

DEEPWATER

CP USING ANODES BUILT INTO STABILIZATION MATTRESSES: BRENT PIPELINE, NORTH SEA

Deepwater supplied RetroMats™ and RetroClamps™ to protect 12 km of pipeline for 15 years

In 2010, a cathodic protection survey showed that two sections at each end of a 148 km pipeline in the North Sea had “low structure potentials”. In 2012, Deepwater installed CP retrofits on those sections, which were each at a depth of about 100 meters. The pipeline to be protected was 36” nominal pipe with a 7mm asphalt coating and a 2.25” thick concrete weight coat. To boost the cathodic protection, a total of 16 Retromats and Retroclamps were used in two groups of eight; these were placed within “hot spots” at either end of the pipeline, each 6 kilometers long.

Deepwater’s Retromats, which are concrete stabilization mattresses with anode arrays cast inside, were used as the CP source. They were delivered as empty shells and anodes, and were assembled on-site by local crews. The shells were snapped together, the cables were connected and concrete was poured to embed the anodes within the mat.

The Retromats were transported via work boat and deployed using ROVs to position the mats into place. The mats were electrically connected to the pipeline with Retroclamps, which were also placed by ROV. The clamps use a screw-in bit that penetrates the concrete coat without harming the pipe. A continuity check confirmed that the electrical connection was made and that the pipeline was protected.

The installation was problem-free, completed on time and within budget, and the installation contractor stated that the Retromat installation didn’t cause any undue concerns. The Retromats will provide fifteen years of protection for the pipeline.

More info at www.stoprust.com



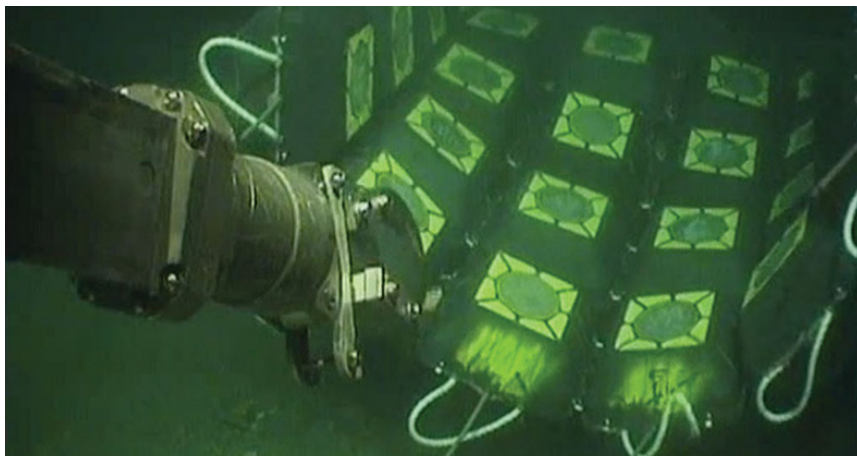
LOCAL ASSEMBLY

The mats are assembled by local crews.



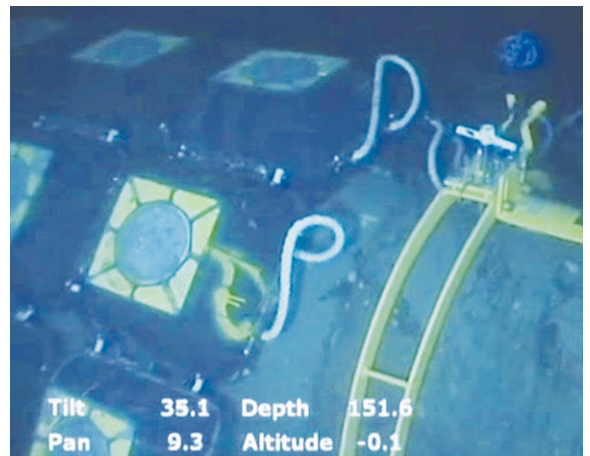
ADDING SOME WEIGHT

Local crews fill the RetroMat™ shells with concrete before deployment.



PRECISELY POSITIONED

ROVs assist in positioning the mats when they're lowered into place.



MAKING THE CONNECTION

The mats are electrically connected to the pipeline using RetroClamps™.