

BUREAU OF INDIAN STANDARDS

Program of Work

CED 3 : Sanitary Appliances And Water Fittings

Scope: Glazed Earthenware and Vitreous Sanitary Appliances, Including Water Closets, Flushing Cisterns, Bath Tubs, Non-ferrous Waste Fittings for Wash Basins and Sinks, Traps, Waste Plugs and Accessories for Wash Basins, Manhole Covers for Use in Drainage Works (Except Concrete), Taps and Valves, Ball Valves, Copper and Plastic Floats for Ball Valves, Caulking Lead, Ferrules, Plug Cocks, Foot Valves, Surface Boxes, Stoneware Pipes, Water Meters, Water Meter Boxes, Sluice Valves, and Stainless Steel and Plastic Water Tanks.

Liaison: **ISO TC- (P):** *Water efficient products - Rating*

Published Standards

S.No	IS No.	TITLE	Reaffirm M-Y	No. of Amds	Eqv.
1	IS 11246:1992 <i>Reviewed In : 2022</i>	Glass fibre reinforced polyester resin (GRP) squatting pans - Specification (First Revision)	October, 2022	1	Indigenous
2	IS 12234:2021	Plastic equilibrium float valves for cold water services - Specification (first revision)		-	Indigenous
3	IS 12701:1996 <i>Reviewed In : 2022</i>	Rotational moulded polyethylene water storage tanks - specification (First Revision)	March, 2022	2	Indigenous
4	IS 13049:1991 <i>Reviewed In : 2022</i>	Diaphragm type (plastic body) float operated valves for cold water services - Specification	October, 2022	2	
5	IS 13114:1991 <i>Reviewed In : 2022</i>	Forged brass gate, globe and check valves for water works purposes - Specification	October, 2022	-	
6	IS 13349:1992 <i>Reviewed In : 2022</i>	Cast iron single faced thimble mounted sluice gates - Specification	October, 2022	1	
7	IS 13983:1994 <i>Reviewed In : 2019</i>	Stainless steel sinks for domestic purposes - Specification	October, 2019	3	
8	IS 14399 (Part 1):1996 <i>Reviewed In : 2022</i>	Hot Press Moulded Thermosetting Glass Fibre Reinforced Polyester Resin (GRP) Sectional Water Storage Tanks : PART 1 SPECIFICATION FOR PANELS	March, 2022	1	
9	IS 14399 (Part 12):1996 <i>Reviewed In : 2022</i>	Hot press moulded thermosetting glass fibre reinforced polyester resin (GRP) sectional water storage tanks: Part 1 Specification for panels: Part 2 Guidelines for assembly, installation and testing	March, 2022	-	
10	IS 14845:2000 <i>Reviewed In : 2020</i>	Resilient seated cast iron air relief valves for water works purposes -	November, 2020	1	Indigenous

		Specification			
11	IS 14846:2000 Reviewed In : 2020	Sluice valve for water works purposes (50 To 1200 mm size) - Specification	November, 2020	4	Indigenous
12	IS 1701:1960 Reviewed In : 2022	Specification for mixing valves for ablutionary and doimestic purposes	October, 2022	-	Indigenous
13	IS 1703:2000 Reviewed In : 2020	Water fittings - copper alloy float valves (horizontal plunger type) - Specification (fourth revision)	November, 2020	1	
14	IS 1711:1984 Reviewed In : 2020	Specification for self - Closing taps for water supply purposes (second revision)	November, 2020	-	Indigenous
15	IS 1726:1991 Reviewed In : 2022	Cast iron manhole covers and frames - Specification (Third Revision)	October, 2022	-	Indigenous
16	IS 17585:2021	Beta (Outflow) valves for gravity type flushing cisterns - Specification		-	Indigenous
17	IS 17650 (Part 1):2021	Water efficient plumbing products - Requirements: Part 1 Sanitaryware		-	Indigenous
18	IS 17650 (Part 2):2021	Water efficient plumbing products - Requirements: Part 2 Sanitary fittings		-	Indigenous
19	IS 1795:1982 Reviewed In : 2020	Specification for pillar taps for water supply purposes (second revision)	November, 2020	-	Indigenous
20	IS 19315:2025	Ball Valves for Water Works Purposes - Specification		-	Indigenous
21	IS 2373:1981 Reviewed In : 2022	Specification for water meters (bulk type) (third revision)	October, 2022	3	
22	IS 2548 (Part 1):1996 Reviewed In : 2022	Plastic seats and covers for water - Closets - Specification: Part 1 thermoset seats and covers (Fifth Revision)	March, 2022	1	Indigenous
23	IS 2548 (Part 2):1996 Reviewed In : 2022	Plastic seats and covers for water - Closets - Specification: Part 2 Thermoplastic seats and covers (Fifth Revision)	March, 2022	3	Indigenous
24	IS 2556 (Part 1):2021	Vitreous China sanitary appliances - Specification: Part 1 General requirements (fourth revision)		-	Indigenous
25	IS 2556 (Part 2):2024	Vitreous China Sanitary Appliances - Specification Part 2 Specific Requirements of Washdown Water Closets (sixth revision)		-	Indigenous
26	IS 2556 (Part 3):2024	Vitreous China Sanitary Appliances - Specification Part 3 Specific Requirements of Squatting Pans (sixth revision)		-	
27	IS 2556 (Part 4):2004 Reviewed In : 2019	Vitreous sanitary appliances (Vitreous China) - specification: Part 4 Specific requirements of wash basins (fourth revision)	October, 2019	3	Indigenous
28	IS 2556 (Part 5):1994 Reviewed In : 2019	Vitreous sanitary appliances (Vitreous China) - Specification: Part 5 Specific requirements of laboratory sinks (third revision)	October, 2019	3	Indigenous

