Plastics Industry Pipe Association of Australia Limited ACN 086 511 686

Low Pressure Air Testing of Pipelines

The following procedure is based on the low pressure air test nominated in the WSAA Sewerage Code of Australia (WSA 02-2002 V2.3). The purpose of the test is to identify leaks in non pressure pipe installations.

It is important to recognise that high pressure testing of pipelines with compressed gasses (including air) can be dangerous due to the high levels of potential energy stored in the compressed gas. For this reason, low pressure air testing restricts the maximum permitted pressure to 50kPa and it is recommended that a 50kPa pressure relief valve be fitted to all pressurising equipment.

Procedure

1. Plug and seal all ends and inlets to the pipe length under test.
2. Slowly apply an initial pressure of 27 kPa.

Note:

a. It is important to apply this pressure slowly as rapid pressure increases may result in significant temperature changes that may affect the accuracy of the test later.

b. Where the pipeline is located below the water table, increase the overall pressure to achieve a differential pressure of 27 kPa but the overall pressure must not exceed 50 kPa.

3. Once the 27 kPa has been achieved, close the valve and allow the system to stabilise for at least 3 minutes to identify any initial leakage.
4. When the pressure is stable (at or above the test pressure of 23.6 kPa), allow the pressure to drop to the test pressure of 23.6 kPa and start recording the pressure drop over the test period.
5. The test is passed if the pressure drop is <7 kPa for the relevant time interval as specified in Table 1.

Table 1
Low Pressure Air Test
Minimum Acceptance Times (min) for 7 kPa Pressure Change

Pipe Size DN	Pipeline Test Length (m)					
	50	100	150	200	250	300
≤100	2	2	2	2	3	3
150	3	3	3	5	6	6
225	4	5	8	10	13	15
300	6	9	14	18	23	29
375	7	14	22	29	36	43

Notes:

1. Timing must commence after the initial 3 minute stabilisation period.
2. Test acceptance times for other combinations of pipe size and length may be interpolated.

For Further information please contact
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