Sample Water
SERVICES



EVIDENCE · DISTRIBUTION (PIPE NETWORK)

Pressure & leak test of pipeline

Documentation of the pressure and leak test of transport main TL-WEST according to BS EN 805. Record of test execution, assessment, defect rectification and section-by-section approval.

1 Document type

Discipline / cluster	Distribution (pipe network)
Document class	Evidence
Standard reference	BS EN 805; Water UK – Principles of Water Supply Hygiene

2 Document control (to be completed · • = mandatory)

• Project number	**• Project title**
e.g. P-2027-W1	*e.g. new waterworks West + transport main, expansion stage 1*
Plant / site / bay	**Component / designation (KKS / RDS-PP)**
e.g. transport main West TL-WEST, WW-WEST to HB-HILL	*e.g. cast iron DN 400, km 0.0–6.5, test section PA-01*
• Document number	**• Revision / version**
suggested automatically	*e.g. 00*
Document status (draft/…)	**• Date**
Draft / under review / approved	*DD.MM.YYYY*
• Client / operator	**• Contractor / author**
e.g. Sample Water Services Ltd	*e.g. Pipelines North Ltd, lot 3 – transport main*

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DMS RESOLVER
Link back from paper / PDF → digital DMS object
https://dms.sample.example/r/template/WV-D-001
Sample Water Services Ltd · SAMPLE · Illustrative template

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1 Key data

• Document ID	*e.g. P-2027-W1-TLW-QS-PR-001*
• Revision / status	*e.g. rev. 01 / for review*
• Test object	*e.g. TL-WEST, cast iron DN 400, 6,500 m*
• Test method	*☒ Pressure loss method ☐ Water loss method*
• Test pressure	*e.g. according to test plan PP-TLW-01, e.g. 16.0 bar*
• Test date	*e.g. 14.09.2027*
• Test result	*☒ Passed ☐ Failed ☐ Open*
• Approval status	*☐ Pressure test approved ☑ Blocked ☒ Assessment pending*

2.1 Test object and section delimitation

Operator	*e.g. Sample Water Services Ltd*
Test section	*e.g. PA-01, TL-WEST, km 0.0–2.2*
Pipeline	*e.g. ductile cast iron pipe DN 400, cement mortar lining*
Section length	*e.g. 2,200 m, according to as-built and test plan*
Test limits	*e.g. isolation A-01 to A-02, end caps secured*
Height reference	*e.g. high/low points and pressure measuring point according to longitudinal section LS-TLW-01*

2.2 Test planning and test method

Test basis	*e.g. BS EN 805; test plan PP-TLW-01*
Procedure	*☒ Pressure loss method ☐ Water loss method*
Method variant	*e.g. pressure loss method for cast iron with cement mortar, according to approved test plan*
System test pressure	*e.g. according to PP-TLW-01, e.g. 16.0 bar at the defined reference point*
Test phases	*e.g. preliminary test, pressure drop test, main test*
Test criteria	*e.g. test duration, pressure curve and limit values according to PP-TLW-01*

2.3 Test preparation and occupational safety

Pipeline condition	*☒ Completely filled ☐ Partially filled ☐ Not filled*
Venting	*☒ High points vented ☐ Re-venting required*
Thrust blocks / end caps	*☒ Secured ☐ Rework required*
Test medium	*e.g. water of suitable quality; origin and quantity documented*
Safeguarding	*☒ Exclusion zone set up ☐ Approval pending*
Measuring equipment	*e.g. pressure sensor DS-01, logger DL-01, calibration valid*

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2.4 Execution and measurement conditions

Start / end of test	*e.g. 14.09.2027, 08:00–13:30*
Filling / conditioning	☒ *Carried out and documented according to PP-TLW-01*
Preliminary test	☒ *Completed* ☐ *Failed* ☐ *Open*
Pressure drop test	☒ *Completed* ☐ *Failed* ☐ *Open*
Main test	☒ *Completed* ☐ *Failed* ☐ *Open*
Ambient conditions	*e.g. air 18 °C; water 15 °C; temperature curve documented*

2.5 Measurement results and assessment

Measured value recording	*e.g. DL-01, measurement series MR-PA01-20270914*
Governing test pressure	*e.g. 16.0 bar, example value according to PP-TLW-01*
Assessed pressure change	*e.g. 0.08 bar; reference period according to test plan*
Permissible pressure change	*e.g. according to PP-TLW-01, e.g. max. 0.20 bar*
Visual check	☒ *No visible leakage* ☐ *Leakage found*
Overall assessment	☒ *Passed* ☐ *Failed* ☐ *Assessment open*

2.6 Deviations, repetition and approval

Deviation status	☒ *None* ☐ *Deviation found* ☐ *In progress*
Repeat test	☒ *Not required* ☐ *Required* ☐ *Passed*
Test decision	☒ *Passed* ☐ *Failed* ☐ *Blocked*
Scope of approval	*e.g. PA-01, km 0.0–2.2; pressure and leak test only*
Further commissioning	*e.g. approval separately after hygiene and operating records*

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3 Test points and acceptance criteria