29	IS 2556 (Part 6):2021	Vitreous China sanitary appliances - Specification: Part 6 Specific requirements of urinal and partition plates (fifth revision)		-	Indigenous
30	IS 2556 (Part 7):1995 Reviewed In : 2023	Vitreous sanitary appliances (Vitreous China) - Specification: Part 7 Specific requirements of accessories for sanitary appliances (third revision)	September, 2023	3	Indigenous
31	IS 2556 (Part 8):2021	Vitreous China sanitary appliances - Specification: Part 8 Specific requirements of close coupled and one-piece, pedestal washdown and syphonic water closets (sixth revision)		-	Indigenous
32	IS 2556 (Part 9):2004 Reviewed In : 2019	Vitreous sanitary appliances (Vitreous China) - Specification: Part 9 specific requirements of pedestal type bidets (Fifth Revision)	October, 2019	-	Indigenous
33	IS 2556 (Part 14):2024	Vitreous China Sanitary Appliances - Specification Part 14 Specific Requirements of Integrated Squatting Pans (Second Revision)		-	Indigenous
34	IS 2556 (Part 15):2024	Vitreous China Sanitary Appliances â€™Specification Part 15 Specific Requirements of Universal Water Closets (Third Revision)		-	Indigenous
35	IS 2556 (Part 16):2024	Vitreous China Sanitary Appliances â€™Specification Part 16 Specific Requirements of Washdown Wall Mounted Water Closets (First Revision)		-	Indigenous
36	IS 2556 (Part 17):2001 Reviewed In : 2022	Vitreous sanitary appliances (Vitreous China) - Specification: Part 17 Specific requirements of wall mounted bidets	March, 2022	-	Indigenous
37	IS 2685:1971 Reviewed In : 2022	Code of practice for selection, installation and maintenance of sluice valves (First Revision)	October, 2022	2	Indigenous
38	IS 2692:1989 Reviewed In : 2023	Ferrules for water services - specification (second revision)	September, 2023	3	Indigenous
39	IS 2963:2013 Reviewed In : 2023	Copper Alloy Waste Fittings and Waste Plug for Wash Basin and Sinks - Specification (second revision) (amalgamating IS 3311)	September, 2023	-	
40	IS 3004:1979 Reviewed In : 2020	Specification for plug cocks for water supply purposes (first revision)	November, 2020	-	
41	IS 3006:1979 Reviewed In : 2022	Specification for chemically resistant glazed stoneware pipes and fittings (first revision)	October, 2022	-	
42	IS 3042:1965 Reviewed In : 2023 Decision taken to Reaffirm and Archive	Specification for single faced sluice gates (200 to 1200 mm)	September, 2023	-	

