

When Experience Really Counts.....

Skill and cutting-edge technology are always important aspects of any job we do but, when faced with an extremely complicated repair, experience and teamwork ensure we always deliver the best possible outcomes.

Such was the case with the recent low-pressure gas escape repair of a 6" off 16" cast iron under pressure damper tee. After we received the call, PLCS engineers Mark Bailey and Ross Fairley visited the site to assess the repair and take measurements for the preferred solution – a special fabric kit measuring 1.5 metres long with a circumference of 2.2. metres.

Measurements and photos were immediately sent back to the PLCS Technical Office where Manager Mark Perry began designing the kit to completely encase the tee and incorporate the damper plate valve on the branch.



That afternoon, three skilled machinists from PLCS's sewing room worked in tandem to expedite the manufacturing process, cutting and sewing the various elements of the polyurethane-coated nylon mould, which was completed and quality-approved on the same day.

The following morning, less than 24 hours after the initial site visit, two PLCS teams arrived with the kit to install the repair.

Grit blasting and descaling were followed by the application of a primer that was specially developed by PLCS to promote adhesion of the Flexapress Encapsulant to the pipe and fitting, whilst at the same time providing a secondary anti-corrosion barrier.

The effectiveness of the repair depended in part on achieving an equal depth of sealant coverage fitting, the consistency of which was critical to ensure the longevity of the seal.



To avoid the weight of the heavy sealant (a quarter ton) slumping and distorting the mould, the teams created and fitted a strategically-placed framework of internal and external supports around the repair area.



This is where experience proves so vital, as Mark Perry explained:

"For most repairs, however technically demanding, we can rely on set processes and procedures. However, with this kind of repair involving irregular shapes and angles, it's very much a question of relying on the extensive experience, expertise and 'feel' of our engineers."

Once the kit supports were in place, the mould was filled and pressurised with 144 litres of Flexapress Encapsulant which is approved by the Gas Networks to meet and exceed the GIS LC8 Part One Specification for the permanent repair of ferrous gas main joints and fittings.



Being a hot summer's day, the team were faced with the challenge of mixing, pouring and pressurizing the encapsulant which had a work life of only 12-14 minutes due to the hot temperatures.

Planning, experience and teamwork meant PLCS was able to execute the repair and meet the demands of the Network to deliver a positive, permanent and cost-effective solution.

By undertaking this type of repair, PLCS has added real value to the Network asset while fulfilling the ever-present requirement to maintain a safe and environmentally sound gas supply.

The PLCS repair team: Mark Bailey, Ross Fairley, Mark Cartwright and Chris Darby.

The PLCS machinists: Beverley Poole, Margaret Burns, Marylyn Cooper.
