

## कार्य योजना

(01 अप्रैल 2013 तक )

PROGRAMME OF WORK  
(AS ON 1 April 2013)

धातुकर्म इंजीनियरिंग विभाग  
(एमटीडी)

Metallurgical Engineering Department  
(MTD)



भारतीय मानक ब्यूरो

मानक भवन, 9 बहादुरशाह जफर मार्ग

नई दिल्ली – 110 002

**BUREAU OF INDIAN STANDARDS**  
**MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG**  
**NEW DELHI 110002**

**STATISTICS AT A GLANCE**  
**(As on 1 January 2013)**

<b>Aspect</b>	<b>No. of Standards</b>
Product Standards	639
Methods of Test	368
Code of Practices	162
Terminology	40
Dimensions	31
Symbols	01
Others	389
<b>Total</b>	<b>1640</b>

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## FOREWORD

This programme of work is prepared by all Standards formulating departments of Bureau of Indian Standards to indicate the latest position standards and draft standards at different stages of processing. It is prepared Sectional Committee wise and arranged in the sequential order of the Committee Number.

This document covers the programme of work of Metallurgical Engineering Division Council (MTDC) with its scope as under:

**'Standardization in the field of metallurgy and metallurgical engineering including ferrous and non-ferrous metals, alloys and their products, ores and minerals, foundry, refractories, powder metallurgy, heat treatment, corrosion protection, metallic and non-metallic coating (excluding paints, pigments and enameling) and welding (excluding electrical welding equipment) and Nanomaterials and technologies'**

This document covers designation of the Sectional Committee, its Scope, Number and title of the published/draft standards, date of reaffirmation, number of Amendments issued, new items on programme etc. An '\*' before IS No. has been used to indicate that the standard is under revision and '\*\*' has been used to indicate standards to be taken up for revision. Below a published standard wherever 'ISO..' standard number is given, it implies that the Indian Standard given above is under dual number system with the relevant ISO standard. Further to facilitate tracking on the data base, national number in 9000 series have been used for new items on programme. This should not be confused with document number.

List of Indian Standard with dual numbers (adopted ISO standards) is given in Annex I.

A list of withdrawn/superseded standards relating to this Division is given in Annex II. The list of licences relating to MTDC standard is given in Annex III. The list of ISO TC where MTD is a participating member (P member) is given in Annex IV. The list of Indian Standards published in Hindi/Bilingual is given in Annex V. In adoption, the department has published the followings special Publications:

SP	Handbook of manual metal-arc welding for welders
SP 1:1967	Comparison of Indian and overseas standards on aluminium alloy castings
SP 6(7):1972	Simple welded girders
SP 12:1975	ISI Handbook for gas welders
SP 14:1976	Index to steel designation
SP 17:1979	Index to IS 1956 Glossary of terms relating to iron and steel
SP 37(Pt 3):1987	Handbook for refractories : Pt 3 Refractories for cement kiln system

It is hoped that this publication will provide the user community a convenient tool for obtaining the latest information about new and upcoming standards in the field of Metal and Metallurgy.

For any other clarification, please write to:

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MTD 3 MECHANICAL TESTING OF METALS SECTIONAL COMMITTEE

**SCOPE** - Standardization in the field of mechanical testing of metals  
LIAISON  
ISO/TC 164 Mechanical testing of metals

