



Thermofuse
Pipelines Ltd



Hydrostatic Pressure Testing



tpl.uk.com



Who Are TPL

- Established in 1993 as a new force in the joining of polyethylene pipe work and plastic fabrication, Thermofuse has evolved to become a leader in its field.
- We provide a cost effective, efficient and competitive engineering plastics services. Our trained operators install corrosion resistant plastic pipe for Gas, Water, Sprinkler, Fire Hydrant and other PE mains applications on sites throughout the UK and abroad. Our other services include on site repair, plastic welding, pressure testing, leak detection and maintenance of new and existing pipeline systems.
- Our expertise go beyond installation, we also supply PE pipe products either from stock or bespoke parts, which are fully customised in our workshop to meet your pipe and fitting requirements.
- We always deliver quality end products within the required budget and time-scales.

What is Hydrostatic Pressure Testing?

- Hydrostatic pressure testing requires a pipeline to be exposed to water pressure levels above its normal operating pressure to determine whether there are any faults or weaknesses.
- This pressure test should be carried out for every new pipeline and all new sections of pipework laid in an existing system.
- If not undertaken safely and correctly, in line with industry best practice, a pressure test can be a highly dangerous activity.





Why do you need Hydrostatic Pressure Testing?

- Without pipeline pressure testing, the UK's water network would be hugely inefficient given new sections of pipeline are regularly identified as containing leaks.
- Pipeline pressure testing is a requirement for any contractor installing or repairing water pipelines.
- Without accurate hydrostatic pressure testing pipelines may be unable to withstand the pressures of constant use, so identifying leaks early can eliminate more expensive and time-consuming problems down the line.

Because of the risks associated with pressure testing TPL ensure only qualified, experienced operatives undertake testing of pipelines

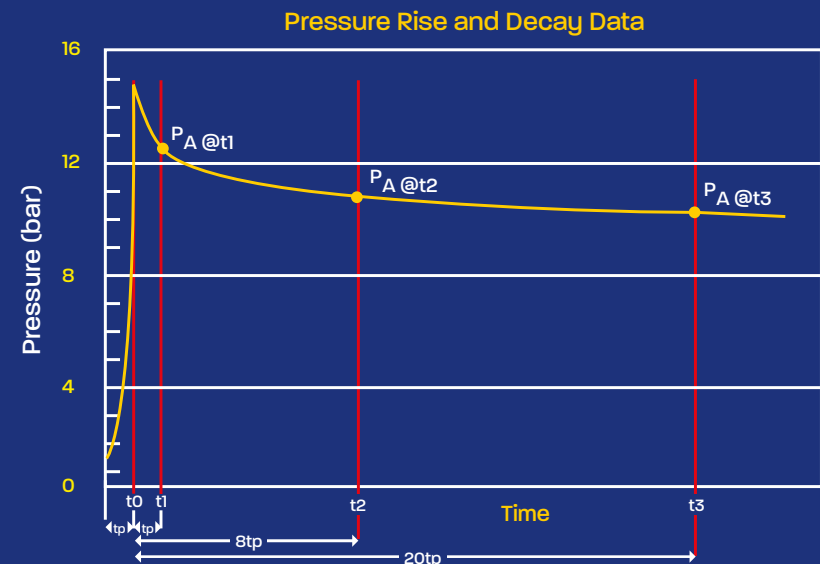
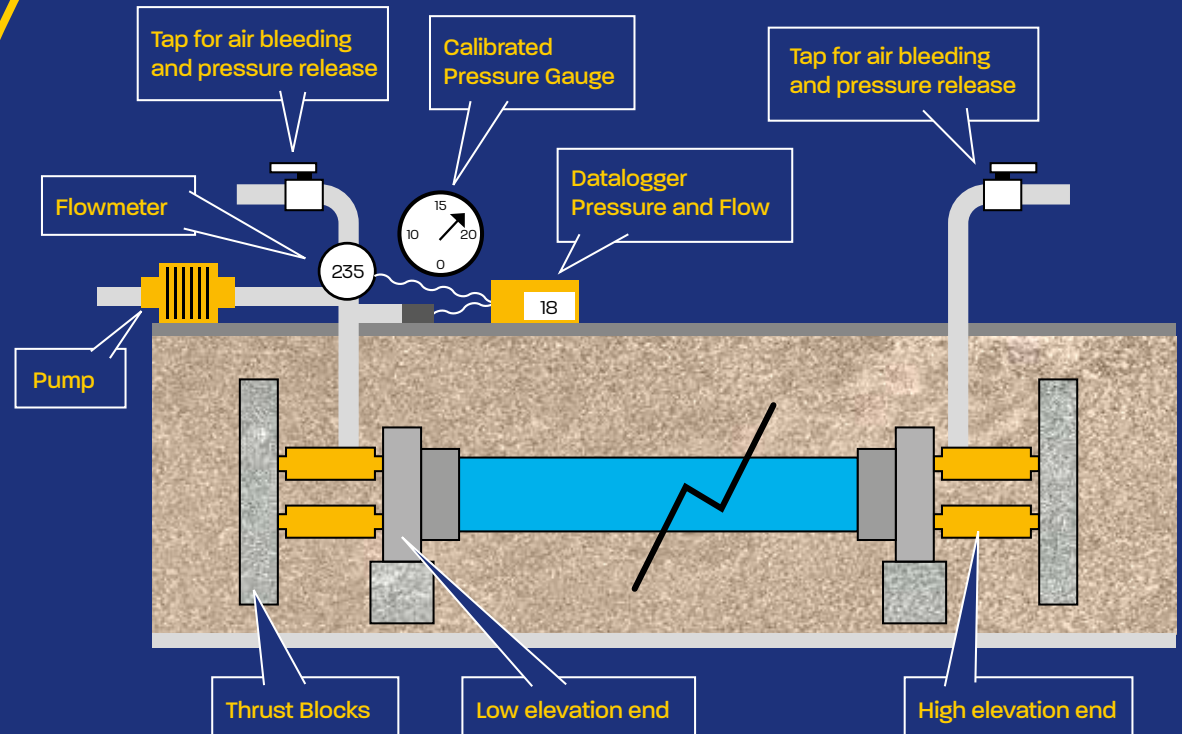
Types Of Hydrostatic Pressure Tests that Thermofuse Pipelines Ltd Undertake

