



SIKA AT WORK

LEWPP-2 PLATFORM – UNDERWATER REPAIR

OFFSHORE & MARINE CONSTRUCTION
CONVENTIONAL ENERGY

BUILDING TRUST



LEWPP-2 PLATFORM – UNDERWATER REPAIR



PROJECT DESCRIPTION

Oil and Natural Gas Corporation Limited (ONGC) operates multiple offshore platforms in the Mumbai High Field, located in the Arabian Sea. Many of these platforms – including those in the Mumbai High North, Mumbai High South, and Heera fields – have exceeded their original design life but continue to produce oil and gas. To ensure safe and continued operations, ONGC initiated the LEWPP-2 project, encompassing a large program of subsea engineering and structural repairs.

Between April and June 2018, Sika partnered with AFCONS Infrastructure, one of India's leading EPC contractors, to execute the underwater structural strengthening scope for this project.

Project name: LEWPP-2 Platform – Underwater Repair
Location: Mumbai High Field, India
Year: 2018
Application: Repair and maintenance
Product: SikaGrout®-9110 and a predecessor of SikaGrout®-9550

PROJECT REQUIREMENTS

With aging offshore infrastructure still in operation, ONGC required a comprehensive solution to strengthen and repair subsea structural elements across 15 platforms. The solution needed to enhance the platforms' load-carrying capacity, extend service life, and mitigate risks associated with structural degradation – all without interrupting ongoing production.

Given the offshore environment and operational constraints, the approach had to be technically robust, cost-effective, and capable of meeting rigorous engineering standards and approvals.

Any product name or reference reflects the Sika product name at the time of creation of this document and may differ from the product name or reference during past events.

Our most current General Sales Conditions shall apply. Please consult the most current local Product Data Sheet prior to any use.



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PROJECT PARTICIPANTS

Customer: AFCONS Infrastructure
End Client: Oil and Natural Gas Corporation Limited (ONGC)

SIKA SOLUTIONS

Sika undertook a full turnkey role in delivering the subsea repair works. This included conducting pre-engineering surveys and detailed design engineering services such as global in-place structural analysis, pushover and fatigue assessments, and finite element analysis (FEA). Sika also supervised fabrication and installation activities to ensure quality and compliance with ONGC and Engineering India Limited (EIL) standards. To execute the structural repairs, Sika supplied and installed both SikaGrout®-9110 and a predecessor of SikaGrout®-9550, both ultra-high-performance cementitious (UHPC) materials specifically developed for underwater structural applications. The grouting scope covered annulus filling and infill grouting of subsea members using grouted clamp technology – a proven method for restoring structural integrity without extensive replacement work.

Sika provided all grout materials, offshore grouting equipment, skilled grouting crews, field engineers, and testing facilities to ensure proper execution and quality control.

CUSTOMER BENEFITS

Sika's involvement as a single-point solution provider simplified project coordination for the client, ensuring seamless integration between engineering, materials supply, fabrication, installation, and offshore operations. Leveraging experience gained from working on over 40 similar ONGC platforms, Sika developed a cost-effective and technically sound repair strategy tailored to ONGC's aging offshore assets.

The underwater repair works executed during the LEWPP-2 project have significantly extended the service and production life of the platforms, allowing safe operation beyond their original design lifespan. The use of grouted clamp and infill member technologies proved both effective and economical, providing ONGC with a sustainable method for strengthening critical offshore structures without production downtime.