



PEWeldBank

PRESSURE TESTING

USER MANUAL

Digital Pressure Testing and Reporting



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1. About Pressure Testing in PEWeldBank

The PEWeldBank Pressure Testing module allows operators to perform and digitally record pipe pressure tests through the PEWeldBank mobile application. Completed records can be reviewed in the mobile app and through the PEWeldBank Fusion Management System (FMS).

- Strength Tests and Leak Tests
- Water (hydrostatic) and Air (pneumatic) testing
- Live pressure readings, real-time graphs and continuous recording
- Visual and audible pressure alarms when pressure moves outside the configured allowable variance
- Multiple pressure test stages under the same Test Pack ID (Test Pack No.)
- Review Pressure Tests through the app
- PDF pressure test reports and protected Excel exports through FMS

Platform availability: PEWeldBank Pressure Testing is currently available only on Android. Support for iOS will be available soon.



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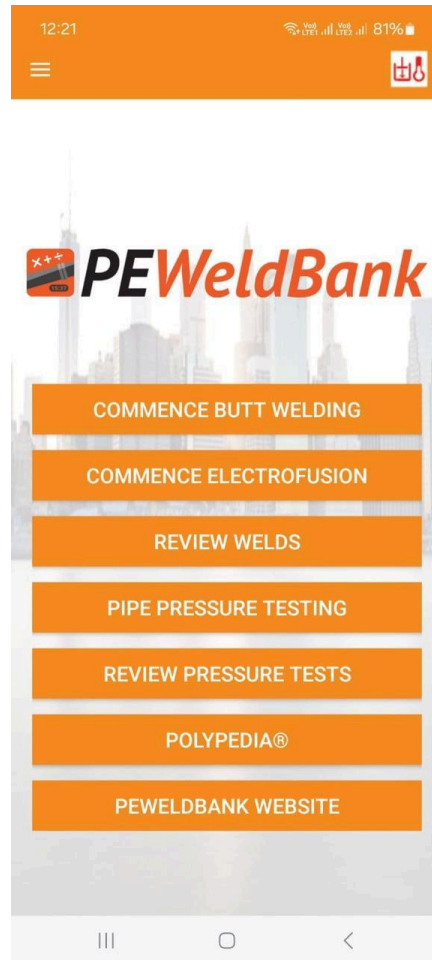


Figure 1.0 : Pipe Pressure Testing is accessed from the PEWeldBank home screen

2. Before You Begin

2.1 Requirements

- A compatible mobile phone or tablet with the latest PEWeldBank app installed
- A PEWeldBank account with access to the required company / project
- A compatible PEWeldBank pressure sensor and the correct pressure transducer for the test medium and range



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- Bluetooth enabled on the device
- Sufficient battery on the device and pressure sensor for the planned test duration
- For long-duration tests, keep the device connected to a suitable power source where practical
- The approved project pressure-testing procedure and required test parameters

Sensor pairing: Any user can pair a compatible PEWeldBank sensor from the app.

2.2 Before starting a test

1. Confirm the pressure testing equipment is suitable for the required test pressure and medium.
2. Confirm the sensor is connected and the live pressure reading is displayed in PEWeldBank.
3. For long-duration tests, connect the device to a suitable power source where practical.
4. Confirm that the required project is available in the PEWeldBank account.
5. Follow all applicable site safety controls before applying pressure.



