



## TRANSMISSION AND DISTRIBUTION SERIES

### AMENDMENTS AT MARCH 2025

These Amendments apply to the following publication:

- **IGEM/TD/4 Edition 5 with amendments. Communication 1867 (December 2022).**

**PE and steel gas services and service pipework**

### Clause 11.3 Delete and substitute as follows.

#### 11.3 TEST PRESSURES

11.3.1 STP should exceed MIP and whenever possible should exceed 1.5 x MOP.

11.3.2 Pneumatic tightness test pressures, durations and allowable pressure loss for new and replacement services with an MOP less than or equal to 75 mbar, and service length less than 160 m, shall be as specified in Table 18 below.

<u>SERVICE MOP</u>	<u>MOP (GAUGE)</u>	<u>TEST PRESSURE (GAUGE)</u>	<u>TEST PERIOD</u>	<u>MAXIMUM PRESSURE LOSS (FLUID (WATER) GAUGE)</u>	<u>MAXIMUM PRESSURE LOSS (ELECTRONIC TESTER)</u>
<u>MOP ≤ 75 mbar</u>	<u>75 mbar</u>	<u>100 mbar</u>	<u>5 min</u>	<u>nil</u>	<u>0.2 mbar</u>

*Note 1: Suitable test instruments are fluid (water) gauges and electronic testers accurate to less than 3 mbar*

*Note 2: Further requirements can be found in BS EN 12007-5 & BS EN 12327*

#### **TABLE 18 - TIGHTNESS TESTING (PNEUMATIC) ON PE AND STEEL SERVICES WITH MOP ≤ 75 MBAR**

11.3.3 Where the length of the service being tested exceeds 160 metres, the pressure test shall be carried out in accordance with the requirements of IGEN/TD/3.

11.3.4 Pneumatic tightness test pressures, durations, and allowable pressure loss for new and replacement services with an MOP exceeding 75 mbar shall be as specified in Table 19 below.



<u>SERVICE MOP</u>	<u>MOP (GAUGE)</u>	<u>TEST PRESSURE (GAUGE)</u>	<u>TEST PERIOD</u>	<u>MAXIMUM PRESSURE LOSS</u>
<b>75 mbar &lt; MOP ≤ 2 bar</b>	<b>2 bar</b>	<b>3 bar</b>	<b>5 min</b>	<b>nil</b>
<b>2 bar &lt; MOP ≤ 7 bar</b>	<b>≤ 7 bar</b>	<b>7 bar</b>	<b>5 min</b>	<b>nil</b>

Note 1: Suitable test instruments are electronic testers accurate to less than 3 mbar

Note 2: For PE systems, creep will cause pressure loss

Note 3: Further requirements can be found in BS EN 12007-5 & BS EN 12327

**TABLE 19 - TIGHTNESS TESTING (PNEUMATIC) ON PE AND STEEL SERVICES WITH MOP > 75 MBAR**

**Clause 11.4 Delete and substitute as follows.**

**11.4 TEST ACCEPTANCE CRITERIA**

11.4.1 A hydrostatic strength test shall be deemed successful if there is no pressure loss recorded that cannot be accounted for by the effects of temperature change or creep.

11.4.2 A pneumatic tightness test or combined tightness and strength test shall be deemed successful if it meets the criteria stated in Table 18 or Table 19, as applicable.

Where the volume of a service is significant, the chosen maximum permissible pressure change during a tightness test compensated for temperature change and for PE creep effects, should be such that if a defect remains undetected the resultant leakage would not be hazardous.

Note 1: Adjustments to the allowable loss may also be required to compensate for the difference in leakage which would occur at TTP compared to MOP (if the two are different) and for the different flow characteristics between air and gas.

Note 2: If a test failure is indicated it is permitted to extend the test period to confirm that the "failure" is not attributable to falling temperature or creep effects. However, an extension is not permitted if the ambient temperature is rising.

Note 3: Information on creep effects can be found in IGEM/TD/3.

END OF AMENDMENTS