

**REPAIR TECHNOLOGY** 

DEVELOPED BY AN INTERNATIONAL TEAM OF

**ENGINEERS** 

GC Wrap is the highest quality

fiberglass and carbon fiber systems

original working strength of damaged

compliance to ASME PCC-2 and ISO TS 24817 technical standards.

service life extensions are possible

GC WRAP can be applied on tees,

pipe, in confined spaces and on irregular surfaces – wherever

structural reinforcement or leal

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

technology with composite materials is

approved by the UDT.

elbows, and, of course, straight runs of

containment is required. The adhesive properties of the urethane and the use

or corroded transmission pipelines and pressure vessels. With full

**EFFICIENCY** 

up to 50 years.

PIPING PROTECTION

## CASE STUDY

Documentation of the repair of the transmission pipeline, made with composite materials REINFORCEMENT OF THE PIPELINE WALL - INTERNAL PATCH

## PROBLEM

Gascontrol Polska sp. z o.o. not only carries out pipeline repairs with composite materials on its own, but also provides services: training for other companies in the installation of composites and supervision of such work (supervising). In the case in question, the repair concerned a defect located on the Kiev-Kursk (Ukrainian territory) gas pipeline with a diameter of 325 mm, operating at a working pressure of 35 bar. The defect is a 40 x 250 mm steel patch welded on the inside to the pipeline wall.

## APPLIED SOLUTION

After consulting with the engineering department of Gascontrol Polska sp. z o.o. regarding the proper protection of the defect in issue, the length of the repair was estimated at 600 mm and the number of layers of composite material at 18 layers. Urethane-soaked fiberglass was used as the material. The repair work began with the removal of isolation, then the surface was cleaned with spark-free brushes. The entire surface of the patch was filled with an epoxy compound - filler, then an adhesion-enhancing primer was used, and the entire length of the repair was wrapped with 18 layers of composite material.





## RESULT

Thanks to the presence on site of a supervisor from Gascontrol Polska sp. z o.o., who trained installers from a local pipeline maintenance company and supervised the repair work, the repair was completed in three hours (including the time required for removal of isolation and surface preparation). The repair was carried out without taking the pipeline out of service. The service life of the pipeline could be extended by 20 years in accordance with the ISO TS 24817 technical standard





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