43	IS 3950:1979 Reviewed In : 2022	Specification for surface boxes for sluice valves (first revision)	October, 2022	1	
44	IS 4038:1986 Reviewed In : 2020	Specification for foot valves for water works purposes (second revision)	November, 2020	-	
45	IS 4346:1982 Reviewed In : 2020	Specification for washers for use with fittings for water services (first revision)	November, 2020	-	
46	IS 5219:2013 Reviewed In : 2023	Cast copper alloy traps - Specification (First Revision)	September, 2023	-	Indigenous
47	IS 5312 (Part 1):2004 Reviewed In : 2019	Swing check type reflux (non-return) valves for water works purposes - Specification: Part 1 Single door pattern (second revision)	October, 2019	2	
48	IS 5312 (Part 2):2013 Reviewed In : 2023	Swing Check Type Reflux (Non-Return) Valves for Water Works Purpose - Specification Part 2 : Multi-Door Pattern	September, 2023	-	
49	IS 5455:1969 Reviewed In : 2022	Specification for cast iron steps for manholes	October, 2022	-	Indigenous
50	IS 5961:1970 Reviewed In : 2022	Specification for cast iron gratings for drainage purposes	October, 2022	-	Indigenous
51	IS 6411:1985 Reviewed In : 2020	Specification for gel - Coated glass fibre reinforced polyester resin bath tubs (first revision)	November, 2020	-	Indigenous
52	IS 651:2007 Reviewed In : 2022	Glazed stoneware pipes and fittings - Specification (Sixth Revision)	October, 2022	2	Indigenous
53	IS 6784:1996 Reviewed In : 2022 ISO 4064-2:2014 ISO 4064-4:2014	Methods for performance testing of water meters (Domestic Type) (Second Revision)	March, 2022	1	Not Equivalent
54	IS 7231:2021	Plastic flushing cisterns for water closets and urinals - Specification (third revision)		-	Indigenous
55	IS 774:2021	Ceramic (Vitreous China) flushing cisterns for water closets and urinals - Specification (sixth revision)		-	Indigenous
56	IS 778:1984 Reviewed In : 2020	Specification for copper alloy gate, globe and check valves for waterworks purposes (Fourth Revision)	November, 2020	4	Indigenous
57	IS 779:1994 Reviewed In : 2020 ISO 4064-1:2014 ISO 4064-4:2014	Water meters (Domestic Type) - Specification (Sixth Revision)	November, 2020	5	Not Equivalent
58	IS 781:1984 Reviewed In : 2020	Specification for cast copper alloy screw down bib taps and stop valves for water services (Third Revision)	November, 2020	2	Indigenous
59	IS 8931:2021	Copper alloy single taps, combination tap assemblies, stop valves and single lever mixers for water services — Specification (second revision)		-	Indigenous
60	IS 9140:1996 Reviewed In : 2022	Methods for sampling of vitreous and fire clay sanitary appliances (Second Revision)	March, 2022	-	Indigenous

61	IS 9338:2013 Reviewed In : 2023	Cast iron/S.G. Iron/Cast Steel screw-down stop valves for water works purposes - Specification (second revision)	September, 2023	-	
62	IS 9739:1981 Reviewed In : 2022	Specification for pressure reducing valves for domestic water supply systems	October, 2022	3	
63	IS 9758:1981 Reviewed In : 2022	Specification for flush valves and fittings for water closets and urinals	October, 2022	2	Indigenous
64	IS 9762:1994 Reviewed In : 2019	Specification for polyethylene floats (Spherical) for float valves (first revision)	October, 2019	-	Indigenous
65	IS 9763:2000 Reviewed In : 2020	Plastics bib taps, pillar taps, angle valves and stop valves for hot and cold water services - Specification (second revision)	November, 2020	-	Indigenous

Standards under Development

Projects Approved		
SI. No.	Doc No.	Title
No Records Found		

Preliminary Draft Standards		
SI. No.	Doc No.	Title
No Records Found		

Drafts Standards in WC Stage		
SI. No.	Doc No.	Title
No Records Found		

Draft Standards Completed WC Stage		
SI. No.	Doc No.	Title
1	CED 3 (26381)	Flush ValveFlushometer and Fittings for Water Closets and Urinals - Specification first revision

Finalized Draft Indian Standard		
SI. No.	Doc No.	Title
No Records Found		

Finalized Draft Indian Standards under Print		
SI. No.	Doc No.	Title
No Records Found		

