or software based systems. This paper aims to present a challenging project where DP technology is critical for the success of the operations. It lies indeed in the building of the largest viaduct worldwide, currently built in La Reunion, French island located in the Pacific Ocean. Built by a consortium between VINCI Construction Grands Projets (authorized representative), Dodin Campenon Bernard, subsidiaries of VINCI Construction, Bouygues Travaux Publics, a subsidiary of Bouygues Construction and Demathieu Bard Construction, the mega barge Zourite is a key element of the project. Zourite is a DP jack-up barge over 100 metres long with eight legs designed to carry cargo items of up to 4,800 tonnes and 23 m in diameter.

The on-board DP delivered by Sirehna incorporates unique control algorithms and the operation carried out demonstrated the extreme precision of the system allowing the jack-up barge to maintain its position very accurately from its target position. Strong and efficient teamwork of all actors has been enforced and necessary for the success of incident-free operations.

In this paper, the authors review the design of the jack-up barge, focusing on the innovative developments required for DP system and demonstrate how efficient marine operations planning and strong teamwork of all participants (crew, contractors, OEM staff, ...) have lead to maximize the values in order to achieve very challenging operations.