TDW carried out the intervention for Energinet.dk, in conjunction with the Danish railroad company, Banedanmark, as part of a railroad expansion program aiming to improve rail travel throughout Denmark, plans to build a new dual track, electrified railway running from Copenhagen to Ringsted via Koege. The line will be Denmark’s first high speed railway and will be able to handle passenger trains travelling up to 250 km/h. It was necessary to re-locate the Energinet.dk gas transmission pipeline, as part of the new rail line would cross the pipeline route at Broendbyvester in Greater Copenhagen.

To make certain that the pipeline would be effectively re-located without disrupting gas supply or commercial activity in Broendbyvester, Energinet.dk contracted TDW to provide a range of services, including its STOPPLE® Train double block isolation system, in order to isolate the 30-
inch pipeline and install a 16-inch temporary bypass line, to maintain gas flow throughout the relocation.

Energinet.dk was keen to take advantage of the benefits offered by using the STOPPLE® Train system, as it wanted to make certain that the transmission pipeline would be re-routed safely and efficiently without interrupting gas supply. Safety was of great concern as the location of the intervention was close to habitations and schools. Due to the linked, double plugging heads and bleed port, the STOPPLE® Train system offered the operator greater sealing capacity during the operation, as well as increased safety, helping to ensure the protection of its technicians welding in close proximity to the isolation points. LOCK-O-RING® Plus fittings were used for post-operation sealing to eliminate potential leak paths, a major benefit of this TDW technology.

**Pipeline safely re-located without disrupting flow**

Drawing upon support from its operations facility in Belgium, the TDW team used a hot tapping machine to tap the 30-inch pipeline, two 30-inch STOPPLE® Train plugging systems to plug the line, and LOCK-O-RING® Plus fittings to seal the entry points created by the hot taps. The pipeline was successfully isolated, creating a secure environment for the pipeline to be cut and re-located.

For three weeks, the line was safely isolated at a pipeline pressure of 60 bar, during which time the relocation works took place. The existing section of the pipeline was safely removed and the new section installed, clearing the area for the new Copenhagen-Ringsted line. Product flowed continuously during the work, providing an uninterrupted supply to Energinet.dk’s downstream customers in Denmark and Sweden.

“We are very impressed with the job that TDW carried out in Brøndbyvester. It was extremely well done,” said Jakob Kjaer, Project Manager for Energinet.dk. “Everyone, especially those who worked on the job site, was very satisfied with the STOPPLE® Train intervention,” he added.

Working in the small town of Broendbyvester posed its own unique challenges. It’s a residential community, complete with a major football stadium, home to Brøndby IF. “We were acutely aware that the entire operation was to be carried out in a busy area, where residents live, work and play,” Alexandre Flamand, Project Manager – Europe/Africa/Middle East for TDW. “In preparation, we worked closely with the Energinet.dk team on a detailed plan of action that was
based on in-depth analysis of the risks posed, and the necessary steps that needed to be taken to address them. From the outset, we forged a very solid team that cooperated and communicated extremely well. Even before work on-site commenced, we had built an excellent foundation of mutual respect and camaraderie. As a result, it allowed every member of the team to be that much more proactive, focused on the task, and confident in one another’s abilities on the jobsite,” he added.

Given the success of the Broendbyvester pipeline intervention, and Denmark’s continued railroad expansion initiative, TDW is looking forward to carrying out additional operations for Energinet.dk in 2015.

# # #

About the STOPPLE® Train intervention system

The STOPPLE® Train plugging system is a patented double-block isolation design that makes it possible to insert two plugging heads through a single pipeline fitting. Once set in the line, the void between the two plugging heads is bled down to provide a “zero energy” zone.

As a result of using the STOPPLE Train system, TDW customers reap the benefits of enhanced safety and reduced costs associated with fitting, welding, inspection services, scaffolding and crane rental, excavation services, and fewer “hot work” permits. This method offers a significant improvement over traditional approaches to double-block and bleed, which often require twice the number of line penetrations. In addition, costs associated with the purchase and welding of fittings are halved because only one set is required.

The STOPPLE® Train system has been used successfully for customers seeking to carry out routine maintenance and emergency repair work on pressurized piping systems located subsea, in remote onshore environments, and in refineries and processing plants.

About T.D. Williamson

A world leader in pressurized pipeline equipment and services, TDW delivers a comprehensive portfolio of integrity pipeline system solutions for onshore and offshore applications, including hot tapping and plugging, pipeline cleaning, integrity inspection, pigging and non-tethered plugging pig technology for any pressurized piping system, anywhere in the world.
Note to editors: To obtain photos taken during the inline inspection operation carried out by TDW for Energinet.dk in Denmark, please contact Sharon Roe below.

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