SI. No.	IS Number/ DOC Number	Title	Reaffirm Date	No. of Amd.
<b>STANDARDS PUBLISHED</b>				
1	IS 1403(Part 1):1993 / ISO 7799:1985	Mechanical testing of metals - Reverse bend test Part 1 Sheet & strip (second revision)	Apr 2009	
2	IS 1499:1977	Method for charpy impact test (U-notch) for metals (first revision)	Apr 2009	1
3	IS 1500:2005 / ISO 6506-1:1999	Method for Brinell hardness test for metallic materials (third revision)	Feb 2011	
4	IS 1501:2002 / ISO 6507-1:1997	Method for Vickers hardness test for metallic materials (third revision)	Apr 2012	
5	IS 1586(Part 1):2012 / ISO 6508-1:2005	Metallic Materials - Rockwell hardness test Part 1 Test Method (Scales A, B ,C ,D ,E ,F, G, H, K, N, T (fourth revision)	Jul 2012	
6	IS 1586(Part 2):2012 / ISO 6508-2:2005	Metallic materials - Rockwell hardness test Part 2 Verification and calibration of testing machines ( scales A, B, C, D, E,, F, H, K, N, T ) (fourth revision)	Aug 2012	
7	IS 1586(Part 3):2012 / ISO 6508-3:2005	Metallic materials - Rockwell hardness test Part 3: Calibration of reference blocks (scales A, B,C, D ,E, F, G, .H,K,N,T) (fourth revision)	Jul 2012	
8	IS 1598:1977	Method for izod impact test of metals (first revision)	Apr 2009	
9	IS 1599:2012 / ISO 7438:2005	Metallic materials - Bend test (third revision)	Jul 2012	
10	IS 1608:2005 / ISO 6892:1998	Metallic materials - Tensile testing at ambient temperature (third revision)	Feb 2011	
11	IS 1716:1985   ISO 7801:1984	Method for reverse bend test for metallic wire (second revision) (Superseding IS 6878:1973)	Feb 2011	
12	IS 1717:2012 / ISO 7800:2003	Metallic materials - Wire - Simple torsion test (third revision)	Mar 2012	
13	IS 1754:2002 / ISO 6507-2:1997	Method for verification of vickers hardness testing machines (third revision) (Amalgating IS 1754(Part 1 & 2:1986)	Apr 2012	
14	IS 1755:1983   ISO 7802:1983	Method for wrapping test for metallic wire (first revision) (Superseding IS 3388:1965 and IS 4168:1967)	Feb 2011	
15	IS 1757:1988	Method for charpy impact test (V notch) for metallic material (second revision)	Apr 2009	1
16	IS 1828(Part 1):2005 / ISO 7500-1 : 1999	Metallic materials - Verifications of static uniaxial testing machines Part 1 Tension/compression testing machines - verification and calibration of the force measuring system (third revision)	Feb 2011	

\* INDICATES STANDARDS UNDER REVISION

\*\* INDICATES STANDARDS TO BE REVISED

17	IS 1828(Part 2):2002 / ISO 7500-2:1996	Metallic materials -verification of static uniaxial testing machines-Tension creep testing machine verification of the applied load	Apr 2012
18	IS 2281:2005 / ISO 6506-2:1999	Method for verification of Brinell hardness testing machines (third revision)	Feb 2011
19	IS 2328:2005 / ISO 8492:1998	Metallic materials - Tube- Flattening test (second revision)	Feb 2011
20	IS 2329:2005 / ISO 8491:1998	Metallic materials - Tube (in full section) - Bend test (second revision)	Feb 2011
21	IS 2330:2011 / ISO 8494:1998	Metallic materials - Tube - flanging test (second revision)	Jul 2011
22	IS 2335:2005 / ISO 8493:1998	Metallic materials - Tube drift expanding test (second revision)	Feb 2011
23	IS 2854:1990	Determination of young's modulus,tangent modulus and chord modulus - Test method (first revision)	Feb 2011
24	IS 2855:1991	Thermostat metals - Determination of flexivity (first revision)	Apr 2009
25	IS 3394:1985	Method for accelerated life test of electrical resistance alloys for heating elements (first revision)	Feb 2011
26	IS 3407(Part 1):1983	Method for creep testing of steel at elevated temperature Part I Tensile creep testing (first revision) (Superseding IS 3408:1965)	Feb 2011
27	IS 3407(Part 2):1983	Part 2 Tensile creep stress rupture testing (first revision) (Superseding IS 3409:1965)	Feb 2011
28	IS 3410:1993	Metallic materials - Determination of linear thermal expansion (first revision)	Apr 2009
29	IS 3711:2012 / ISO 377:1997	Steel and Steel Products - Location and preparation of samples and test pieces for mechanical testing (second revision)	May 2012
30	IS 3766:1977	Method for calibration of pandulum impact testing machines for testing metals (first revision)	Apr 2009
31	IS 3803(Part 1):1989 / ISO 2566-1 : 1984	Steel - Conversion of elongation values Part I Carbon & low alloy steels (second revision)	Feb 2011
32	IS 3803(Part 2):1989 / ISO 2566-2 : 1984	Part 2 Austenitic steels (second revision)	Feb 2011
33	IS 4132:2005 / ISO 6506-3:1999	Method for calibration of standardized blocks to be used for Brinell hardness testing machines (second revision)	Feb 2011
34	IS 4133:2002 / ISO 6507-3:1997	Method for calibration of standardized blocks to be used for Vickers hardness testing machines (second revision)	Apr 2012
35	IS 4169:1988	Method for calibration of force-proving instruments used for the verification of uniaxial testing machines (first revision)	Apr 2009
36	IS 4258:2011 / ISO 18265:2003	Metallic materials - Conversion of hardness values (second revision)	Dec 2011

