

Repair of Oil Pipes on the FPSO Crystal Ocean



Light Curing Resin Impregnated Fibreglass Prepregs



Case Studies

PROJECT: Repair of Oil Pipes on the FPSO Crystal Ocean

CLIENT: ACR / CHEVRON OIL

LOCATION: BASS STRAIGHT, Australia

PRODUCT: Auspreg UV MTT 958 VE

DESCRIPTION: UV Curable Triaxial Combi Mat 1350 VE FR

YEAR OF PROJECT: 2009

OVERVIEW: Reduced wall thickness was reported in the 8" diameter slug catcher elbow and weld outlet pipes aboard the floating production, storage and offloading oil vessel – "FPSO Crystal Ocean". A rapid temporary repair solution with minimal downtime was required to enable the continued flow of oil through the pipes at 90 bar pressure until brand new replacement parts could be sourced and installed 2 weeks later.

Engineering crews temporarily diverted oil flow so the compromised parts could be taken off. They were then wire brushed to remove paint and solvent cleaned. In a darkened part of the vessel, 10 cm strips of Auspreg™ UV cure Vinylester prepreg were cut and applied in overlapping strips two layers thick. A heat shrink film was then wrapped around the prepreg and heat shrunk using a hand held heat gun to ensure that the prepreg adhered to the metal surface and bonded well between the layers. The parts were then exposed to 30 minutes of sunlight. Once cured, the elbow and weld outlets were painted and reconnected. In total 25 parts with reduced wall thickness were reinforced with Auspreg™

Auspreg™ was selected as the most cost effective, fastest repair solution. Material was sourced within 1 day of request and flown to the site without the need to refrigerate. Ease of handling and the ability for complete curing through multiple layers aided the entire repair process.



Quality
ISO 9001

