


INTERPLANT STANDARD - STEEL INDUSTRY		
 IPSS	SPECIFICATION FOR FOOT VALVES <i>(Second Revision)</i>	IPSS:1-06-001-03
	Based on IS 4038:1986	Formerly : IPSS:1-06-001-96

0. FOREWORD

- 0.1 This Inter Plant Standard prepared by the Standards Committee on Pipes, Fittings, Valves and Piping Layout, IPSS 1:6 with the active participation of the representatives of all the steel plants and established manufacturers of valves, was adopted in June 2003.
- 0.2 Inter Plant Standards for steel industry primarily aim at achieving rationalization and unification of parts and sub-assemblies used in steel plant equipment and accessories, and provide guidance in indenting stores or equipment for existing or new installations by individual steel plants. For exercising effective control on inventories, it is advisable to adopt procedure for installation as mentioned in this standard for the purpose of company standards of individual steel plants. It is not desirable to make deviations in technical requirements.
- 0.3 This IPSS Standard was first published in year 1981 and was based on IS 4038:1979. After the revision of the Indian Standard, this standard was revised in 1996. During the usage of this standard, it was felt that certain changes were necessary to increase the effectiveness of this standard. These changes have been incorporated in this revision which are based on practical experience of the plants.

1. SCOPE

- 1.1 This Inter Plant standard covers the requirement of foot valves for handling ordinary water, water containing small amount of chemicals as commonly available in steel plants, mineral oils and sewage and is generally based on IS 4038:1986 'Specification for foot valves for water works purposes (second revision)'. For convenience of reference the clause number of Indian Standard for each requirement are given in Appendix-A, along with the numbers of the matching clauses of this standard.

2. TYPES & SIZES

- 2.1 For the purpose of this standard, the following shall be the types (along with the recommended use) and sizes of the foot valves. The nominal size of the valve shall refer to the nominal bore of the pipe:

Types	Nominal size in mm
<i>Swing type</i> – recommended for use on temporary installation such as mobile drainage pumps for handling water & sewage.	Single disc – 50, 65, 80, 100
	Double disc - 150, 200, 250, 300
<i>Lift type</i> – recommended for use on permanent installation for handling water, mineral oils, chemicals (see 1.0) & sewage.	25, 32, 40, 50, 65 & 80
NOTE: Typical sketches of swing type (single disc and double disc) and lift type foot valves are given at Fig 1, 2 and 3 (for reference only).	

3. MATERIAL

- 3.1 The materials to be used for manufacture different components of foot valves shall be as per **Table-1** of IS 4038:1986 with the following exceptions:

Components	Material	Remarks
Disc face	Leather – Veg. Tanned (thickness 3 mm min) conforming to IS 581:1976.	For foot valves of nominal sizes upto 100 mm
	Leader tin bronze – grade LTB2 conforming to IS 318:1981.	For foot valves of nominal sizes higher than 100 mm
Bolts & Nuts	Brass – conforming to IS 4170:1967.	

4. OTHER REQUIREMENTS

- 4.1 In case of the foot valves having leaded tin bronze disc faces, both the disc and the seat shall be machined while only the seat shall be machined in foot valves having leather disc faces.
- 4.2 For ease of replacement/removal for repairs, all foot valves of nominal sizes 100 mm and above shall have flanged end connection while those less than 100 mm size may have either screwed or flanged end connections.
- 4.3 The height of the strainer shall not exceed its diameter.
- 4.4 The details of manufacture, coating and testing given in IS 4038:1986 shall be applicable to this standard also.

5. MARKING

- 5.1 Each valve shall be marked with the following information :

- i) Manufacturer's name or trade mark
- ii) Size of the valve,

6. INFORMATION TO BE FURNISHED BY INDENTOR

- 6.1 Following information shall be supplied with the enquiry :

- i) Nominal size of foot valve..... mm
 - ii) Type of valveSwing / Lift type
 - iii) End connection Flanged/Screwed
 - iv) Material of strainerCI/Galvanized steel
 - v) IPSS Number
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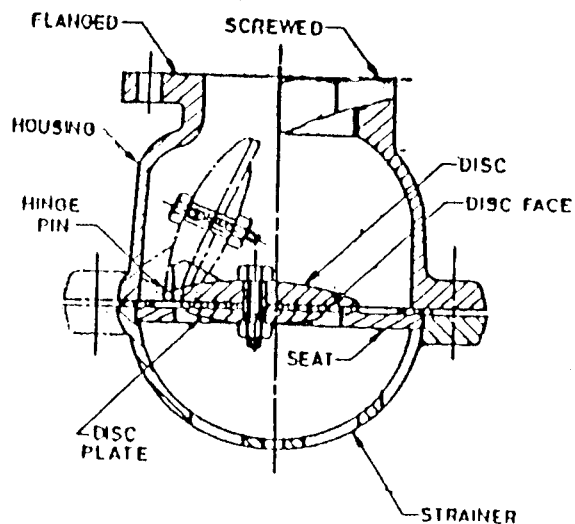