\* INDICATES STANDARDS UNDER REVISION  
/ INDICATES DUAL NUMBER STANDARDS

\*\* INDICATES STANDARDS TO BE REVISED  
/ INDICATES EQUIVALENT STANDARDS

37	IS 5069:1982   ISO 6929	Glossary of terms relating to methods of mechanical testing of metals (first revision)	Apr 2009
38	IS 5070:1985   ISO 946:1975	Method for beam unnotched impact test for grey cast iron (first revision)	Feb 2011
39	IS 5074:1969   1099:1975	Method for axial load fatigue testing of steel	Feb 2011
40	IS 5075:1985   ISO 1143:1975	Method of rotating bar bending fatigue testing of metals (first revision)	Feb 2011
41	IS 5242:1979	Method of test for determining shear strength of metals (first revision)	Feb 2011
42	IS 6243:1985   ISO 2626:1973	Method of hydrogen embrittlement test for copper (first revision)	Feb 2011
43	IS 6885(Part 1):2011 / 4545-1:2005	Metallic Materials - Knoop hardness test Part 1 Test Method (first revision)	Aug 2011
44	IS 6885(Part 2):2011 / 4545-2:2005	Metallic materials - Knoop hardness test Part 2: Verification and calibration of testing machines [first revision)	Aug 2011
45	IS 6885(Part 3):2011 / 4545-3:2005	Metallic materials - Knoop hardness test Part 3: Calibration of reference blocks[ first revision)	Aug 2011
46	IS 6885(Part 4):2011 / 4545-4:2005	Metallic Materials - Knoop hardness test Part 4 Table of hardness values [first revision)	Jun 2011
47	IS 6886:1973	Method for dynamic force calibration of axial load fatigue testing machines by means of a strain gauge technique	Feb 2011
48	IS 7096:1981	Method for scleroscope hardness testing for metallic materials (first revision)	Feb 2011
49	IS 7172:1984	Method for verification of scleroscope hardness testing machines (first revision)	Feb 2011
50	IS 8632:1977   ISO 3785:1976	Method for identification of test-piece axes	Apr 2009
51	IS 10166:1982	Method for calibration of standardized test block for verification of scleroscope hardness testing equipments	Feb 2011
52	IS 10167:1982	Method for upsetting test on metallic materials	Feb 2011
53	IS 10175:2012 / ISO 20482:2003	Metallic materials - Sheet and strip - Erichsen cupping test (second revision)	Jul 2012
54	IS 10180:1982	Method for plain strain fracture toughness testing of metals	Feb 2011
55	IS 10181:1982	Method for determination of magnetic permeability of iron and steel	Feb 2011
56	IS 10623:1983	Drop weight tear test on ferritic steels and line pipe	Feb 2011

