

SYLWRAP Case Study

ASME PCC-2 402-III Qualification Testing

Superfast Aqua PW Epoxy Putty and SylWrap HD Pipe Repair Bandage make a leak repair tested as passing ASME PCC-2 401-III qualification



A 25mm hole was cut into the 110mm diameter carbon steel pipe for the qualification test



Superfast Aqua PW was formed into a 75mm disc and fixed over the hole



SylWrap HD reinforced the repair, after which it withstood three separate pressure tests up to 30 bar

Defect

ASME PCC-2 Appendix 402-III Validation for Repair of Leaking Component assesses the ability of composite repair systems for sealing leaking pipes containing non-hazardous fluids operating below 10 bar.

A 25mm hole was cut into a steel pipe. To qualify for PCC-2 402-III, the leak needed to be sealed and the repair withstand three pressure tests up to 30 bar.

Solution

Superfast Aqua PW Epoxy Putty was used to plug the hole in the pipe, which was abraded first to improve adhesion with the repair material.

The putty was mixed and formed into a 75mm diameter disc, ensuring full coverage of the hole. This disc was pressed firmly onto the pipe, and its edges smoothed with a little water to remove any step.

Whilst the putty was gelled but not fully cured, **SylWrap HD Pipe Repair Bandage** was applied over the top.

SylWrap helped force the putty deeper into the hole for a more effective seal, whilst also creating a thick, rock hard outer sleeve around the pipe.

Result

The repair was left for 24 hours to achieve maximum properties before testing. Pressure was steadily increased for 30 seconds until reaching 30 bar.

After 60 seconds of the pipe being pressurised at 30 bar, the repair was inspected for any visible leakage.

With no leak or defect detected during any of the three tests, Superfast Epoxy Putty and SylWrap HD are qualified to meet PCC-2 402-III standard.