

ENFIELD RISER WINCH LINES

Synthetic rope solutions: The Technip Enfield riser project

Installation of the riser column at the Technip Enfield oil-field development site off the coast of Exmouth, Australia, provides an excellent example of the use of Samson's synthetic ropes to replace wire in the offshore oil industry. The Enfield riser column is the largest in the world installed to date, weighing in at 1525 MT and over 92-meters long. JumboShip's largest vessel was delivered in time to provide transport for this riser column to the oil field.

The design of the riser column uses a special angled flow pipe that allows for a shorter catenary for the riser tubes. Wire rope was originally specified for the riser winch lines on other risers using this design, but due to the angled design of the flow tubes, the wire caused damage at the bend in the tube.

Jeremy White, project engineer for Technip contacted Samson for a solution that would allow the installation to stay on schedule. Samson designed and delivered a set of tapered, jacketed lines with master links spliced into the ends for connection to the riser hoses. In-house testing was performed to confirm the acceptability of the smaller than recommended D/d ratio.

The winch lines used a tapered 12-strand braid of Dyneema® fiber with a braided polyester jacket. Technip reported that the lines performed well and met all design requirements. After riser installation was complete, the ropes showed only slight wear in isolated patches in the cover along the length of the rope.

For more information on this application, or to get Samson started replacing wire in critical applications on your project, contact Samson Customer Service at 360.384.4669.



Technip Enfield riser column installation: Exmouth, Australia



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