\* INDICATES STANDARDS UNDER REVISION  
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\*\* INDICATES STANDARDS TO BE REVISED  
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57	IS 10636(Part 1):1983	Measurement of abrasive wear properties of metallic materials Part I Test method for gouging abrasion resistance (Jaw crusher test)	Feb 2011
58	IS 10636(Part 2):1983	Part2 Test method for high stress abrasion	Feb 2011
59	IS 10636(Part 3):1983	Part 3 Test method for low stress abrasion	Feb 2011
60	IS 11083:1984	Method for evaluation of friction and wear properties of materials against steel surface	Feb 2011
61	IS 11240:1985	Method for falling weight test on metallic materials	Feb 2011
62	IS 11999:2007 / ISO 10113:1991	Method for determination of plastic strain ratio 'r' for steel sheets (first revision)	Apr 2012
63	IS 12260:1987 / ISO 8495 : 1986	Method for ring expanding test on metallic tubes	Apr 2009
64	IS 12261:1987	Method for reverse torsion test for metallic wire	Apr 2009
65	IS 12278:2011 / ISO 8496:1998	Metallic materials - Tube- Ring tensile test (first revision)	Dec 2011
66	IS 12514:1988	Method for torsional stress fatigue testing	Apr 2009
67	IS 12872:2011 / ISO 9513 : 1999	Metallic materials - Calibration of extensometers used in uniaxial testing (first revision)	Dec 2011
68	IS 13237:1991	Metallic foils - Tension testing	Apr 2009
69	IS 13838:1993	Mechanical testing of metals - Determination of poisson's ratios	Feb 2011
70	IS 15420:2003	Metallic materials-charpy pendulum impact test - preparation and characterization of charpy V-reference test pieces for verification of test machines	Apr 2009
71	IS 15756:2007 / 10275:1993	Metallic materials - Sheet and strip - Determination of tensile stain hardening exponent	Apr 2012

#### **FINALISED DRAFTS UNDER PRINT**

1	DOC.MTD 3(5116)	Metallic materials - Tensile testing - Part 1: Method of test at room temperature (fourth revision of IS 1608 (Pt 1) (Based on ISO 6892-1:2009)
2	DOC.MTD 3(5118)	Metallic material - Vickers hardness test - Part 1 Test method (fourth revision of IS 1501(Pt 1) (Based on ISO 6507-1:2005)
3	DOC.MTD 3(5119)	Metallic material - Vickers hardness test - Part 2: Verification and calibration of testingmachines (fourth revision of IS 1501 (Pt 2) (Based on ISO 6507-2:2005)
4	DOC.MTD 3(5120)	Metallic material - Vickers hardness test - Part 3 Calibration of reference blocks (fourth revision of IS 1501 (Pt 3) (Based on ISO 6507-3:2005)

\* INDICATES STANDARDS UNDER REVISION  
/ INDICATES DUAL NUMBER STANDARDS

\*\* INDICATES STANDARDS TO BE REVISED  
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- 5      DOC.MTD 3(5121)      Metallic material - Vickers hardness test - Part 4; Table of hardness values (fourth revision of IS 1501 (Pt 4) (Based on ISO 6507-4:2005)
- 6      DOC.MTD 3(5122)      Metallic material - Brinell hardness test - Part 1: Test method(fourth revision of iS 1500 (Pt 1) (Based on ISO 6506-1:2005)
- 7      DOC.MTD 3(5123)      Metalic material - Brinell hardness test - Part 2: Verification and calibration of testing machines (fourth revision of IS 1500 (Pt 2) (Based on ISO 6506-2:2005)
- 8      DOC.MTD 3(5124)      Metallic material - Briness hardness test - Part 3: Calibration of reference blocks (fourth revision of IS 1500 (Pt 3) (Based on ISO 6506-3:2005)
- 9      DOC.MTD 3(5125)      Metallic material - Brinell hardness test - Part 4: Table of hardness values (fourth revision of IS 1500 (Pt 4) (Based on ISO 6506-4:2005)