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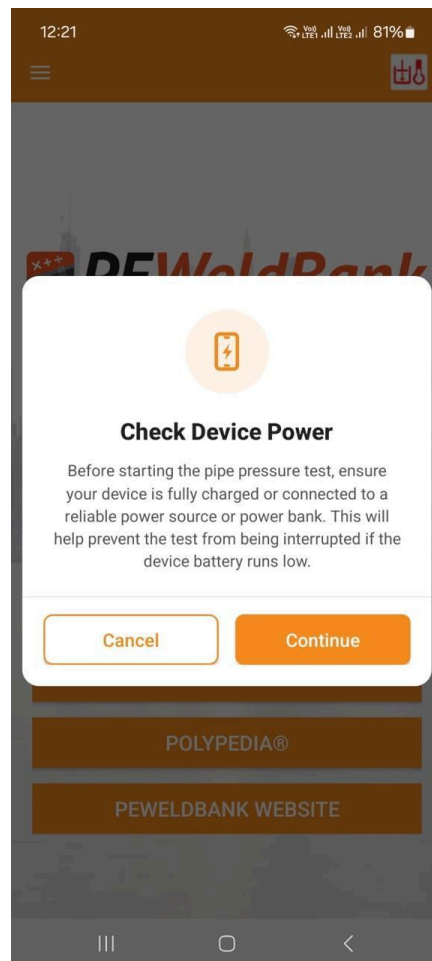


Figure 2.2.1 : PEWeldBank displays a device-power reminder before the pressure-test workflow begins



3. Connect the Pressure Sensor

The pressure sensor must be paired with PEWeldBank before a pressure test can use live pressure readings.

3.1 Prepare the sensor

6. Turn on the Pressure sensor.
7. If required, disconnect and reconnect the battery to activate the sensor.
8. Confirm the blue Bluetooth status light is blinking, indicating that the sensor is ready for pairing.

3.2 Pair the sensor in PEWeldBank

9. Open the PEWeldBank app.
10. Open the menu and go to Settings > Sensors.
11. Select Add New.
12. Scan the QR code on the pressure sensor, or use the available nearest-sensor option if applicable.
13. Confirm the sensor connects successfully and save the sensor if prompted.

Tip: If the status light is not flashing, remove and replace the battery to activate the sensor and enable Bluetooth pairing.

Important: Do not start a pressure test until the sensor connection is confirmed and the live pressure value shown in the Pressure Testing Setup screen is reasonable for the current system condition.



4. Start a Pressure Test

14. From the PEWeldBank Home Screen, select **Pipe Pressure Testing**.
15. Review the device-power reminder and select **Continue** when the device is ready.
16. Enter the **Test Pack ID (Test Pack No.)** used to identify the pressure test package.
17. Select the applicable **Job Number** or **Project**.
18. Confirm the displayed project / location / operator details.
19. Select **Commence Pressure Testing**.
20. Review the **Pressure Testing Checklist**, mark the applicable items as completed, and select **Next**.

Test Pack ID (Test Pack No.): A single Test Pack ID (Test Pack No.) can contain more than one pressure-test stage, for example a Strength Test followed by a Leak Test.



12:22 81%

Pressure Testing Setup

TEST ID (TEST PACK NO.)

44

Pipe or spool-piece reference

Enter reference

Pipe Material SDR (Standard Dimension Ratio)

PE100 Select SDR

Test Type

Strength Test Leak Test

Long duration test to verify pipeline strength.

Is this the first pressure test on this pipeline?

☒ Yes, this is the first test

☐ No, this is a repeat test

✓ Sensor: Connected

Live pressure: 5.8 bar

START TEST

Figure 4.1.1 : Pressure Testing Setup

12:22 81%

Pressure Testing Setup

Required test pressure Allowable variance

e.g. 16.0 bar e.g. 2.5 %

Test duration Monitoring interval

e.g. 24:00:00 hh:mm:ss e.g. 5 Minutes

Testing Medium

Water Air

Ambient Temperature Pipe Temperature (Outside)

e.g. 25 °C °F e.g. 20 °C °F

Add Notes (optional)

Enter notes (optional)

✓ Sensor: Connected

Live pressure: 5.8 bar

START TEST

Figure 4.1.2 : Pressure Testing Setup



5. Configure the Pressure Test

The Pressure Testing Setup screen is used to define the test before pressure recording begins. The connected sensor status and live pressure are shown before the Start Test is selected.

