

function

SCITEQ's Point Load tester is used for determining the resistance to slow crack growth of polyethylene pipes with external point load. The PLT system complies with PAS 1075:2009 Annex A3. The Publicly Available Specification, PAS 1075, defines characteristics, requirements and test methods for pipes made of PE for alternative installation procedures.

highlights

high pressure control and accuracy

simple operation

individual circulation pumps for each sample

individual pressure for each sample

flexibility in no. of point load points

upgrade of existing thermo tank possible to run PLT

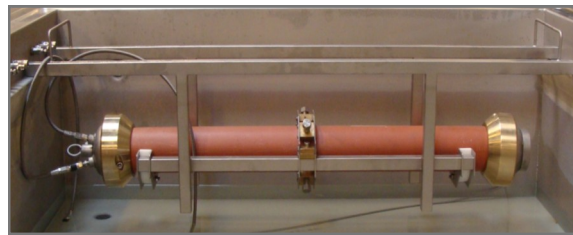
robust construction

version 09/2012

features

Control of pressure takes place by means of the S40 microprocessor in the pressure station cabinet. Pressure is set for each sample and errors in case of failures will be detected. Further, a press static detector is built in for each sample line for ensuring that the circulation pumps will not run dry in case of a sample error. The pump will stop if pressure falls below a certain level.

The standard system includes four active contact points, however, it is possible to construct different support options depending on the need of stress (load points). Point load systems can be constructed with 1 up to 3 passive points merely supporting the pipe sample.



PLT frame with point load testing unit and end closures emerged in thermo tank

We wish to give our partners the tools to produce to the highest standard, while helping them to produce as cost effectively as possible with Q.C. tools throughout the factory.

construction

The PLT system consists of three main parts, namely the PLT pressure station cabinet, the PLT thermo tank and the PLT frames with the circular 4-screw point load testing unit and end closures.

A pipe sample mounted with end closures is placed in the open PLT frame where the pipe sample rests on the frame. Subsequently the PLT unit is mounted on the frame and the four PLT screws are fixed on the pipe sample and adjusted. The PLT frame is ready to be emerged into the thermo tank where the pipe sample can be aired out and pressurized.

The frames ensure that the pipe samples are positioned correctly in the thermo tank. Further, they ensure that the point load system is centred around the pipe sample and prevent pipe samples from touching each other.



PLT thermo tank



PLT pressure stations

associated equipment

▲ essential equipment

pressure stations

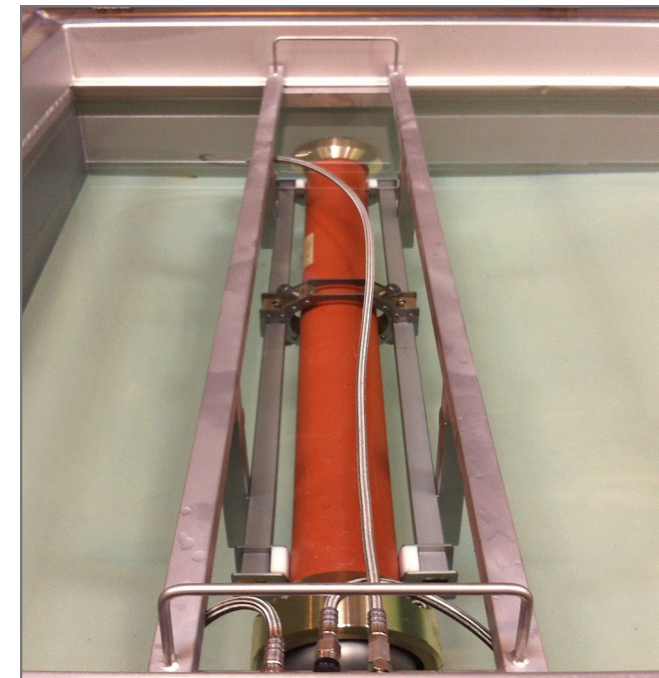
thermo tank

end closures

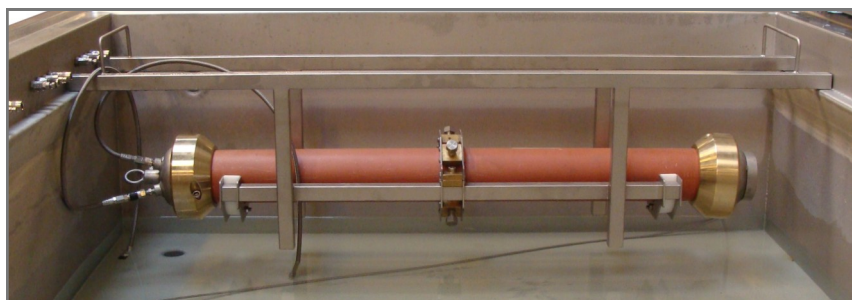
PC SCITEQ software

laboratory saw

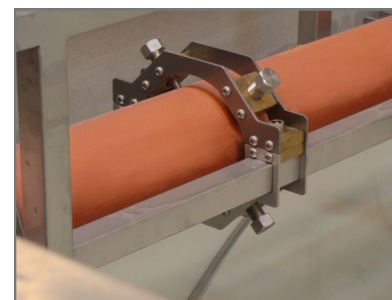
- pipe dimension:** Ø16mm up to Ø630mm (other sizes on request)
- test fluid:** for instance detergent solution
- control unit:** pressure station controller
- tank:** thermo tank with heating capacity and control up to 95°C
- test pressure:** depending on pipe dimension and requirements
- circulation:** individual circulation pump for each pipe sample
- circulation pumps:** flow 1.33 l/min in pipe samples
no shaft seal (elimination of leakages), but magnetic drive
- point load fixtures:** four screw inserts (other no. on request). Fixed deformation adjusted in beginning of test. Screw head markings indicate how far the points are screwed in; 1 round corresponds to 1mm.
- radius of fixture tool tip:** 5mm +/-0.1mm
- end closures:** end closures model 1520 in stainless steel and aluminium bronze
- dimensions:** example: 6 station unit with Ø110mm pipe samples
PLT thermo tank: LxWxH: 2000x1400x800mm (inner tank)
PLT pressure station cabinet: LxWxH: 800x800x1850mm
- weight:** depending on model
- electrical supply:** 3 x 400Vac + N + PE, 50 Hz
- existing thermo tank:** the PLT system can be integrated into existing thermo tanks - please contact SCITEQ for more information.



PLT system emerged in water in thermo tank with up to six pipe samples and six individual circulation pumps and individual pressure



point loading unit with support frame and alu-bronze end closures



point loading fixtures with four active contact points

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associated | equipment ▲ | essential equipment

pressure stations	thermo tank	end closures	PC SCITEQ software	laboratory saw
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