

The man of steel



FT Pipeline Systems Ltd CEO, Duncan Frazer, played a key role in the huge Scottish Water Bradan Water Supply investment. We ask him about delivering 20km of steel pipe, his company's unique E Joint, and some unscheduled snowfall in Turkey...

WHEN DESCRIBING the Bradan Water Supply investment, the word 'landmark' quickly comes to mind. More than 200,000 people and businesses in much of Ayrshire and parts of East Renfrewshire will benefit from a £120m investment in the drinking water network. This will involve Scottish Water improving the water supply network by installing 30 miles of new water mains, to connect the system in Ayrshire with the Greater Glasgow network.

Specialised pipes

FT Pipeline Systems (FTPS) has played a fundamental role in the project to date, by supplying over 20km of steel pipes to Scottish Water through their delivery partner Caledonia Water Alliance (CWA). CWA are constructing the 10-mile long strategic water main from Waulkmill Glen reservoir near Newton Mearns to the Fenwick/Waterside area.

Specialised steel pipes

were required for this project due to the high pressure of water that will be present in this system. Also required was a safe installation method avoiding man access into pipes after construction, and a lining suitable for drinking water.

In the Pipeline chats to Duncan Frazer, CEO at FTPS, about this milestone water project.

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Duncan Frazer,
FT Pipeline Systems Ltd

In the Pipeline: Describe the scope of the job, from FTPS's point of view.

Duncan Frazer: The first phase of the project required 5585 tonnes of steel pipe and 201 tonnes of steel fittings. FTPS is in the process of supplying 22.5 km of 900mm and 1000mm E Joint socket pipe for the required no-man-access solution post welding.

ITP: FTPS was described as 'the only company able to meet all the criteria' for the job. What was so special about your solution?

DF: FTPS is the only company that can supply the E Joint, which avoids man access into the pipe after construction.

The E Joint has been tested and proven publicly. During October, we held a product demonstration day to show the suitability of Eurokote 468 Thixo as a lining product for the E Joint on steel pipe. Pressure testing was carried out to prove that the lining did not crack. Another crucial factor in the success of the E Joint is the welding, so welding tests were also performed to demonstrate welding parameters. The welding tests resulted in minimum spark production, and therefore minimum introduction of material into the pipe.

ITP: Can you describe some of the particular challenges of

supplying pipe for a drinking water project.

DF: The key point about supplying a pipe for drinking water is to maintain the integrity of the manufacturing process at all times. In other words, from the manufacture of the pipes right through to the shipping and off-loading, the integrity of the pipes has to be as good as it was when they left the factory.

The pipes themselves have an epoxy lining which was chosen to avoid potential leaching caused by organic cement mortar linings. The use of an epoxy lining, which is approved for drinking water (DWI 31.4.a and Regulation 27)

avoids the associated risk of pH increase with cement mortar during the commissioning.

ITP: What about the sheer scale of the project and the amount of pipe you're supplying? Logistically, what kinds of challenges did you face and overcome?

DF: Whether we are supplying 500m or 22km of pipe, the process is exactly the same. The only extra requirement for a large project is the amount of space needed to offload and check the pipes. FTPS has a good relationship with the dock authorities, which meant that the whole process was able to run smoothly.

ITP: As well as coordinating with CWA, you're working with your French fabrication shop Lortub and the Turkish steel mill Erciyas. The project must involve a huge amount of communication between different parties.

DF: We work closely with our supply chain and experience has shown us that regular meetings between all the parties involved in the project (conducted in English) are critical. Meetings took place from the outset and continued all the way through the job, to ensure that it went smoothly.

ITP: Did you or your team experience any significant problems along the way?

DF: There was a freak snow storm in Turkey in January when a huge amount of snow fell in one day. Workers at the Turkish port, who were in their thirties and forties, saw snow for the very first time and, because it was so unusual, they had no way of coping with it – no gritters, etc. This meant that the first ship carrying the pipes was two days late leaving the port. Fortunately, it made up the time due to the calm conditions in the Bay of Biscay. **ITP: How do you feel about being involved in this project?** **DF:** We have a huge amount of pride in being associated with providing clean drinking water for many generations to come.



The first phase alone required 5585 tonnes of steel pipe and 201 tonnes of steel fittings