Singapore Standard 69 : 1981

SPECIFICATION FOR FLOATS (PLASTICS) FOR FLOAT OPERATED VALVES FOR COLD WATER CISTERNS

AMENDMENT NO. 1

August 1996

1. **Page 3, Contents**

Insert new Figure 1 'Example of test bolt'.

2. **Page 4, Foreword**

Delete 'BS 2456:1973' and *substitute* with 'BS 2456:1990'.

3. **Page 5, Clause 1, Scope**

Delete the entire paragraph and *substitute* with the following:

This Singapore Standard specifies requirements for floats with or without boss inserts, for use in cold water cisterns, comprising plastics spherical floats of 102 mm, 114 mm, 127 mm and 152 mm diameters, and non-spherical floats having equivalent lifting efforts suitable for attachment to the float-operated valves specified in BS 1212:Part 2 and SS 256.

Note. The titles of the standards referred to in this standard are listed in the back page of the standard.

4. **Page 5, Clause 3, Materials**

Delete the entire clause and *substitute* with :

3. MATERIALS

3.1 General. No part of a float shall be made of, or contain, any substance capable of promoting microbial growth or of affecting in any way the physical, chemical or bacteriological quality or the water with which it will be in contact in service.

3.2 Non-metallic Materials. When used under the conditions for which they are designed, non-metallic materials in contact with or likely to come into contact with potable water shall comply with SS 375.

3.3 Plastics Materials. Floats shall be manufactured from one or more plastics material(s) containing, if required, the addition of not more than 15% of the manufacturer's own clean reworked material complying with this standard. No other reworked material shall be used.

3.4 Copper Alloy For Boss Insert. If used, copper alloy for boss inserts shall comply with the requirements of CZ 121 as specified in BS 2874.

5. **Page 5, Subclause 4.1, General**

In item (2), *delete* 'BS 1212' and *substitute* with 'BS 1212:Part 2 and SS 256'.

6. **Page 6, Table 1 'Minimum lifting efforts'**

Delete the existing Table 1 and *substitute* with the new Table 1 as follows :

Table 1. Minimum lifting efforts

1	2	3
Type reference	Diameter of float if spherical, subject to a tolerance of ± 2.5 mm	Minimum lifting effort
	mm	N
102 S	102	2
102 NS	-	2
114 S	114	2.9
114 NS	-	2.9
127 S	127	4.2
127 NS	-	4.2
152 S	152	7.1
152 NS	-	7.1
152 L	-	7.1
152 LNS	-	7.1

7. **Page 7, Subclause 4.4.1.3, Boss face**

Delete 'BS 1212' and *substitute* with 'BS 1212:Part 2 and SS 256'.

8. **Page 7, Table 2 'Bosses'**

Delete the existing Table 2 and *substitute* with the new Table 2 as follows :

Table 2. Bosses

1	2	3
Type reference of floats	Minimum length of screw thread in boss	Diameter of BS Whiteworth screw thread in boss
	mm	in
102 S	13	5/16
102 NS	13	5/16
114 S	13	5/16
114 NS	13	5/16
127 S	13	5/16
127 NS	13	5/16
152 S	19	7/16
152 NS	19	7/16
152 LS	-	-
152 LNS	-	-

9. **Page 10, Appendix B, Method Of Determining Resistance Of the Boss To Distortion**

Delete the existing Appendix B and *substitute* with the new Appendix B as follows:

APPENDIX B

METHOD OF DETERMINING RESISTANCE OF THE BOSS TO DISTORTION

B.1 PRINCIPLE

The principle of the distortion test is to determine whether or not the float is capable of remaining securely fixed to the screwed end of the lever arm of a float operated valve during installation and for a reasonable working life thereafter and that during that life the full lifting effort of the float is transmitted to the float operated valve.

B.2 APPARATUS

B.2.1 A clamp, capable of holding the loaded float under test;

B.2.2 A hexagon-headed bolt, having a thread of appropriate diameter (see Figure 1);

B.2.3 A torque spanner, capable of imparting a torque of 1.7 N.m;

B.2.4 A 10 ± 0.1 kg weight

B.3 PROCEDURE

Clamp the specimen float so that the boss is vertically downwards.

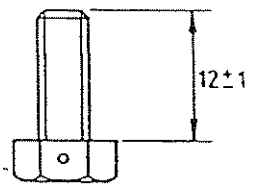
Screw in the bolt using a torque of 1.7 ± 0.1 N.m.

Check that the boss has not been damaged.

Hang the weight co-axially on the bolt for a period of not less than 5 min.

B.4 RESULT

Record any damage to the boss and/or float.



Dimensions in millimetres

Figure 1. Example of test bolt

10. **Page 11, Standards referred to**

Delete the list of reference standards and *substitute* with :

BS 1212: -	Specification for diaphragm type float operated valves (copper alloy body)(excluding floats) Part 2 : 1990 Float operated valves.
BS 1968:1953	Specification for floats for ballvalves (copper)
BS 2874:1986	Specification for copper and copper alloy rods and sections (other than forging stock)
SS 256:1996	Specification for diaphragm type float operated valves (plastics bodied) for cold water services only (excluding floats)
SS 375:1995	Specification for suitability of non-metallic products for use in contact with water intended for human consumption with regard to their effect on the quality of the water.