

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

Composite materials are not only a repair solution when used to wrap pipelines for transmission of fuels and liquids. Fiberglass and carbon fiber soaked with epoxy can also be used as patches on flat surfaces. A good example of such an application is the repair performed at a gas storage facility in Odolanów. The user of the warehouse detected numerous reliefs on the external surface (mainly on welded joints). The task was difficult, because in this case there was no question of taking the installation out of service and, in addition, the repaired surfaces are above or below water, depending on how full the warehouse is with natural gas.

APPLIED SOLUTION

After analyzing the condition of the external surfaces (corroded state) of the gas tank, it was decided to prepare the surfaces in the regions of the reliefs using Monti's sparkless tool, then seal the surfaces with a two-component epoxy filler of liquid consistency. The final step was the application of the composite material - fiberglass soaked in epoxy, to the previously prepared surface. The size of each patch and the number of layers to be applied was calculated in advance by Gascontrol Polska engineers in accordance with the principles of the ISO 24817 technical standard.

RESULT

Thanks to the efficient work of a team of technicians from Gascontrol Polska sp. z o.o., more than 20 reliefs were identified and removed on the surface of the tank, which is a natural gas storage facility. The work was carried out within two weeks, and was conditioned by the level of the tank's emergence. The repairs allowed the gas storage facility to extend its service life by 20 years, according to ISO TS 24817.