Pressure Test Field	Description
Pipe / Spool-piece Reference	Identifies the specific pipe section or spool being tested. Enter the applicable pipe or spool-piece reference.
Pipe Material	Identifies the material of the pipe under test. Select the applicable pipe material used for the pressure test.
SDR	Indicates the Standard Dimension Ratio of the pipe. Select the applicable SDR for the tested pipe system.
Test Type	Defines the type of pressure test being performed. Select Strength Test or Leak Test .
First Pressure Test?	Indicates whether this is the first pressure test performed on the pipeline. Select the applicable option. Repeat testing may display a Miner's Rule warning.



Required Test Pressure	Defines the target pressure required for the test. Enter the approved test pressure using the applicable unit: bar, psi or kPa .
Allowable Variance	Defines how much the pressure is permitted to vary from the required test pressure. Enter the applicable allowable variance.
Test Duration	Defines how long the pressure test will run. Enter the approved test duration.
Monitoring Interval	Defines how frequently pressure readings are recorded during the test. Select or enter the required monitoring interval.
Testing Medium	Identifies the medium used to conduct the pressure test. Select Water or Air .
Ambient Temperature	Records the surrounding environmental temperature at the time of testing. Enter the ambient temperature where required.
Pipe Temperature	Records the external temperature of the pipe being tested. Enter the outside pipe temperature.



Notes / Photos	Allows supporting information relating to the pressure test to be recorded. Add any relevant notes or photos where required.
Sensor / Live Pressure	Shows the sensor connection status and current pressure reading. Confirm that the pressure sensor is connected and review the live pressure value before starting the test.

21. Enter or select the required details on the **Pressure Testing Setup** screen for the pressure test.
22. Confirm that the **pressure sensor** is connected and review the **live pressure** reading before starting the test.
23. Review the entered information and select **Start Test** to begin the pressure test.

6. Strength Tests and Leak Tests

6.1 Strength Test

A Strength Test is used to assess whether the pipeline can withstand the required test pressure for the specified test period. PEWeldBank supports long-duration strength testing with continuous pressure logging.



6.2 Leak Test

A Leak Test is used to monitor whether the system maintains pressure and to identify potential leakage. Leak tests may use a user-defined duration according to the approved testing procedure.

6.3 Test medium

- Water (Hydrostatic)
- Air (Pneumatic)

7. Monitor a Test in Progress

24. Monitor the live progress of the pressure test and confirm whether the pressure remains within the configured **Allowable Variance** for the configured test duration.

- Elapsed and remaining test time
- Target pressure and the current pressure
- Pressure loss
- Current status
- Real-time Pressure vs Time graph
- Recent time-stamped readings

