Bodycote

Materials Testing

CIRCUALTION LOOP TESTING WITH WATER

Circulation at high flow volumes and/or temperature

APPROACH

In 1982 Bodycote Polymer built the first circulation loop for antioxidant extraction from water pipes. In 1997 new apparatus was built which offers the scope to design experiments to simulate specific end use conditions. In addition to studying the influence of temperature, pressure and flow rates this apparatus is designed to also investigate the effect of bend radius, types of fittings and pipe insulation on the life expectancy of pipes. Since hydrostatic pipe testing methods are carried out with non circulating water, the results obtained give only limited information regarding end use performance.

PRINCIPLE

Each circulation loop has ten test positions which are individually controlled in terms of flow rates. Temperatures between 20 and 120°C can be studied. The apparatus also has the facility to introduce fresh water at a predetermined ratio to simulate specific end use situations. Each test position has the scope to accommodate "pipe bend" samples and client's own choice of fitting systems. Pipe diameters between 8 and 32 mm can be tested.

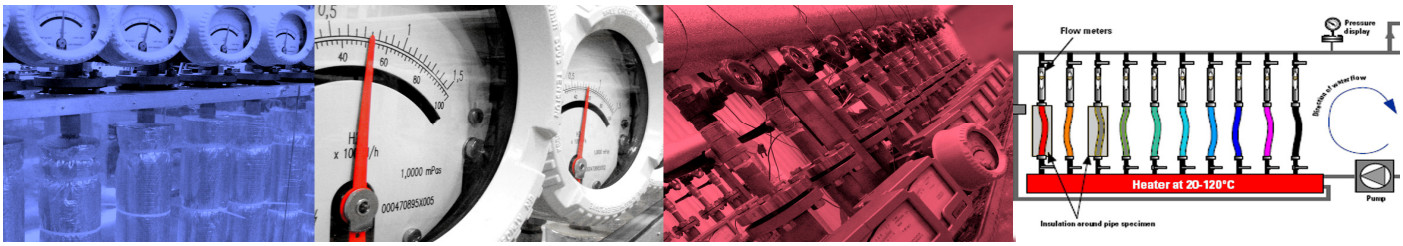
WHAT YOU CAN STUDY

By closely simulating end use conditions the system is ideal for product development projects with respect to studying:

- Influence of fittings, valves and welding techniques on pipe performance
- Pipe wall erosion and the influence of high water turbulence
- Extraction of antioxidants
- Comparison with hydrostatic pressure testing

LEASING

Bodycote Polymer can also offer circulation loop apparatus for leasing whereby the client designs his own experimental work and Bodycote Polymer carries out the testing and provide the client with regular progress reports. The aim of the concept is to provide the client with a fast and cost efficient service for carrying out simulated product development testing. All work and results will be held in strictest confidence.



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Testing
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