



Permeation testing facility

Elevated temperature permeation testing facility for polymeric materials.

Features and benefits

- Four polymer discs exposed simultaneously
- Different pipe geometries accepted
- Tested with gas and liquid mixtures up to 650 bar and 250°C
- Rate of permeation quantified using a gas chromatograph
- Gases that can be detected from mixtures include carbon dioxide, carbon monoxide, hydrogen, hydrogen sulphide, oxygen, methane, nitrogen, water, vapour, hydrocarbon vapours from C1 up to C10.

Some applications

- Testing thermoplastic corrosion barriers within lined pipe
- Testing thermoplastic hydrocarbon barriers in flexible risers
- Assessing suitability of heat exchanger seals for the food processing industry
- Waste repository (Sellafield)
- Seals for LCD circuits
- Hydraulic and pneumatic seals
- Nuclear fusion – hydrogen seals
- Electronic encapsulation
- Chemical processing industry

Technical specification

- Polymer discs exposed to liquid mixtures
- Pressure up to 650 bar
- Temperature up to 250°C
- Allows the determination of permeation and diffusion coefficients

