



PIG TESTING AND VERIFICATION

Product Overview

Propipe have been testing pipeline pigs for several years at their dedicated test facility in Hartlepool, UK.

The type of tests performed can vary from a dewatering performance test to a differential pressure holding test (for an isolation pig) through to full piggability testing for multi-diameters and pipeline features such as valves, wye pieces, tees, bends and reduced pipeline sections.



Piggability testing provides confidence to the client that the chosen pig design will not only pass through the pipeline system but will also do what is expected of it, i.e. flood, clean, gauge, dewater or maintain a pipeline in operational conditions.

Testing is regularly undertaken at the request of Operators, Installation Contractors, Pre-commissioning companies and Design organisations to confirm the piggability of a pipeline system in various scenarios.

Data Logging

Test rigs are fully instrumented for flow, pressure and pig location.

A multi-channel data logger is utilised to record data for analysis and subsequent inclusion into test reports, etc.

Typically the logger is set to sample at 5Hz however this can be increased as determined by the required pig speed.



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Pumping Equipment

Pumping Equipment is utilised to provide an appropriate pigging speed and pressure relevant to the application. Where liquids are used as pumping medium, the liquid will be continually re - circulated to minimise waste and avoid any potential environmental impact.

Piggability Testing with air is often required to simulate dewatering activities or operational pigging.

Air testing will only be carried out after full verification of the pig design using water as pumping medium.



Site Facilities

Testing is undertaken at Propipe's dedicated indoor 2500m test facility which is located with Propipe's main office and manufacturing facility in Hartlepool, UK.

Full test site equipment/facilities are provided including:

- Client Office, Control Room and Canteen
- Multi-Channel High Resolution Data Logging
- Secure storage and workshop
- Suitable fork lift truck and/or crane as required
- Power and Water
- Specific Pig Lifting Equipment
- Pig Loading Trays
- Suitable site and inspection lighting
- Hand/power tools
- 2 acre external site available for larger/longer test rigs





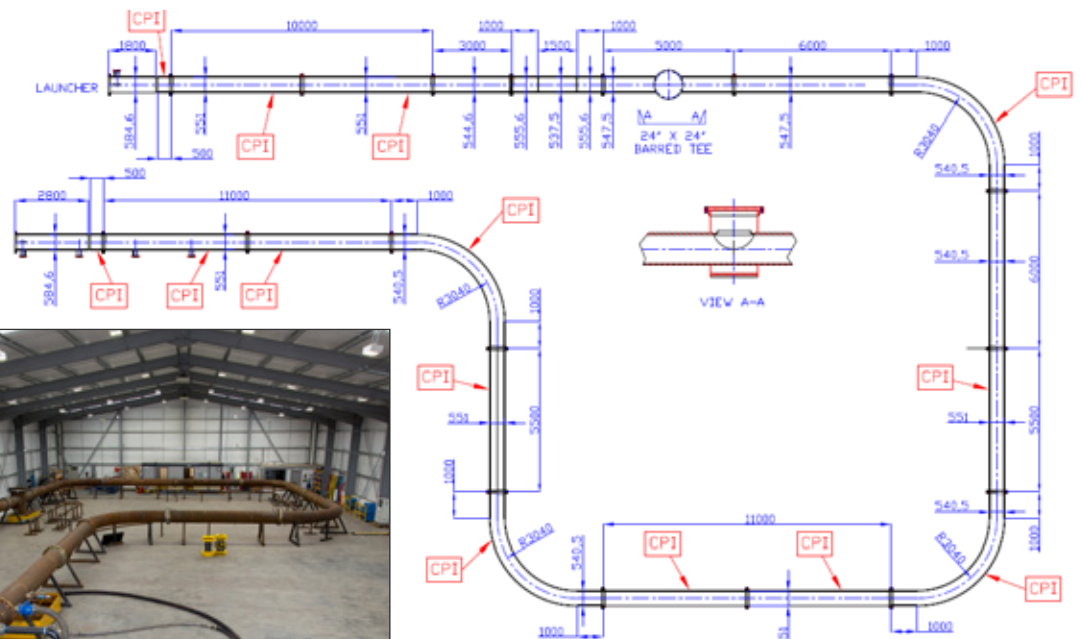
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Key Features

- Indoor & Outdoor Testing Facilities
- Multi-Channel High Resolution Data Logging
- Varied Pigging Mediums (Water, Air, Gel etc.)
- Bespoke Test Rig Manufacture

Test Rig Manufacture

Bespoke test rigs are manufactured for each pipeline project. Each test rig is unique and often includes special simulated features such as reduced / oversized pipe sections, check valves, bends, wye pieces, tees and other features found in pipelines that may affect pig performance.



The test rig replicates the pipeline geometry and features as close as is practical to ensure accurate and meaningful test results.

In addition to establishing the correct geometry and feature configuration, pipe spools can be internally coated with Polyurethane, wax of varying hardness, oil, etc. to closely simulate the pipeline conditions. From receipt of an order a detailed engineering drawing of the test rig is developed and sent to the Customer for approval prior to commencement of manufacture. Prior to use the test rig is dimensionally verified and Hydrottested to ensure safe operations.



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Test Personnel

Each project is supported, as a minimum, by the following personnel;

- Project Manager (single point of contact)
- Project Engineer
- Test Supervisor
- Test Technician

Suitably trained/experienced test personnel are allocated to the project to ensure the work is undertaken in a professional and safe manner. A full site induction is provided for all personnel attending the test site. During testing a qualified First Aider will be in attendance at all times.

Project Management & Engineering

Testing and development projects are administered by the Project Manager; the single point of contact. All communications are routed through the Project Manager to ensure clear and concise communication between Propipe and the Customer. A Kick off meeting is generally recommended at contract award to clearly agree the work scope, facilitate the sharing of ideas and agreement of schedule and Customer aspirations for the project.

A weekly project progress report is issued, by the Project Manager, clearly identifying the progress made during the previous week and work planned for the coming week. In addition the report also details any concerns or delays identified and any accidents or incidents (QHSE) relating to the project that may have occurred. During testing activities a daily progress report is issued to all project personnel.