No.	Test characteristic	Target / tolerance (source)	Evidence	Actual / finding	OK	In case of deviation
1	**Test section clearly delimited**	Section, nominal size, length, material and test limits according to approved test plan PP-TLW-01.	Test plan, site plan	*PA-01, DN 400, 2,200 m; limits documented*	☐	Correct section limits and test plan; do not approve until clarified.
2	**Test method suitable**	Method appropriate to material and lining according to BS EN 805 and the test plan.	Approved test plan	☒ *Pressure loss method for cast iron with cement mortar lining*	☐	Redefine the method technically and approve it before the start of the test.
3	**Test pressure and elevation**	System test pressure and permissible local pressures according to PP-TLW-01; component limits at high/low points observed.	Pressure calculation, longitudinal section	*16.0 bar at the reference point; height correction checked*	☐	Recalculate test pressure; check component stress; only then start the test.
4	**Filling, venting and securing**	Complete filling and venting; end caps, thrust blocks and danger zone secured.	Filling/venting record, visual check	☒ *Filled, vented; exclusion zone set up*	☐	Eliminate trapped air, rework securing; redefine start of test.
5	**Measuring equipment suitable and calibrated**	Measuring range, accuracy, resolution and calibration status according to measuring concept PP-TLW-01.	Calibration certificates, equipment list	*DS-01 and DL-01; calibration valid*	☐	Use suitable measuring equipment; repeat the affected measurements.
6	**Preliminary and pressure drop test**	Duration, pressure control, conditioning and air content criterion according to method and PP-TLW-01.	Time/pressure record, evaluation sheet	☒ *Both phases passed*	☐	Check venting and measurement set-up; repeat the test phase properly.
7	**Main test passed**	Pressure curve, test time and permissible pressure loss according to PP-TLW-01 and the selected method variant (BS EN 805).	Measurement series, test evaluation	*Δp = 0.08 bar; assess the pressure loss curve according to the method*	☐	Investigate leakage or temperature influence; re-test after rectification.
8	**Visual inspection and repetition**	No visible leaks; each repetition documented with cause, measure, measurement series and result.	Visual inspection report, repeat record	*PA-01: no leakage, no repetition*	☐	Repair the damaged point; create a repeat record; no approval without result.
9	**Test record approved**	Measured values, assessment, test limits, annexes and signatures complete.	Signed test record	☐ *PA-01 passed and approved* ☒ *Assessment pending*	☐	Complete the records; defer approval until technical review.

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4 Test section register TL-WEST

Test section	Chainage	Length [m]	Pipe / DN	Test pressure [bar]	Test date	Result
PA-01	*km 0.0–2.2*	*2,200*	*Cast iron / 400*	*16.0*	*14.09.2027*	*☒ Passed*
PA-02	*km 2.2–4.4*	*2,200*	*Cast iron / 400*	*16.0*	*15.09.2027*	*☒ Passed*
PA-03	*km 4.4–6.5*	*2,100*	*Cast iron / 400*	*16.0*	*16.09.2027*	*☒ Passed*

5 Measured value table main test PA-01

Time	Duration [min]	Pressure [bar]	Water [°C]	Δp [bar]	Test phase	Remark
11:00	*0*	*16.00*	*15.0*	*0.00*	*Main test*	*Start value*
11:30	*30*	*15.96*	*15.0*	*0.04*	*Main test*	*unremarkable*
12:00	*60*	*15.92*	*15.1*	*0.08*	*Main test*	*Final value; passed*

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6 Deviation and repetition register

ID	Section	Finding	Action	Repetition	Result	Approval
AW-001	*PA-01*	*No deviation*	*None*	*not applicable*	☒ *Passed*	☒ *Yes*
AW-002	*PA-02*	*Venting incomplete*	*Re-venting*	*15.09.2027*	☒ *Passed*	☒ *Yes*
AW-003	*PA-03*	*Valve leakage*	*Seal replaced*	*16.09.2027*	☒ *Passed*	☒ *Yes*

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7 Completion notes

- All measured values and findings are example values. Take test pressures, test times and limit values from the approved test plan.
- The measured value table shows an extract; attach the complete preliminary, pressure drop and main test including evaluation.
- Assess test pressure and local stress, taking into account elevation and permissible component pressures.
- If the test is failed: document the cause, rectify defects, repeat test with its own measurement series.
- Approval applies to the pressure test only. Verify flushing, hygiene, water quality and commissioning separately.

8 Applicable documents

- Approved pressure test plan TL-WEST
- Route longitudinal section with height and pressure profile
- Site plan and test section limits
- Pipe log and joint records
- Measuring equipment and calibration records
- Filling, venting and conditioning record
- Pressure measurement series and evaluations
- Defect and repetition records
- Hygiene and commissioning approval

9 Standards and regulations

Rules (edition)	Application in this document
BS EN 805	Water supply – requirements for systems and components outside buildings; pressure testing (pressure loss and water loss methods).
Test plan PP-TLW-01	Project test plan: test sections, test pressures, durations and acceptance criteria.
Water UK – Principles of Water Supply Hygiene	Hygiene, cleaning and disinfection of water mains before commissioning (follow-on record).

The edition agreed in the project is authoritative; deviations in the contract or in the grid operator's technical specifications take precedence.

Approval / signatures

Role	Name	Date	Signature
Person responsible for testing (contractor)		*DD.MM.YYYY*	
Site management pipeline construction (lot 3)		*DD.MM.YYYY*	
Site supervision (client)		*DD.MM.YYYY*	
Approval technical operation		*DD.MM.YYYY*	

Revision history

Rev	Date	Description	Author	Approval
00	*DD.MM.YYYY*	Initial issue (template)		

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