Total Published Standards:64 Total Standards Under development:1		
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Aspect Wise Report

Product : 61

Code of Practices : 1

Methods of Test : 3

Terminology : 0
Dimensions : 0
System Standard : 0
Safety Standard : 0
Others : 0
Service Specification : 0
Process Specification : 0
Unclassified : 0

Annexure-I :List of Indian Standards Withdrawn/Superseded

Sl. No.	IS No. & Year	Title
1	IS 1700:1973	Drinking Fountains
2	IS 2104:1981	water meter boxes domestic type
3	IS 2326:1987 Reviewed In : 2018	Automatic Flushing Cisterns for Urinals Other than Plastic Cisterns
4	IS 2401:1973	Code of practice for selection installation and maintenance of domestic water meters
5	IS 2556 (Part 10):1974	Vitreous Sanitary Appliances vitreous China Part 10 Specific Requirements Of Foot Rests
6	IS 2556 (Part 11):1979	Vitreous sanitary appliances vitreous china Part 11 Specific requirements for shower rose
7	IS 2556 (Part 12):1973	Vitreous sanitary appliances vitreous china Part 12 Specific requirements of floor traps
8	IS 2556 (Part 13):1973	Vitreous sanitary appliances vitreous china Part 13 Specific requirements of traps for squatting pans
9	IS 3311:1979 Reviewed In : 2007	Waste Plug And Its Accessories For Sinks And Wash-basins
10	IS 3489:1985	Enamelled Steel Bath Tubs
11	IS 5219 (Part 1):1969 Reviewed In : 2010	cast copper alloys traps Part 1 P and S traps
12	IS 5434:1969	non-ferrous alloy bottle traps for marine use
13	IS 5869:1970	Pillar Taps for Marine Use
14	IS 5917:1970	vitreous vitreous china wash basins for marine use
15	IS 6249:1971	flush valves and fittings for marine use
16	IS 6251:1971	Shower and Shower Fittings for Marine Use
17	IS 771 (Part 1):1979 Reviewed In : 2017	Specification for glazed fire - Clay sanitary appliances Part 1 general requirements
18	IS 771 (Part 2):1985 Reviewed In : 2018	Specification for glazed fire - Clay sanitary appliances Part 2 specific requirements of kitchen and laboratory sinks Third Revision
19	IS 771 (Part 3/Sec 1):1979 Reviewed In : 2017	Glazed Fire Clay Sanitary Appliances Part-3 Specific Requirements of Urinals Section 1 Slab Urinals
20	IS 771 (Part 3/Sec 2):1985 Reviewed In : 2020	Glazed Fire-Clay Sanitary Appliances Part 3 Specific Requirements of Urinals Section 2 Stall Urinals
21	IS 771 (Part 4):1979 Reviewed In : 2017	Specification for glazed fire - Clay sanitary appliances Part 4 specific requirements of post - Mortem slabs Second Reoision
22	IS 771 (Part 5):1979 Reviewed In : 2017	Specification for glazed fire - Clay sanitary appliances Part 5 specific requirements of shower trays Second Revision
23	IS 771 (Part 6):1979 Reviewed In : 2020	Specification for glazed fire - Clay sanitary appliances Part 6 specific requirements of bed pan sinks Second Reoision
24	IS 771 (Part 7):1981	Specification for glazed fire - Clay sanitary appliances Part 7 specific requirements of Second

	Reviewed In : 2017	Revision
25	IS 772:1973 Reviewed In : 2017	Specification for general requirements for enamelled cast iron sanitary appliances
26	IS 773:1988	enamelled cast iron water-closets railway coaching stock type
27	IS 775:1970	Cast Iron Brackets And Supports For Wash Basins And Sinks
28	IS 776:1962	Wooden water closet seats and covers
29	IS 780:1984 Reviewed In : 1995	sluice valves for water works purposes 50 to 300 mm size
30	IS 782:1978 Reviewed In : 2017	Specification for caulking lead Third Revision
31	IS 8718:1978	vitreous enamelled steel kitchen sinks
32	IS 8719:1978	vitreous siphonic wash-down water closets for marine use
33	IS 8727:1978 Reviewed In : 2000	vitreous enamelled steel wash bsins
34	IS 8934:1978	Cast copper alloy fancy pillar taps for water services
35	IS 9076:1979	vitreous integrated squatting pans for marine use