**DRAFT STANDARDS FINALIZED BUT NOT YET UNDER PRINT**

- 1      DOC.MTD 3(5117)      Metallic materials - Tensile testing - Part 2; Method of test at elevated temperature (fourth revision of IS 1608 (Pt 2) (Based on ISO 6892-2:2011)
- 2      DOC.MTD 3(5127)      Metallic mateirals - Charpy pendulum impact test Part 1- Test method (third revision of IS 1757(Pt 1) (based on ISO 148-1:2009)
- 3      DOC.MTD 3(5128)      Metallic materials - Charpy - Pt 2: Verification of testing machines (third revision of IS 1757(Pt 2) (based on ISO 148-2:2008)
- 4      DOC.MTD 3(5129)      Pt 3 Preparation and characterization of charpy v-notch test pieces for direct verification of pendulum impat test (third revision of IS 1757(Pt 3) (based on ISO 148-3:2008)
- 5      DOC.MTD 3(5130)      Metallic materials - Calibration of force proving instruments used for the verification of uniaxial testing machiens (second revision of IS 4169) (based on ISO 376:2011)
- 6      DOC.MTD 3(5131)      Metallic materials - Verification of static uniaxial testing machines - Part I: Tension/compression testing machines - Verification and calibration of the force-measuring system (first revision of IS 1828 (Pt 1) (based on ISO 7500-1:2004)
- 7      DOC.MTD 3(5132)      Metallic materials - Verification of static uniaxial testing machines - Pt 2 Tension creep testing machines - Verification of the applied force (first revision of IS 1828(Pt 2) (based on ISO 7500-2:2006)
- 8      DOC.MTD 3(5134)      Metallic mateirals - Sheet and Strip - Determination of plastic strain ratio (second revision of IS 11999) (based on ISO 10113:2006)
- 9      DOC.MTD 3(5135)      Metallic materials - Sheet and strip - determination of tensile strain hardening exponent (first revision of IS 15756) (based on ISO 10245:2007)

MTD 4 WROUGHT STEEL PRODUCTS SECTIONAL COMMITTEE

**SCOPE** - Standardization in the field of steel and wrought steel products including chemical/instrumental analysis, classification, designation and coding of steels

LIAISON  
ISO/TC 17 Steel

Sl. No.	IS Number/ DOC Number	Title	Reaffirm Date	No. of Amd.
<b>STANDARDS PUBLISHED</b>				
1	SP 14 : 1976	Index to classification of steel	Feb 2013	
2	SP 17 : 1979	Index to glossary of terms relating to iron and steel	Feb 2013	
3	SP 71 : 2012	Compendium of method of chemical analysis of steels	May 2012	
4	IS 277:2003	Galvanized steel sheet (plain and corrugated )(sixth revision)	Feb 2013	4
5	IS 279:1981	Galvanized steel wire for telegraph and telephone purposes (third revision)	Nov 2009	2
6	IS 280:2006	Mild steel wire for general engineering purposes (fourth revision)	Sep 2010	1
7	IS 412:1975	Expanded metal steel sheets for general purposes (second revision)	Mar 2012	1
8	IS 513:2008   ISO 3574:1999	Cold- reduced low carbon steel sheets and strips (fifth revision)	13 2002	1
9	IS 648:2006   IEC 60404-8-4:1998	Cold rolled non-oriented electrical steel sheet and strip - Fully processed type - Specification (fifth revision)	Mar 2011	5
10	IS 649:1997   IEC 404-2:1978	Methods of testing steel sheets for magnetic circuits of power electrical apparatus (second revision)	Mar 2012	3
11	IS 1029:1970	Hot-rolled steel strip (baling) (first revision)	Feb 2013	2
12	IS 1079:2009   ISO 3573:1999	Hot-rolled carbon steel sheet and strip (sixth revision)	Aug 2009	1
13	IS 1136:2008	Preferred sizes for wrought metal products (third revision)	Feb 2013	
14	IS 1148:2009	Hot-rolled rivet bars (upto 40 mm dia) for structural purposes (fourth revision) (superseding IS 1149:1982)	May 2011	
15	IS 1387:1993	General requirments for the supply of metallurgical materials (second revision)	Feb 2013	
16	IS 1673:1984	Mild steel wire cold heading quality (second revision)	Sep 2010	
17	* IS 1762(Part 1):1974	Code for designation of steels, Part I Based on lettter symbols (first revision)	Feb 2013	

