



## MONSOON CAN'T DETER REMEDIATION OF EXPOSED GAS PIPELINE ON INDIAN BEACH

*Natural gas trunk line only shut down for three weeks, despite weather and complex repair*

**TD Williamson  
India Private Limited**  
(Formerly known as  
TD Williamson India Limited)  
(CIN) : U29246GJ1992PTC039396

Plot No. 16, Phase III  
Alindra Savli GIDC  
Taluka - Savli  
Vadodara  
INDIA 391 775  
ph: +91 2667 619900  
fax: +91 2667 619501

www.tdwilliamson.com  
ISO 9001: 2008  
ISO 14001: 2004  
OHSAS 18001: 2007

### #OILANDGAS



**SAVLI, INDIA, NOVEMBER 18, 2015** – A beach in a highly populated tourist area is hardly an ideal work site. But when a 42-inch gas pipeline laid parallel to the seashore shifted and became exposed on the beach near Ubhrat, India, crews had to overcome several unique challenges posed by the surrounding landscape and notable environmental forces to ensure a safe intervention. Rough seas due to monsoon, cyclonic storm, high tides, and sour gas notwithstanding, the urgency of the repair left little room for error.

This particular trunk line was completed in 1996. By 2015, the pipeline had shifted approximately 25 m (82 ft.) from its original position and could be seen moving considerably with the tide. In addition, the rising sea level exposed the pipeline in the beach area. This caused a very tense situation around the beach and within the surrounding community, as the authorities immediately put the beach under constant observation over the threat of rupture and possible explosion – and kept it safe until a new pipeline could be commissioned.

In order to carry out the remediation while limiting the amount of downtime and protecting the environment, the pipeline operator, its engineering consultant, and the main contractor worked with global pipeline solutions provider T.D. Williamson (TDW) to develop a safe remediation.

To accommodate for the unique nature of the work site conditions, the TDW team created a customized solution that included hot tapping and then isolating the line using double block and bleed methodology, including the STOPPLE® II plugging system. The solution used a double STOPPLE isolation unit at one end and single unit at the other.

# Pipeline Performance™



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According to George Easo, TDW project manager, this enabled the repair work to be carried out quickly. As a result, production from the pipeline was shut down for only 21 days, allowing the operator to maintain its reputation for safe operation in the community.

The remediation also helped prevent a potential environmental incident. As predicted, the weakest portion of the line – the insulation joint (IJ) that isolates the offshore and onshore sections – inevitably ruptured in the midst of the hot tapping process.

“We already had our double block and bleed isolation system installed and pressure-tested, on the upstream location,” Easo recalls. “This helped the operator isolate the leaking section at short notice to facilitate the venting, cold cutting, welding of new section, charging, and commissioning.”

Under tight deadlines and harsh environmental conditions, the TDW crew began the challenging task of welding. This involved preheating the fittings at an elevated temperature before welding, in preparation for tie-in of a new section of pipeline. TDW facilitated the replacement of a 1.2 km (0.75 mi) section of pipe on the beach using application-specific hot tapping and line isolation systems, including 42-inch NACE-qualified STOPPLE fittings.

The section replacement was complete July 31, 2015, the line was purged, and gas was charged into the new section. Once the operator verified the safety and integrity of the pipeline, the well was made operational that same day.

“The timeline for completion of the job set by the operator was critical due to the health of the damaged section,” notes Easo. “T.D. Williamson worked closely with the engineering consultant, contractor, and the operator to successfully complete the project on the planned date.”

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#### **About T.D. Williamson**

Drawing upon a 95-year history of industry leadership, TDW is a global solutions provider for the owners and operators of pressurized piping systems. TDW delivers a comprehensive portfolio of solutions for onshore and offshore applications, including hot tapping and plugging, pipeline cleaning, integrity inspection, pigging, and non-tethered plugging pig technology.

For further information or imagery, contact:

Waylon Summers  
Editorial Coordinator  
T.D. Williamson  
Tulsa, Oklahoma, U.S.A  
+1 918-447-5084  
[waylon.summers@tdwilliamson.com](mailto:waylon.summers@tdwilliamson.com)  
[www.tdwilliamson.com](http://www.tdwilliamson.com)

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