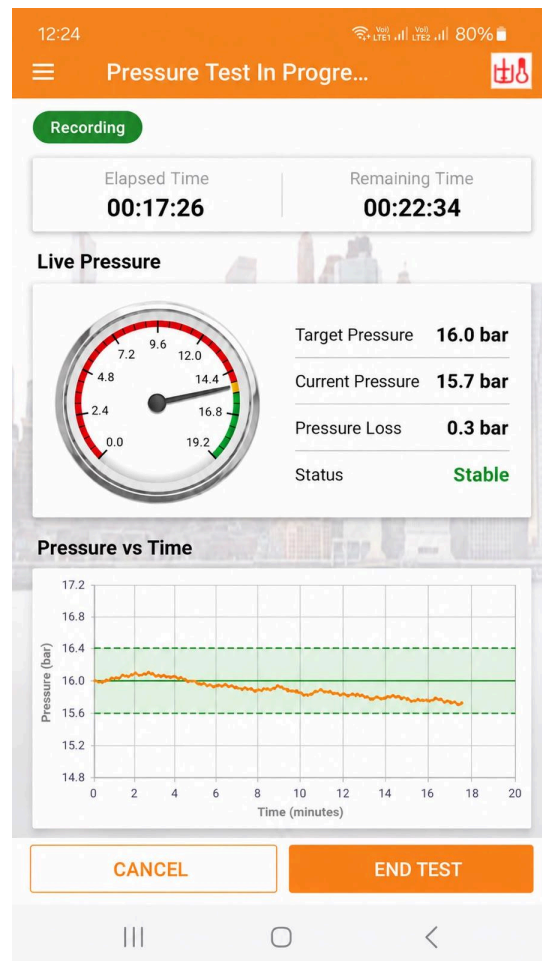


Figure 7.1 : Pressure Test in Progress - normal condition

Long-duration testing: Keep the device powered and the sensor connected throughout the test. For long tests, use an appropriate power supply where practical.



8. Alarms and Pressure Variance

25. If pressure moves outside the configured allowable variance, PEWeldBank displays a visual warning and generates an audible alarm while continuing to record the test.

- Review the live pressure and graph
- Follow the approved test procedure and site safety requirements
- Investigate the cause of the pressure change before deciding whether to continue or end the test

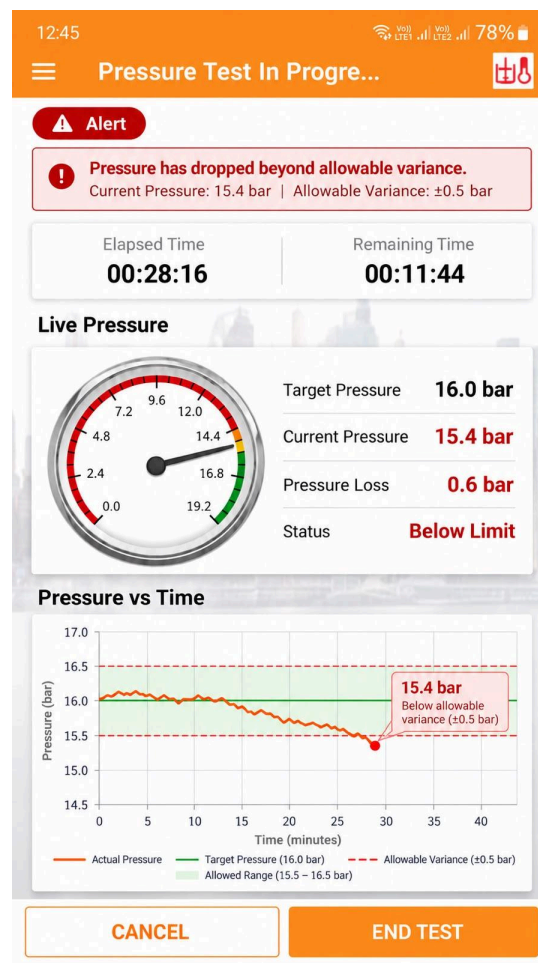


Figure 8.1 : Pressure Test in Progress - alarm condition



9. Complete or End a Test

A pressure test can either complete normally when the configured test duration is reached or be ended early when necessary.

9.1 Normal completion

26. Once the required **test duration** has been completed, the test will be completed and the **Pressure Test Summary** will be displayed.

9.2 Ending a test early

27. If the test needs to be ended before the required duration is reached, select **End Test**, choose the applicable reason, and save the test.

Completion Reason	Description
System Leak Detected	Indicates that a leak has been identified in the tested system. Select this reason when the test is stopped because a system leak is detected.
Pressure Dropped Beyond Limit	Indicates that the pressure has fallen beyond the allowable limit. Select this reason when the test is ended because the pressure drops beyond the allowable range.
Pipe Damaged During Test	Indicates that damage to the pipe has been identified during testing. Select this reason when the test is stopped due to pipe damage.



Equipment Failure	Indicates that a failure of the testing equipment has prevented the test from continuing. Select this reason when equipment failure requires the test to be ended.
Pressure Alarm Triggered	Indicates that a pressure alarm condition has occurred. Select this reason when the test is stopped as a result of the alarm condition.
Other	Use when none of the listed completion reasons applies. Enter supporting remarks where appropriate.



