CTE BV

# LEAK REPAIR AND PIPELINE REINFORCEMENT AT GIRTH WELD

CTE BV works on a day-to-day basis in close cooperation with local pipeline contractors located in different countries. These companies are involved with daily maintenance works at transmission pipelines of natural gas and crude oil in different countries in Europe. In this case, the local contractor in an Eastern European country engaged CTE BV due to a leak in a crude oil pipeline at the tank farm facility that needed urgent repair. The repair was combined with further reinforcement of the pipeline section to extend the pipeline service time.

## CHALLENGE

The damage to the crude oil pipeline was located on land occupied by a tank farm. The carbon steel pipeline has a diameter of DN700 mm and operates at a working pressure of 16 bar. The leak was found at the 6 o'clock position, at a welded joint on an elbow with a reduction from a diameter of 700 mm to a diameter of 500 mm. The leak was caused by an incorrectly made weld.

Our local contractor has huge experience with composite repairs. The company was informed by the pipeline operator about the leak and was asked for a fast repair that would not only be a short-term leak repair solution but also a reinforcement repair that could extend the service life of the pipeline.

## REASONS TO CHOOSE CTE BV:

- **Fast delivery**
- **Local support**
- **Experience**
- **Valued relationship**
- **Long term improvement**

## SOLUTIONS USED

- **RevoWrap110**
  ***Composite system***

## REPAIR

After contacting CTE BV, an effective solution was developed by the engineering team and offered to the contractor. As composite repair materials cannot be installed directly over a leaking pipe, there were some extra solutions needed. Leaks need to be mechanically stopped by special clamp or sealing tapes (depending on the situation; both available from CTE BV). In this case, a steel clamp was used to stop the leak. After thorough checks that it was completely stopped, the pipeline was prepared for further treatment by sandblasting the surface. After this, the repair was further conducted, which consisted of four layers of carbon-fiber material applied over a length of 600 mm centered over the point of the leak. The epoxy putty was used in order to smooth the edges of the steel clamp.

Thanks to the quick response of the local company responsible for maintenance works at the tank farm and the repair performed step by step according to **ISO 24817**, the leak was stopped and the service life of the DN700 mm pipeline was extended by 20 years. Repair materials were delivered within 48 hours of ordering, and an engineer/supervisor from CTE BV was present at the repair site to oversee the repair and perform quality control checks on the process.

**Thanks to all of this, the solution resulted in a lasting repair and a high return on investment.**

**WANT TO KNOW MORE ABOUT OUR SOLUTIONS? PLEASE FEEL FREE TO CONTACT US.**

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