FIG. 1 TYPICAL SKETCH OF SWING TYPE FOOT VALVE (WITH SINGLE DISC)

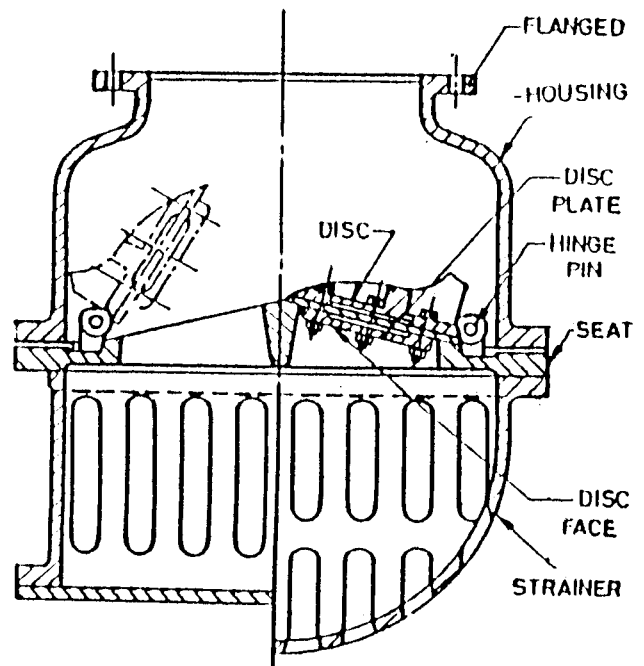


FIG. 2 TYPICAL SKETCH OF SWING TYPE VALVE (WITH DOUBLE DISC)

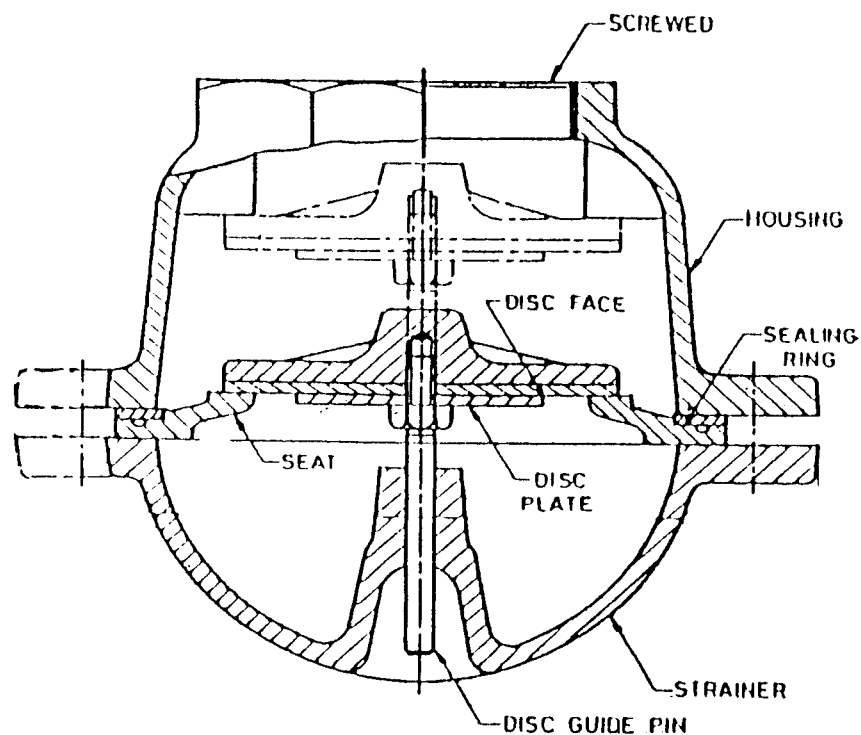


FIG. 3 TYPICAL SKETCH OF LIFT TYPE FOOT VALVE

NOTE: The shape of the parts are only illustrative and not intended to limit the design.

APPENDIX – A

(Ref clause 1)

COMPARATIVE STUDY OF**IS 4038:1986 SPECIFICATION FOR FOOT VALVES FOR
WATER WORKS PURPOSES (SECOND REVISION)****AND****IPSS:1-06-001-03 SPECIFICATION FOR
FOOT VALVES (SECOND REVISION)**

		Clause Ref. In IPSS	Clause Ref. In IS
Requirements in IPSS which are same as in ISs	Material (other than disc face, bolts and nuts)		3
	Nominal sizes of lift type foot valve	2.1	2
	Manufacture	4.4	4
	Coating	4.4	5
	Testing	4.4	6
Requirements in IPSS Selected out of the choices given in ISs	Nominal sizes of foot valves	2.1	2
	Materials of disc face	3.1	3
	End connection	4.2	1.1
	Information for enquiry	6.1	7.2
Requirements in IPSS which are complementary/s upplementary in ISs	Materials of bolts and nuts for foot valves having	3.1	Table-1
	Manufacture	4.4	4
	Marking	5.1	7
Requirements in IPSS which deviates from those in ISs	NIL		