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WBS TEST & ACCEPTANCE CRITERIA PD.

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Date of issue: October 1993

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TEST CODE SHEET

1. TYPE OF TEST(S)

Joint effectiveness

2. BYELAW REQUIREMENT FOR FITTINGS (see application list below)

Byelaw 52

Every water fitting shall be constructed of materials, the nature, the strength and thickness of which will prevent, so far as is reasonably practicable, damage from

- (c) internal water pressure

Byelaw 53

Every water fitting which -

- (a) is installed below ground; or
- (e) is in any other position which is inaccessible, or to which access is difficult; shall be -
- (i) constructed to withstand without bursting, buckling, fracture or leaking an internal; hydraulic pressure twice that to which it would normally be subjected

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

(See Water Supply Byelaws Guide)

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

4. TEST PROCEDURE

Note Unless stated otherwise the temperature of the test fluid shall be 20 ± 10°C.

- 4.1 Tests applicable to the following fittings:-

INDIVIDUAL FITTINGS

- Collars - for pipe repair
- Ferrules - u/p tapping, manipulative compression outlets for copper
- Fittings for use with tube/pipe
 - adhesive bonded, plastics
 - adhesive bonded, s/steel (above ground only)
 - capillary, copper tube
 - compression, non-manipulative copper tube (above ground only)
 - compression, manipulative, copper tube
 - couplings, end feed, copper tube
 - fusion jointed, PE pipe
- Taps and Valves
 - taps, hose union
 - taps, hose union, plastics
 - valves, air venting
- Water conditioners

ASSEMBLIES OF FITTINGS

- Boilers - pressure, catering type
- Cleaning equipment
 - bottle washers
 - glass washers
- Hose reel assemblies
- Hot water rinse kit
- Ice making machines
- Stopvalves - timer operated
- Tumble driers with water cooled condensing units
- Vending machine
- Water softeners

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(A) **CAPILLARY AND COMPRESSION FITTINGS FOR COPPER TUBES**

(Derived from BS 864, Part 2, Clause 13.1)

TEST METHOD

Hydraulic type test for assembled joints. Connect the inlet of the fitting to a pressurised water supply in accordance with Setting-up Procedure IGN 1-50-61 with the outlet of the fitting sealed. Apply an internal hydraulic pressure of 20 ± 0.5 bar for a time of 15 minutes \pm 30 seconds.

5. **ACCEPTANCE CRITERIA**

For the duration of the test there shall be no sign of leakage or other defect in the fittings in the fittings or in the joint.

(B) **DRAW OFF TAPS AND ABOVE GROUND STOPVALVES**

(Derived from BS 1010, Part 2, Clause 1.7.2)

TEST METHOD

Hose union taps. Connect the inlet of the fitting to a pressurised water supply in accordance with Setting-up Procedure IGN 1-50-61. With the tap (valve) in the fully open position and the outlet sealed, apply an internal hydraulic pressure of 20 ± 0.5 bar for a time of 60 ± 5 seconds.

5. **ACCEPTANCE CRITERIA**

For the duration of the test the hose union tap shall show no sign of leakage.

(C) **FOOD AND DRINK VENDING MACHINES**

(Derived from BS 5071, Clause 4.6.5)

TEST METHOD

Connect the inlet to a pressurised water supply in accordance with Setting-up Procedure IGN 1-50-61. Apply 2.0 times the rated operational pressure (± 0.5 bar within range 4-30 bar), for a time of 5 minutes \pm 10 seconds.

5. **ACCEPTANCE CRITERIA**

For the duration of the test there shall be no leakage from the appliance or from the liquid conveying system.

(D) **DRAW-OFF TAPS WITH METAL BODIES**
DRAW-OFF TAPS WITH PLASTIC BODIES

(Derived from BS 5412)

TEST METHOD

Body downstream test. Mount the tap in the test circuit with the obturator open and the outlet closed. Apply an internal hydraulic pressure in accordance with Setting-up Procedure IGN 1-50-61 of 4 ± 0.2 bar for a duration of 60 ± 5 seconds.

5. **ACCEPTANCE CRITERIA**

For the duration of the test there shall be no leakage or seepage through the walls

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(E) **UNDERGROUND STOPVALVES**
(Derived from BS 5433, Clause 8)

TEST METHOD

Connect the valve inlet to a pressurised water supply in accordance with setting-up procedure IGN 1-50-61. With the valve in the fully open position and the outlet sealed, apply an internal hydraulic pressure of 21 ± 0.5 bar for a time period of 60 ± 5 secs.

5. **ACCEPTANCE CRITERIA**

For the duration of the test the valve shall show no sign of leakage.

(F) **ALL OTHER TYPES OF VALVES/FITTINGS NOT REFERRED TO IN THE FOREGOING TO BE ASSESSED IN ACCORDANCE WITH THE FOLLOWING PROCEDURE:-**

TEST METHOD

Assemble the fittings in accordance with the manufacturer's instructions together with the appropriate pipe where applicable. Where necessary blank off one end of the assembly. Connect the assembly to a water supply in accordance with Setting-up Procedure IGN 1-50-61. Fill with water those parts of the fittings that will be subjected to mains pressure under normal working conditions, purging all air from the system.

For fittings intended for use below ground or in inaccessible positions etc., apply a hydraulic pressure of twice the claimed maximum operating pressure rating. For fittings intended for use above ground and in accessible positions only, the hydraulic test pressure requirement can be reduced to 1.5 times the claimed maximum operating pressure rating. (In either case ± 0.5 bar in the range 4 - 30 bar).

In either case the pressure shall be raised over a minimum period of 30 ± 2 seconds with water at the appropriate level for a period of 15 minutes ± 30 seconds.

5. **ACCEPTANCE CRITERIA**

For the duration of the test there shall be no indication of leakage from any joint forming part of the assembly under test.