\* INDICATES STANDARDS UNDER REVISION  
/ INDICATES DUAL NUMBER STANDARDS

\*\* INDICATES STANDARDS TO BE REVISED  
/ INDICATES EQUIVALENT STANDARDS

18	IS 1812:1982	Carbon steel wire for the manufacture of wood screws (second revision)	Mar 2012	
19	IS 1835:1976	Round steel wire for ropes (third revision)	Mar 2012	2
20	* IS 1956(Part 2):1976	Glossary of terms relating to iron and steel Part 2 Steel making (first revision)	Feb 2013	
21	* IS 1956(Part 3):1975	Hot rolled steel products (excluding sheet and strip) (first revision)	Feb 2013	3
22	* IS 1956(Part 4):1975	Steel sheet and strip (first revision)	Feb 2013	4
23	IS 1956(Part 5):1976	Bright steel bar and steel wire	Feb 2013	3
24	IS 1990:2009	Steel rivet and stay bars for boilers (second revision)	Apr 2009	
25	IS 1993:2006 / ISO 11949:1995	Cold reduced electrolytic tin plate (fourth revision)	Sep 2010	1
26	IS 2002:2009	Steel plates for pressure vessels for intermediate & high temperature service including boilers (third revision)	Feb 2013	1
27	IS 2041:2009	Steel plates for pressure vessels used at moderate and low temperature (third revision)	Feb 2013	
28	IS 2049:1978	Colour code for the identification of wrought steels for general engineering purposes (first revision)	Feb 2013	1
29	IS 2062:2011	Hot rolled medium and high tensile structural steel (seventh revision)	Sep 2011	1
30	IS 2100:1970	Steel billets, bars and sections for boilers (first revision)	Mar 2012	
31	IS 2255:1977	Mild steel wire rod for the manufacture of machine screws (by cold heading process)(second revision)	Mar 2012	1
32	IS 2385:1977	Hot-rolled mild steel sheet and strip in coil form for cold-reduced tinplate and cold-reduced blackplate (first revision )	Mar 2012	1
33	IS 2507:1975	Cold-rolled steel strips for springs (first revision)	Sep 2010	2
34	IS 2549:1994	Code of classification of processed ferrous scrap (first revision)	Feb 2013	3
35	IS 2589:1975	Hard drawn steel wire for upholstery springs (first revision)	Mar 2012	1
36	IS 2591:1982	Dimensions for hot rolled bars for threaded components (second revision)	Mar 2012	
37	IS 2830:2012	Carbon steel cast billet ingots, billets, blooms and slabs for re-rolling into steel for general structural purposes (third revision)	Apr 2012	1

