

Subsea Pipelay Uses Weldless, Jetair System

In late 1994, Fina Oil & Chemical Co. contracted Jetair International Inc. to install 2.4 mi of dual 3-in. and 4-in. subsea pipeline in Vermilion Block 16 using its weldless, patented Positive Seal Coupling System to join the externally coated pipe. The Gulf of Mexico project was accomplished aboard Diamond Services Inc.'s pipelay barge LB5.

"Fina chose Jetair's system to save time and money," says R.J. Verbeck, Jetair's executive vice president. "Normally, subsea installations cost more than the pipe itself."

The project was completed in 5 days, but featured a 12-hour day when 1.8 mi of pipeline (about 1 mi of each size) was joined, laid and jet trenched. The 12 hours included nine stops for anchor moves, eight stops for welded anode installation, crew dinner and supper, and about 2 hours of cumulative time waiting on the trench jetting sled to catch up with the pipelay rate.

"It went pretty slick," Verbeck says. "The net pipelay time on the day was about 4 hours for the total 1.8 mi of pipeline."

The remainder of the pipelay was held up while divers addressed

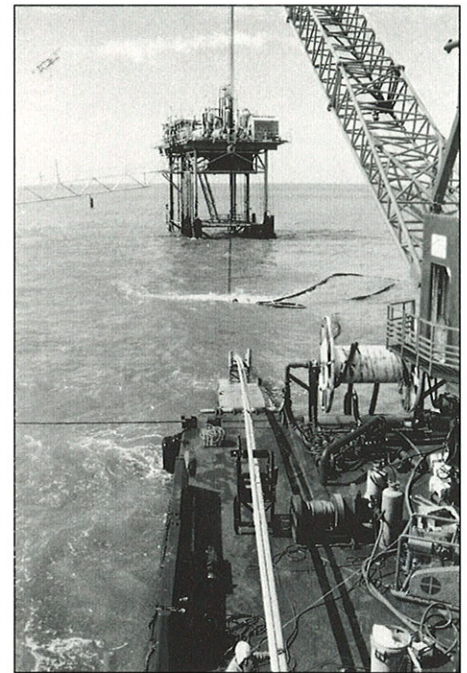
situations involving seven uncharted existing flowlines, and four instances where junk blocked the path of the pipelay.

Overall, the project was unique for Jetair from the standpoint that two pipelines were installed at the same time, and because it was the first time Jetair crews worked on a pipeline barge. The Positive Seal Coupling System has been used in more than 2,000 subsea pipelays, but most of those were completed from a regular barge, Verbeck says.

The Positive Seal Coupling System uses a press-on mechanical metal-to-metal interference fit and features a coupling with finely machined internal serrations. The pipe end is pressed into the coupling and these inward directed serrations grip the outer pipe wall and form a trap for a sealant epoxy.

The sealant epoxy forms a sealing bead at the pipe ends seam to ensure continuous coating on internally coated or lined pipelines. A shaped seal ring gasket can also be used between the pipe ends to form a redundant seal in the pipe connection.

In most cases, the coupling is installed at the plant yard on one



Fina Oil & Chemical Co. used Jetair's Positive Seal Coupling System to join coated pipe in the Gulf of Mexico.

end of the pipe and the gasket is installed. The pipe is then capped on both ends and shipped to the field for pipeline construction. When installed, a special crew completes the make up of the field connections using a portable hydraulic power unit and the patented Positive Seal Field Joining Unit. ■

The Pipeliner's Business Guide



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