

Centron GRE Fibreglass pipeline to be licensed by WA Government

Adtech FRP Pipelines and ARC Energy have broken new ground in the petroleum industry with the installation of the first glass reinforced epoxy (GRE) ANSI #600 oil transmission flow-line for an onshore production licence in Western Australia.

The 3.5 km pipeline, connecting the Eremia 1 and Eremia 2 oil wells to the Hovea production facility in Western Australia's Mid West region, is seen as a significant achievement for the industry, given the strict requirements of the State's petroleum regulator, the Department of Industry and Resources.

Durability and protection of the environment were major considerations in getting the 150NB (six inch) high-tech fibreglass pipeline incorporated into the production licence for the Hovea oilfield.

Installed in late 2004 and due to be commissioned early 2005, the GRE pipeline passes through two farming properties en-route to the Hovea production facility.

The GRE pipeline was one of five separate pipelines laid in the same trench; the others being two heavy-duty steel flow lines for gas and (later) water injection purposes, and two poly-ethylene flow lines for potable water and instrument purposes.

Operator of the Hovea-Eremia oil-fields, Arc Energy Limited and its joint venture partner Origin Energy Developments Pty Ltd, gained official approval to incorporate the new pipeline infrastructure into its L2 production licence in October 2004. The original licence was issued several years ago.

The GRE pipeline was supplied and installed by Western Australian fibreglass pipeline specialist, Adtech FRP Pipelines, of West Swan. Adtech also supplied the engineering design book which was 3rd party validated by PCT engineers.

The GRE pipeline was designed with reference to AS 2885.1 Pipelines - Gas and Liquid Petroleum, Part 1 Design and Construction, API 15HR Specifications for High Pressure Fibreglass Line Pipe and ISO 14692-3 Petroleum and natural gas industries-Glass-reinforced plastics (GRP) piping.

Two examples of fibreglass oil pipeline operators elsewhere in Australia are Chevron Texaco has which has approxi-



Full work crew for 6" pipe.

mately 500 kms on Barrow Island off Western Australia's northwest coast and Santos which has approximately 75 kms in the Cooper Basin in South Australia. Both these operate under existing licence/permit conditions, whereas the one in WA's Mid West region takes in land within both the production license area and private land.

Virtues of GRE pipelines:

- Non Corrosive — no need to use corrosion inhibitors or cathodic protection, smooth internal finish means higher flow rates for the fluid being transported, resulting in lower transmission costs and downsizing options;
- Durable — it can be designed with a 100 year service life; and,
- High environmental rating — being made of inert materials, the GRE pipeline won't interact with soil, high water tables or man-made materials around it.



Preparing for hydrotest prior to tie in to facility

The capital cost of the pipeline was slighter higher than the overall cost of an installed steel pipeline but this cost will be quickly recouped from the savings on maintenance costs.

A spokesman for Adtech, Benton Moran, said that while the process of getting the GRE pipeline linked into the Eremia-Hovea production licence was time consuming and at times very demanding, his company felt proud that it was able to achieve world's best practice with a local company.