\* INDICATES STANDARDS UNDER REVISION  
/ INDICATES DUAL NUMBER STANDARDS

\*\* INDICATES STANDARDS TO BE REVISED  
/ INDICATES EQUIVALENT STANDARDS

38	IS 2831:2012	Carbon steel cast billet ingots, billets, blooms and slabs for re-rolling into structural steel (ordinary quality) (fourth revision)	Apr 2012	
39	IS 2879:1998	Mild steel for metal arc welding electrodes (fourth revision)	Feb 2013	1
40	IS 3024:2006   IEC 60404-8-7:1998	Grain oriented electrical steel sheet and strip (second revision)	Sep 2010	3
41	IS 3039:1988	Structural steel for construction of hulls of ships(second revision)	Mar 2012	
42	IS 3195:1992	Steel for the manufacture of volute and helical springs (for railway rolling stock) (third revision)	Mar 2012	2
43	IS 3298:1981	Mild steel rivet bars for shipbuilding (first revision)	Mar 2012	
44	IS 3431:1982	Steel for the manufacture of volute, helical and laminated springs for automotive suspension (second revision)	Mar 2012	2
45	IS 3502:2009	Steel chequered plates (third revision)	May 2011	
46	IS 3885(Part 1):1992	Steel for the manufacture of laminated springs (railway rolling stock) Part 1 Flat Sections (second revision)	Mar 2012	1
47	IS 3885(Part 2):1992	Steel for manufacture of laminated springs (railway rolling stock) Part 2 Rib and groove sections (second revision)	Mar 2012	1
48	IS 3975:1999	Low carbon galvanized steel wires, formed wires and tapes for armouring of cables (fourth revision)	Nov 2009	
49	IS 4072:1975	Steel for spring washers (first revision)	Mar 2012	2
50	IS 4223:1975	Steel wire for umbrella ribs (first revision)	Mar 2012	
51	IS 4224:1972	Steel wire for office staples, pins and clips (first revision)	Mar 2012	1
52	IS 4454(Part 1):2001   ISO 8458-1&2:1998	Steel wires for mechanical springs, Part 1 Cold drawn steel unalloyed steel wire (third revision)	Sep 2010	
53	IS 4454(Part 2):2001   ISO 8458-3:1998	Part 2 Oil hardened and tempered steel wire (second revision) (Superseding IS 4454(Pt 3):1975)	Sep 2010	
54	IS 4454(Part 4):2001   ISO 6931-1:1989	Part 4 Stainless steel wire (second revision)	Sep 2010	1
55	IS 4824:2006	Bead wire for tyres (second revision)	Mar 2012	
56	IS 5478:1969	Thermostat metal sheet and strip	Feb 2013	
57	IS 5872:1990	Cold rolled steel strips (box strappings) (second revision)	Sep 2010	

\* INDICATES STANDARDS UNDER REVISION  
/ INDICATES DUAL NUMBER STANDARDS

\*\* INDICATES STANDARDS TO BE REVISED  
| INDICATES EQUIVALENT STANDARDS

58 2011	IS 5986:2011   ISO 20805:2005	Hot rolled steel flat products for structural forming and flanging purposes (third revision)	Sep	
59	IS 6240:2008	Hot rolled steel plate (up to 6mm ) sheet and strip for the manufacture of low pressure liquifiable gas cylinder (fourth revision)	Feb 2013	
60	IS 6902:1973	Steel wire for spokes	Mar 2012	2
61	IS 6967:1973	Steel for electrically welded round link chains	Mar 2012	
62	IS 7072:1973	Glossary of terms relating to emission spectroscopy	Mar 2012	
63	IS 7226:1974	Cold rolled medium, high carbon and low alloy steel strip for general engineering purposes	Mar 2012	
64	IS 7283:1992	Hot rolled bars for production of bright bars and machined parts for engineering applications (first revision)	Mar 2012	
65	IS 7452:2002 / ISO	Hot-rolled structural steel plates - Tolerances on dimensions and shape	Feb 2013	
66	IS 7557:1982	Steel wire (upto 20 mm) for the manufacture of cold forged rivets (first revision)	Mar 2012	
67	IS 7598:1990   ISO 4948(Pt 1 & 2)	Classification of steels (first revision)	Feb 2013	
68	IS 7887:1992	Mild steel wire rods for general engineering purposes (first revision)	Mar 2012	1
69	IS 7904:1995	High carbon steel wire rods (first revision)	Mar 2012	
70	IS 8052:2006	Steel ingots,billets and blooms for the production of spings, rivets and screws for general engineering applications - Specification (second revision)	Mar 2011	
71	IS 8510(Part 1-3):1977	Tinned steel wire for banding of armatures and rotors	Mar 2012	
72	IS 8563:1977	Half round mild steel wire for the manufacture of split pins	Mar 2012	
73	IS 8564:1977	Steel wire for nipples for spokes	Mar 2012	
74	IS 8565:1977	Heald wire	Mar 2012	
75	IS 8566:1977	Steel wire for reeds	Mar 2012	
76	IS 8910:2010 / ISO 404:1992	General technical delivery requirements for steel and steel products (first revision)	Feb 2010	
77	IS 8917:1978	Steel plates for galvanizing pots	Mar 2012	

