

Project news

PMC works with GTD and others to create a bespoke engineering solution at Peterborough Compressor Station and repairs an emergency whilst on-site!

The Problem:

A 2” diameter class 600 flange connection had a cracked weld at its base. Removing this section of pipe would involve a re-design of the compressor pipework. This was not possible in the timescales, if at all.

The solution:

PMC developed a solution to insert a solid coupon into the pipe and then weld it in (see picture left).

How was this developed and executed?

First, PMC had to develop a stand to connect the drilling machine. The driller had to have extra swarf holes added as the amount of swarf was so large it would have jammed the cutter.

We had to remove the fitting and surrounding pipe sample in one piece. This meant manufacturing a bespoke cutter with three teeth and also developing a special pilot drill to match the centre of the cracked fitting to ensure the fitting was removed when the drill retracted instead of falling into the pipe.

Next we had to remove a section of the wrap around pipe support. This was done by using two different metal cutters. These cutters are used in Gas Distribution (now Cadent) and had to be adapted. We also had to ensure we did not go through the sleeve material and into the pipe material.

Then, we prepared the hole in the pipe to receive the pipe coupon and position the



coupon to the tolerance detailed in the weld procedure and complete the weld. Inspection of the coupon was restricted so a special variation of Phased Array had been agreed. This is a very rare inspection technique and was in addition to standard NDT.

After acceptance of the weld, the reinforcement sleeve was replaced with a new section of the same material and welded in situ.



Every step of this process was mocked up and proven prior to being accepted at PMC's depot in Ambergate.

CEME Emergency call

Whilst on site conducting this repair, a painting contractor noticed a leak and detected gas onsite. The stem seal was leaking on a valve at the bottom end of the site. An emergency NRO was put in place to isolate the valve. PMC and East Area Ops worked together with a civils contractor to build a temporary roadway. The ground had to be vac ex'd, the gearbox was removed along with the vent and sealant lines. The stem seal was lapped cleaned up, rebuilt and re-installed.

Another CEME call out responded to with a cut out and replace and installation of a 125 metre bypass

This emergency defect repair consisted of a double stopple, cut out and replacement of an 8" HP pipeline operating at 15Bar.

The pipeline affects the supply of gas to over 32,000 properties over a large area around Colchester.

As soon as the customer had prepared the site, PMC mobilised.