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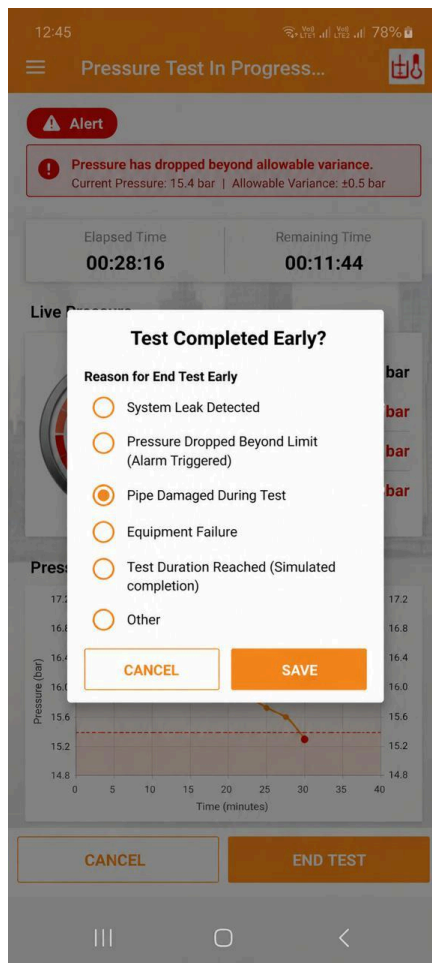


Figure 9.2.1: End Test confirmation

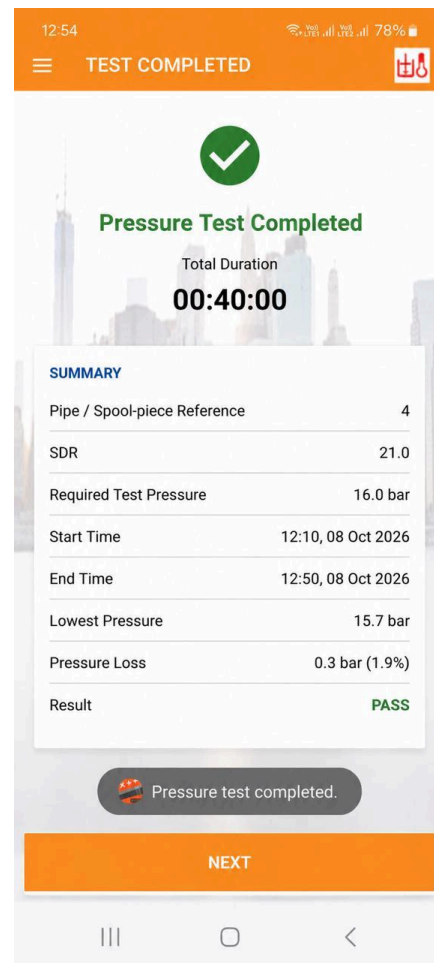


Figure 9.2.2: Completed test summary

9.3 Review the Completed Test Summary

28. Once the test has been completed, PEWeldBank displays the **Pressure Test Summary**. Review the recorded test information and result, then select **Next** to proceed.



10. Notes, Photos, Declaration and Signature

Before finalizing the pressure test, complete the Notes and Reporting stage.

29. Add relevant **comments** or **notes**.
30. Attach supporting **photos** where required.
31. Capture the **operator identification photo**. The Pressure Testing workflow uses the **front-facing camera** for this operator photo.
32. Review the **operator declaration**.
33. Provide the **operator signature**.
34. Select **Finish** when the record is complete.

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NOTES AND REPORTING

Pressure Testing

Comments and Notes

Enter comments and notes (optional)

Project

North Ridge Pipeline

Operator Identification Photo

I, Marco Rossi carried out pressure testing according to specifications.