Annexure-II :List of Indian Product Standards

Sl. No.	IS No. & Year	Title
1	IS 11246:1992 Reviewed In : 2022	Glass fibre reinforced polyester resin GRP squatting pans - Specification First Revision
2	IS 12234:2021 ISO 23306:2020	Plastic equilibrium float valves for cold water services - Specification first revision
3	IS 12701:1996 Reviewed In : 2022	Rotational moulded polyethylene water storage tanks - specification First Revision
4	IS 13049:1991 Reviewed In : 2022	Diaphragm type plastic body float operated valves for cold water services - Specification
5	IS 13114:1991 Reviewed In : 2022	Forged brass gate globe and check valves for water works purposes - Specification
6	IS 13349:1992 Reviewed In : 2022	Cast iron single faced thimble mounted sluice gates - Specification
7	IS 13983:1994 Reviewed In : 2019	Stainless steel sinks for domestic purposes - Specification
8	IS 14399 (Part 1):1996 Reviewed In : 2022	Hot Press Moulded Thermosetting Glass Fibre Reinforced Polyester Resin GRP Sectional Water Storage Tanks PART 1 SPECIFICATION FOR PANELS
9	IS 14845:2000 Reviewed In : 2020	Resilient seated cast iron air relief valves for water works purposes - Specification
10	IS 14846:2000 Reviewed In : 2020	Sluice valve for water works purposes 50 To 1200 mm size - Specification
11	IS 1701:1960 Reviewed In : 2022	Specification for mixing valves for ablutionary and doimestic purposes
12	IS 1703:2000 Reviewed In : 2020	Water fittings - copper alloy float valves horizontal plunger type - Specification fourth revision
13	IS 1711:1984 Reviewed In : 2020	Specification for self - Closing taps for water supply purposes second revision
14	IS 1726:1991 Reviewed In : 2022	Cast iron manhole covers and frames - Specification Third Revision
15	IS 17585:2021 ISO 16014-3 : 2019	Beta Outflow valves for gravity type flushing cisterns - Specification
16	IS 17650 (Part 1):2021 ISO 9241-302:2008	Water efficient plumbing products - Requirements Part 1 Sanitaryware

