



First offshore lifting operations with centimetric precision successfully carried out by the Zourite mega-barge to construct the viaduct for the New Coastal Road (NRL)

Sirehna and D-ICE Engineering took part in an unconventional project by providing the dynamic positioning system (DP) and the associated piloting expertise for the huge Zourite barge which is to be used to convey components of the viaduct for the new coastal road on Réunion Island. The barge has just completed its first task with the laying of the first pile.

The group that holds the contract for the marine viaduct has chosen to equip an unconventional jack-up barge to meet the specific construction conditions of the project to transport and install heavy packages for the viaduct offshore. As part of the construction of the bespoke barge, Sirehna has designed, developed and installed an innovative dynamic positioning system enabling the vessel to ensure the offshore operations. The DP system has allowed Sirehna to successfully carry out the positioning and jacking operations to lay the first pile of the NRL in Reunion. The onboard DP incorporates unique control algorithms and the operation carried out demonstrated the extreme precision of the system allowing the jack-up barge to maintain a difference of less than 10 cm from its target position. Zourite is a megabarge over 100 metres long with 8 legs designed to carry cargo items of up to 4,800 tonnes and 23 m in diameter.

D-ICE ENGINEERING expertise was a key parameter for the unprecedented success of the installation of the pile for the NRL. D-Ice have applied their skills in particular to the design of the offshore operations and control of the use of DP technology and the behaviour of the floating platforms. Developed and manufactured by Sirehna, the DP system, combined with solid knowledge provided by D-ICE, has demonstrated impressive performance characteristics. Thanks to great teamwork with the Compagnie Maritime du Littoral shipping line, the operation has achieved results with unmatched precision in difficult jacking conditions.

Built by a consortium comprising VINCI Construction Grands Projets (authorised representative), Dodin Campenon Bernard, subsidiaries of VINCI Construction, Bouygues Travaux Publics, a subsidiary of Bouygues Construction and Demathieu Bard Construction, the barge is taking part in the construction of the new coastal road on Réunion Island.

### **ZOURITE TECHNICAL DATA SHEET**

# **Dimensions of the barge**

- Dimensions: 107 metres x 44 metres - Hull height: 7 metres

### **Dimensions of 8 legs**

- Length: 55 metres - Diameter: 3 metres - Leg weight: 240T

## Cargo size

- 4,800 tons - 23 m diameter

# Official name and flag of barge

Owner: Compagnie Maritime du Littoral

Flag: French

Home port: Le Havre

Shipyard: CRIST - Gdynia - Poland

#### **About Sirehna**

Sirehna is a company with 65 employees, specialising in the dynamic behaviour of naval platforms. Based on the outskirts of Nantes, Sirehna offers a full range of embedded systems to secure navigation with dynamic positioning systems. Sirehna ensures the service and maintenance of its systems for its customers worldwide.

#### www.sirehna.com

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#### **About D-ICE**

D-ICE ENGINEERING is an engineering and research company specialised in automation and hydrodynamics. D-ICE develops and provides tools, simulation means, technologies and advanced services in particular for complex offshore operations and marine renewable energy systems. A world-renowned expert in dynamic positioning and drilling specialist, D-ICE is a major technological player and a partner of choice for innovative projects with high added value.

D-ICE ENGINEERING: Design, Innovation, Control, Expertise

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