Signature CLEAR

FINISH

Figure 10.1: Notes and Reporting screen



Good practice: Use comments and photos to document abnormal events, visible leaks, equipment issues or other information that may be important during later review.

11. Continue the Same Test Pack

After Finish is selected, PEWeldBank can ask whether another Strength Test or Leak Test should be completed under the same Test Pack ID (Test Pack No.)

35. Select **Yes, Continue** to perform another pressure-test stage under the **same Test Pack ID (Test Pack No.)**.
36. PEWeldBank returns to the **Pressure Testing Setup** and retains the relevant test-pack information.
37. Configure the next **Strength Test** or **Leak Test** and start the next stage.
38. Repeat as required.
39. Select No, **Finish** when no further stages are required.



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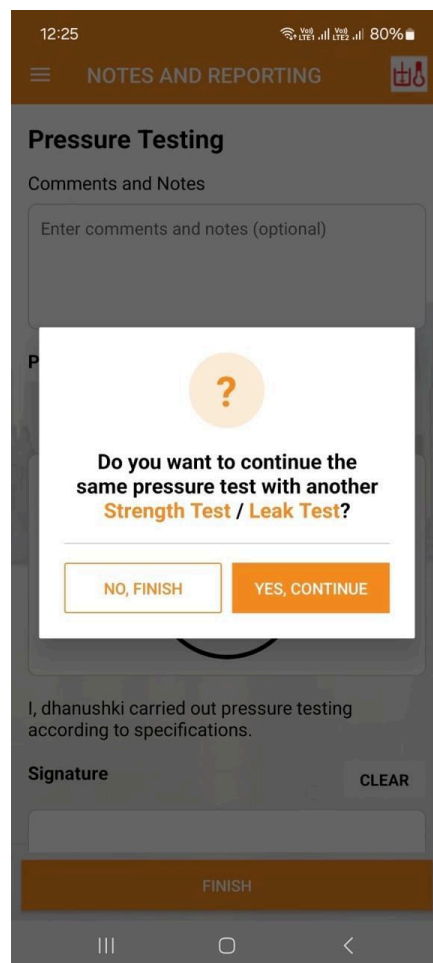


Figure 11.1: Continue the same pressure test with another Strength Test or Leak Test

12. Review Pressure Tests in the Mobile App

Completed pressure tests can be reviewed from the mobile app.

40. From the PEWeldBank Home Screen, select **Review Pressure Tests**.
41. Locate the required completed pressure test.
42. Open the record.
43. Review the pressure-test details, recorded results and pressure graph.



Important: Completed pressure test records are stored locally when connectivity is unavailable and will synchronize to FMS automatically once an internet connection becomes available.

13. View Pressure Tests in FMS

The FMS is used to review synchronized pressure-test records and reports. Pressure tests are performed in the mobile app, while the FMS is used to review pressure test records and reports.

44. Log in to the PEWeldBank FMS.
45. From the left navigation menu, select **Pressure Testing**.
46. Locate the required Test Pack / pressure-test record using the available fields and filters.
47. Select View to open the pressure-test information and report options.
48. Review the test stages and associated results.
49. Download or share the PDF report as required.

Grouped test stages: Multiple Strength Tests and Leak Tests recorded under the same Test Pack ID (Test Pack No.) are grouped together for reporting.



14. PDF Reports and Excel Exports

14.1 PDF Pressure Test Report

FMS generates a Pipe Pressure Test Report after the test record has synchronized. Reports may contain:

- Project and operator information
- Test parameters and timing
- Pressure graphs and test summary information
- Environmental conditions
- Calibration information
- Photos and operator signature
- The result for each Strength Test or Leak Test



North Ridge Pipeline
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PEWeldBank Pressure Test Report

Date	Pressure Test Report No.
08-10-2026	2f9e0c86-7d52-4e3a-9b6f-1a3d9c7e6b21

Custom Test Number	Start Time	
1	12:10	

Project Details		Test Timing	
Project Name	Job Number	Start Time	Elapsed
North Ridge Pipeline	NRP-214	12:10:00	00:40:00 (Configured)