17	IS 17650 (Part 2):2021 ISO 18646-4 : 2021	Water efficient plumbing products - Requirements Part 2 Sanitary fittings
18	IS 1795:1982 Reviewed In : 2020	Specification for pillar taps for water supply purposes second revision
19	IS 19315:2025	Ball Valves for Water Works Purposes - Specification
20	IS 2373:1981 Reviewed In : 2022	Specification for water meters bulk type third revision
21	IS 2548 (Part 1):1996 Reviewed In : 2022	Plastic seats and covers for water - Closets - Specification Part 1 thermoset seats and covers Fifth Revision
22	IS 2548 (Part 2):1996 Reviewed In : 2022	Plastic seats and covers for water - Closets - Specification Part 2 Thermoplastic seats and covers Fifth Revision
23	IS 2556 (Part 1):2021 ISO 17450-2:2012	Vitreous China sanitary appliances - Specification Part 1 General requirements fourth revision
24	IS 2556 (Part 2):2024	Vitreous China Sanitary Appliances - Specification Part 2 Specific Requirements of Washdown Water Closets sixth revision
25	IS 2556 (Part 3):2024	Vitreous China Sanitary Appliances - Specification Part 3 Specific Requirements of Squatting Pans sixth revision
26	IS 2556 (Part 4):2004 Reviewed In : 2019	Vitreous sanitary appliances Vitreous China - specification Part 4 Specific requirements of wash basins fourth revision
27	IS 2556 (Part 5):1994 Reviewed In : 2019	Vitreous sanitary appliances Vitreous China - Specification Part 5 Specific requirements of laboratory sinks third revision
28	IS 2556 (Part 6):2021 ISO 20140-2 : 2018	Vitreous China sanitary appliances - Specification Part 6 Specific requirements of urinal and partition plates fifth revision
29	IS 2556 (Part 7):1995 Reviewed In : 2023	Vitreous sanitary appliances Vitreous China - Specification Part 7 Specific requirements of accessories for sanitary appliances third revision
30	IS 2556 (Part 8):2021	Vitreous China sanitary appliances - Specification Part 8 Specific requirements of close coupled and one-piece pedestal washdown and syphonic water closets sixth revision
31	IS 2556 (Part 9):2004 Reviewed In : 2019	Vitreous sanitary appliances Vitreous China - Specification Part 9 specific requirements of pedestal type bidets Fifth Revision
32	IS 2556 (Part 14):2024	Vitreous China Sanitary Appliances - Specification Part 14 Specific Requirements of Integrated Squatting Pans Second Revision
33	IS 2556 (Part 15):2024	Vitreous China Sanitary Appliances Specification Part 15 Specific Requirements of Universal Water Closets Third Revision
34	IS 2556 (Part 16):2024	Vitreous China Sanitary Appliances Specification Part 16 Specific Requirements of Washdown Wall Mounted Water Closets First Revision
35	IS 2556 (Part 17):2001 Reviewed In : 2022	Vitreous sanitary appliances Vitreous China - Specification Part 17 Specific requirements of wall mounted bidets
36	IS 2692:1989 Reviewed In : 2023	Ferrules for water services - specification second revision
37	IS 2963:2013 Reviewed In : 2023	Copper Alloy Waste Fittings and Waste Plug for Wash Basin and Sinks - Specification second revision amalgamating IS 3311
38	IS 3004:1979 Reviewed In : 2020	Specification for plug cocks for water supply purposes first revision
39	IS 3006:1979 Reviewed In : 2022	Specification for chemically resistant glazed stoneware pipes and fittings first revision
40	IS 3042:1965 Reviewed In : 2023 Decision taken to Reaffirm and Archive	Specification for single faced sluice gates 200 to 1200 mm
41	IS 3950:1979 Reviewed In : 2022	Specification for surface boxes for sluice valves first revision
42	IS 4038:1986 Reviewed In : 2020	Specification for foot valves for water works purposes second revision
43	IS 4346:1982 Reviewed In : 2020	Specification for washers for use with fittings for water services first revision
44	IS 5219:2013 Reviewed In : 2023	Cast copper alloy traps - Specification First Revision
45	IS 5312 (Part 1):2004	Swing check type reflux non-return valves for water works purposes - Specification Part 1 Single

	Reviewed In : 2019	door pattern second revision
46	IS 5312 (Part 2):2013 Reviewed In : 2023	Swing Check Type Reflux Non-Return Valves for Water Works Purpose - Specification Part 2 Multi-Door Pattern
47	IS 5455:1969 Reviewed In : 2022	Specification for cast iron steps for manholes
48	IS 5961:1970 Reviewed In : 2022	Specification for cast iron gratings for drainage purposes
49	IS 6411:1985 Reviewed In : 2020	Specification for gel - Coated glass fibre reinforced polyester resin bath tubs first revision
50	IS 651:2007 Reviewed In : 2022	Glazed stoneware pipes and fittings - Specification Sixth Revision
51	IS 7231:2021	Plastic flushing cisterns for water closets and urinals - Specification third revision
52	IS 774:2021 ISO 17450-1:2011	Ceramic Vitreous China flushing cisterns for water closets and urinals - Specification sixth revision
53	IS 778:1984 Reviewed In : 2020	Specification for copper alloy gate globe and check valves for waterworks purposes Fourth Revision
54	IS 779:1994 Reviewed In : 2020 ISO 4064-1:2014 ISO 4064-4:2014	Water meters Domestic Type - Specification Sixth Revision
55	IS 781:1984 Reviewed In : 2020	Specification for cast copper alloy screw down bib taps and stop valves for water services Third Revision
56	IS 8931:2021 ISO 20140 - 3 : 2019	Copper alloy single taps combination tap assemblies stop valves and single lever mixers for water services Specification second revision
57	IS 9338:2013 Reviewed In : 2023	Cast iron S G Iron Cast Steel screw-down stop valves for water works purposes - Specification second revision
58	IS 9739:1981 Reviewed In : 2022	Specification for pressure reducing valves for domestic water supply systems
59	IS 9758:1981 Reviewed In : 2022	Specification for flush valves and fittings for water closets and urinals
60	IS 9762:1994 Reviewed In : 2019	Specification for polyethylene floats Spherical for float valves first revision
61	IS 9763:2000 Reviewed In : 2020	Plastics bib taps pillar taps angle valves and stop valves for hot and cold water services - Specification second revision