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WBS TEST & ACCEPTANCE CRITERIA PD.

Issue No: 4
Date of issue: May 1996

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TEST CODE SHEET

1. **TYPE OF TEST(S)**

Tension - (Resistance to pull-out of assembled joint - single pull)

2. **BYELAW REQUIREMENT FOR FITTINGS**

Byelaw 52

Every water fitting shall be constructed of materials, the nature, the strength and the thickness of which will prevent, so far as is reasonably practicable, damage from (a) any external load; (b) stress

3. **BRITISH STANDARDS OR WATER SPECIFICATION, DEEMED TO SATISFY BYELAW REQUIREMENTS**

(See Water Supply Byelaw Guide)

3.1 Fittings with 'kitemarks' which are deemed to satisfy the requirements of byelaws are listed in the directory.

4. **TEST PROCEDURE**

Note The test shall be carried out at a temperature of $20 \pm 10^{\circ}\text{C}$.

4.1 Tests applicable to the following fittings:-

COMPRESSION FITTINGS FOR USE WITH IMPERIAL POLYETHYLENE PIPE - above ground use only.

(A) **COMPRESSION FITTINGS FOR USE WITH IMPERIAL POLYETHYLENE PIPE - ABOVE GROUND USE ONLY.**
(Derived from BS 864 Part 3 and BS 5114)

TEST METHOD

The test specimen shall consist of the fittings to be tested, assembled with one or more pieces of polyethylene pipe of the size and quality for which the fitting is designed. Each piece of pipe shall be at least 300mm in length. Assembly of the fittings shall be carried out in accordance with the manufacturers assembly instructions.

Mount the test specimens securely to the tensile test apparatus in accordance with setting-up procedure IGN 1-50-72. Select from Table 1 the appropriate test force for pipe size and fitting under test.

Apply the tensile force gradually over a period of 15-20 seconds. Hold the specimen in constant tension for a period of 60 mins. + 30, -0 secs and at a temperature of $23 \pm 2^{\circ}\text{C}$.

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Table 1 Test Pull Forces

Nominal Size	Test Pull Forces					
	Type 32 Pipe (BS 1972 and BS 1973)			Type 50 Pipe (BS 3284 and BS 3796)		
	Class B N	Class C N	Class D N	Class B N	Class C N	Class D N
3/8	-	470	580	-	-	690
1/2	-	725	870	-	850	1070
3/4	810	1140	1380	-	1370	1660
1	1320	1760	2180	1600	2080	2650
1 1/4	2060	2800	3470	2400	3360	4200
1 1/2	2710	3700	4530	3080	4350	5660
2	4370	5780	-	4830	6760	8520

After removal, examine the specimen for pull-out from the compression ring and /or fracture/tearing of the pipe. If appropriate, the cap nut shall be removed to permit examination.

5. ACCEPTANCE CRITERIA

The amount of axial movement of the pipe from the socket of the fitting shall not exceed 1.0mm after the assembly has been loaded and a maximum amount of axial movement of 10mm from unloaded to loaded state.