- **Type 2 Hydrostatic Pressure Test** – This type of test is to be used with various types of Polyethylene Pipelines. This can range from PE100, PE80, Profuse, Protectaline or Puriton pipe.
- **Ductile Iron Water Draw Off Test** – This type of test is specific for the use on Ductile Iron or Steel pipelines.



What is a Type 2 Pressure Test Hydrostatic Pressure Test?

- Type 2 tests are designed for polyethylene piping but need to consider the possibility of pipe expansion – also known as creep – as the pipe's pressure is brought up to standard test pressure (STP).
- The 'creep' nature of polyethylene pipe material means that the pipe will expand when under pressure, making it difficult to determine whether pressure loss during a test is the result of water leakage or pipe expansion.
- Other factors such as temperature can also influence the amount of expansion, further complicating result analysis.
- The industry approved Type 2 test method has been designed to factor in these challenges and ensure accurate analysis and outcomes.





What is a Ductile Iron Water Volume Loss Hydrostatic Pressure Test?

- Designed for testing pipework made from ductile iron, stainless steel and glass-reinforced plastic (GRP), type 1 hydrostatic pressure tests involve the measurement of volumes of water drawn off (type 1b) and measured after the system test pressure has been replaced at the end of a test.
- Pipelines are deemed to pass or fail based on the rate of water loss versus the allowed loss as part of the pipeline's specifications.

Test Analysis

- Any test undertaken by Thermofuse Pipelines Ltd will be recorded by a water test specific data logger. This data logger has the capabilities to accurately read and record pressure, time and water flow.
- It is through the use of this data and the expertise of our onsite operatives that we are able to accurately analyse every hydrostatic test that we undertake.
- Each of our tests comply with the industry standard specifications set out in **BS:EN:805** and **IGN 4-01-03 October 2015: Issue 2**.
- All of our Test Analysis adhere to the strict methods and formulas that these documents, and the industry as a whole, require to provide detailed and transparent analysis of a Hydrostatic Pressure Test.



What Thermofuse Pipelines can supply

At Thermofuse Pipelines Ltd we have all of the tools required to assist in any of your pipeline testing requirements:

- **Expertise** – With decades of onsite Hydrostatic Pressure Testing experience between each of our EUSR approved Pressure Testing Team. A dedicated analysis team on hand to provide results, advice and solutions to every pipeline being tested.
- **Equipment** – A range of bespoke pressure testing equipment to suit all of your testing needs. Ranging from various hydrostatic test pumps, flow metres, pipe end fittings, onsite water solutions and water delivery systems.
- At Thermofuse Pipelines Ltd we will always be transparent in the planning of your pipeline pressure test. We will work in collaboration with every contractor to ensure complete transparency and efficiency on expected timescales, water requirements, preferred discharge methods and bespoke requirements.
- Every test is treated as unique and, as such, will require various equipment solutions to ensure an efficient and accurate pressure test.
- We will always endeavor to provide the best equipment, advice and service possible to allow you to rest assured with all of your testing needs.



Benefits of Using Thermofuse Pipelines

- We know that the industry requires that every pipeline laid into the network be tested to the standard set place inf BS:EN:805 and IGN 4-01-03 October 2015: Issue 2. This may be a process that you or your operatives are not familiar with.
- We will take the onus off you, the contractor, by being an independent entity that will provide all that the water authority requests.
- We will provide unique RAMS and Method Statements for each Scheme to be reviewed and approved by your client.
- We will ensure that you are aware before hand of the time required to undertake each test.



Our Projects

Some examples of recent projects we have completed.

Wigton Land, Leeds - Sewage main replacement - Yorkshire Water

TPL carried out the installation and pressure testing of a new 355mm and 450mm PE sewage main along a busy main road. The pipe line was just over 1km in length and was pressure tested successfully in one visit.

Donnegans, Chester - 800mm Clean Water

A new 80m section of 800mm PE pipe had to be welded and tested to divert the existing water main, TPL welded the new pipe using a McElroy T900 machine and pressure tested to 15Bar.

Corby Rising Main - 450mm

TPL carried out there longest test section to date, a 3km 450mm SDR17 PE rising main running through main roads in Corby. The test had to be planned well to achieve the test pressure within a given time frame. A 300 l/s pump was used to test the pipe work to 8 Bar. The testing was completed in just 3 days at first attempt.

NMC Nomenca - Hayfield Green, Doncaster Rising Main

With aspects of both directional and open cut TPL successfully pressure tested just short of 2km of 200mm PE rising main. The test was carried out over 3 sections each with a STP of 12 Bar.



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