General Information			
Test ID(Pack Number)	44		
Pipe/Spool Reference	4	Pipe Material	PE100
Test Type	Strength Test	SDR	21.0
Required Test Pressure	16.0 bar	Testing Medium	Water
Allowable Variance	2.5 %	Monitoring Interval	5 min
Operator	Marco Rossi		

Environmental Conditions			
Ambient Temperature	25.0 °C	Pipe Temperature	20.0 °C

Pressure vs Time

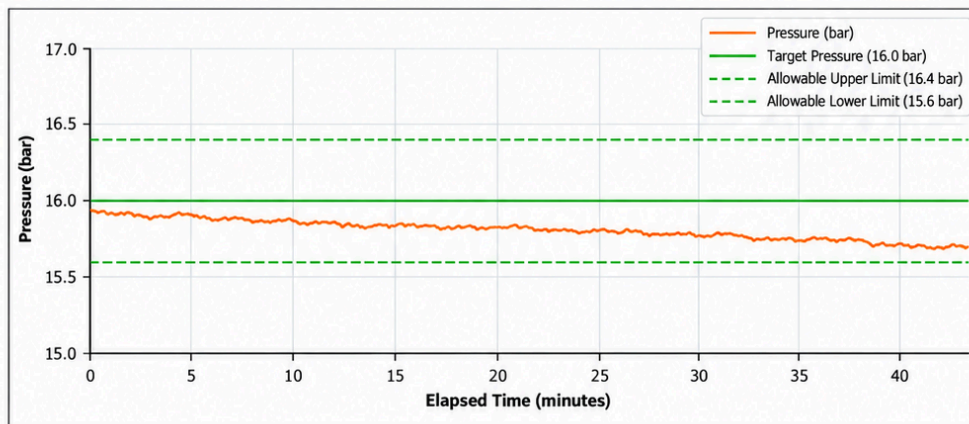


Figure 14.1.1 : PEWeldBank Pressure Test Report – Page 1



Pressure Summary

Target	Lowest	Highest	Loss	Loss %
16.0 bar	15.7 bar	16.0 bar	0.3 bar	1.9 %

Sensor Information

Pressure test recorded with connected pressure sensor (live pressure data).

Pre-Test Checklist

Are pipe ends securely closed?	Yes
Are thrust blocks installed and cured?	Yes
Has air been released from the pipeline?	Yes
Is the pressure gauge correctly positioned?	Yes
Has the fill procedure been completed correctly?	Yes
Is a visual inspection of joints completed?	Yes

Test Completion

Reason: Test Duration Reached (Simulated completion)

Notes

40-minute strength test completed successfully.

Comments

No additional comments.

Photos



Operator Declaration

Marco Rossi

I, Marco Rossi, declare that I carried out this pressure test in accordance with the required procedure and that the information recorded in this report is accurate.

Operator Signature

Figure 14.1.2 : PEWeldBank Pressure Test Report – Page 2



14.2 Excel export

Pressure test results can also be exported from FMS as a protected, read-only Excel workbook. The export is intended for review and record keeping and can include recorded pressure data, summary statistics, test results, completion details and status information.

15. Understanding Test Results

Result Status	Description
System Pass	Indicates that the recorded pressure-test stage met the system criteria based on the configured test parameters.
In Review	Indicates that the pressure-test stage requires further review.
Manual Pass	Indicates that an Admin review in FMS has changed the test result to Manual Pass.

Result classification: PEWeldBank does not automatically classify a pressure test as **FAIL**. If a test does not meet the system pass criteria, the result is shown as **IN REVIEW** and requires further review in FMS. Admin can then review the test and update the result to **Pass** or **Fail**. If the test is approved as Pass during this review, the result is displayed as **Manual Pass**.