

REPAIR TECHNOLOGY DEVELOPED BY AN INTERNATIONAL TEAM OF ENGINEERS

EFFICIENCY

GC Wrap is the highest quality fiberglass and carbon fiber systems used to rehabilitate and restore the original working strength of damaged or corroded transmission pipelines and pressure vessels. With full compliance to ASME PCC-2 and ISO TS 24817 technical standards, service life extensions are possible up to 50 years.

PIPING PROTECTION

GC WRAP can be applied on tees, elbows, and, of course, straight runs of pipe, in confined spaces and on irregular surfaces – wherever structural reinforcement or leak containment is required. The adhesive properties of the urethane and the use of an epoxy primer allow it to be applied to most substrates.

COMPLIANT TECHNOLOGY

GC Wrap is compliant to the ISO TS 24817 technical standard, ASME B31, .8, .4, .G and PCC-2 Art. 4.1, 4.2. as well as API 570. Please refer to: API 570, Section 8.1.4 – Non-welding repairs (on stream). The repair technology with composite materials is approved by the UDT.

PROBLEM

The subject of repair at the Zinc Smelter in Miasteczko Slaskie was a natural gas leak located at a flanged connection with a diameter of 400 mm, which was located around the circumference of the connection.

The pipeline was operating at a working pressure of 4 bars. The room where the leak was located belonged to a hazardous area, which is why there was no possibility of using any technology that could cause sparks (so-called hot work).

APPLIED SOLUTION

Gascontrol Polska sp. z o.o.'s team of specialists, trained to carry out repairs using composite materials in accordance with the ISO TS 24817 technical standard, decided to prepare the surface in the relief region using sandpaper. A two-component epoxy filler was then used to seal the surfaces between the flanges. A dynamometric wrench was also used to properly adjust the bolts – connecting the gate valve to the main pipeline.

RESULT

After ensuring that the relief was closed (using a gas-analyzer), it was proceeded to protect the flange connection with a composite material made of urethane-soaked fiberglass, the use of which permanently protected the epoxy putty and allowed the flange connection to extend its service life by 10 years. Finally, the repair site was wrapped with petrolatum tape and UV isolation tape. The repair was completed in four hours by a team of three technicians working on site along with a supervisor.

