

STRONGWELL

APPLICATION PROFILE



SUB-SEA PIERCE PROJECT USES FIBERGLASS FOR IMPACT PROTECTION

The Pierce sub-sea manifold in the North Sea was built with 200 square meters of yellow DURAGRID® I-4000 1-1/2" grating as protection panels - thanks to Motherwell Bridge Composites, Strongwell's UK Distributor. Chosen for impact resistance and light weight, the grating panels made installation easier and will outlast and outperform similar steel grating applications.

Throughout the North Sea, numerous pipelines run along the sea-bed to carry oil and gas product from the production platforms to the shore terminals. The pipelines are often interlinked at sub-sea manifolds, which are complex arrangements of valves and other control devices.

The manifolds are easily damaged by impacts from falling objects or such things as fishing boat trawling gear. Traditionally, a steel frame with steel grating mesh panels is lowered over the manifold arrangement to afford impact protection to the manifold valves. However, these frames are often large, requiring sizable barge cranes to lift these into position offshore. In addition, the heavy steel panels are difficult for divers to lift or remove underwater. The steel grating also requires huge sacrificial anodes to try to combat electrolytic corrosion.

The client specified that the frame panels should withstand an impact of 10 K Joules (7,370 lbs./ft.) with a span of 1800 mm (six feet). Having evaluated the results of a series of tests on the grating and realizing the high strength, inherent corrosion resistance and light weight of the DURAGRID® grating, the client awarded Motherwell Bridge Composites the contract for

the grating protection panels. The grating was manufactured by Strongwell and minor fabrication changes and cut-outs were done by Motherwell Bridge Composites.

TECHNICAL DATA

Product:	Fiberglass Subsea Protection Panels
Process:	Pultrusion
Materials:	DURAGRID® fiberglass reinforced grating, color yellow
Sizes:	I-4000 1-1/2" grating
Fabricated By:	Motherwell Bridge Composites Glasgow, Scotland
For:	Pierce Sub-sea Manifold, North Sea

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