

Case Study

Edinburgh Castle, Crown Square

'Plastic' replaces iron pipework at historic landmark

Project

Surveyors investigating a leak in Edinburgh Castle's Crown Square found ageing cast iron hot water pipes were corroding in the heating network serving the Queen Anne building.

During the attempted repair programme, other sections of pipe were also found to be corroding, so the decision was taken to replace the entire section of flow and return pipes.

Work Involved

Flexenergy's pre-fabricated and pre-insulated Flexalen 600 pipe work was selected to replace the corroded iron pipe for the heating and hot water distribution systems in the square.

The flexibility of the Flexenergy product meant that much of the pipework could be prefabricated before being brought to site, which was important because of the space-constrained nature of the location. The Flexalen pipe is made of polybutene and could, therefore, be fusion-welded together to take

account of the numerous bends in the heating network.

Thanks to the unique properties of polybutene pipes and the closed cellular structure of the polyethylene foam, Flexalen 600 is high pressure, temperature and moisture resistant. The safe, fully homogenous pipe and easily welded connections minimise heat losses to ensure a lifetime efficiency of the network. Flexenergy supplied a total of 80 metres of Flexalen 600 pipe technology to complete this project.

Outcome

The square, which dates back to the 15th century, is located outside the Royal Palace, and now benefits from a pre-insulated Flexalen pipe system supplied by Flexenergy. The problem of corrosion will not re-occur with the new polybutene pipe and the possibility of any further leakages are significantly diminished; the castle can expect the pipe work to be maintenance-free for many years to come.

As Flexenergy's Sales Director, Sandy Fairley

explains: "Flexalen was ideal for this particular project as it is lightweight, highly flexible, very thermally efficient, recyclable and offers a much more enduring solution than equivalent iron or steel pipe network in this type of environment.

"It was also very pleasing from a company perspective to be able to contribute to a more sustainable future at one of Scotland's most historic settings."

Products Used

- Flexalen 600 pre-insulated pipe
- Prefabricated joints