\* INDICATES STANDARDS UNDER REVISION

\*\* INDICATES STANDARDS TO BE REVISED

78	IS 8951:2001	Steel cast-billet ingots ,billets and blooms for production of high carbon steel wire rods -Specification (first revision)	Sep 2010	
79	IS 8952:1995	Steel ingots,blooms and billets for production of mild steel wire rods for general engineering purposes (first revision)	Sep 2010	
80	IS 9442:1980	Hot rolled steel plates, sheets and strips for manufacture of agricultural tillage discs	Mar 2012	
81	IS 9476:1980	Cold rolled steel strips for carbon steel razor blades	Mar 2012	
82	IS 9485:1980	Cold-reduced and hot-rolled carbon steel sheet for porcelain enamelling	Mar 2012	
83	IS 9550:2001	Bright steel bars (first revision)	Sep 2010	
84	IS 9962:1981	Steel wires for needles	Mar 2012	1
85	IS 10206:1982	Methods of sampling steel wires	Feb 2013	
86	IS 10340:1982	Glossary of terms for cold-reduced tinplate and cold-reduced blackplate	Feb 2013	1
87	IS 10474:1991 / ISO	Steel & Steel products - Inspection Documents	Jan 2010	
88	IS 10748:2004	Hot-rolled steel strip for welded tubes and pipes (second revision)	Nov 2009	1
89	IS 10794:1984	Mild steel wire for cottor pins	Mar 2012	
90	IS 11513:2011	Hot-rolled carbon steel strip for cold rolling purpose (first revision)	Sep 2011	
91	IS 11587:1986   ISO 4952:2003	Structural weather resistant steels	Mar 2012	
92	IS 11951:1995 / ISO	Cold reduced blackplate in coil form for the prod of tinplate or electroytic chromium/chromium oxide- coated steel	Apr 2009	
93	IS 12262:1988	Trapezoidal steel wires for spring washers	Mar 2012	
94	IS 12313:1988   ISO 4999:2005	Hot dip terene coated carbon steel sheet	Mar 2012	1
95	IS 12367:1988	Cold-rolled carbon steel strips/coils for manufacture of welded tubes	Mar 2012	
96	IS 12457:1988   ISO 7788:1985	Code of practice for evaluation repairs and acceptance limits of surface defects in steel plates, and wide flats	Mar 2012	
97	IS 12591:2006 / ISO 11950:1995	Cold-reduced electrolytic chromium/chromium oxide coated steel (first revision)	Mar 2012	1

\* INDICATES STANDARDS UNDER REVISION  
/ INDICATES DUAL NUMBER STANDARDS

\*\* INDICATES STANDARDS TO BE REVISED  
/ INDICATES EQUIVALENT STANDARDS

98 2012	IS 13566:1992	Recommended practice of pickling by H2SO4 levelling and oiling of LPG sheets	Mar	
99	IS 13752:1993	Guidelines for reporting sequence of elements in steel & pig iron and mechanical properties in steel	Feb 2013	
100	* IS 14246:1995	Continuously pre-painted galvanised steel sheets and coils	Sep 2010	
101	IS 14284:1996 / ISO	Steel and iron sampling and preparation of samples for the determination of chemical composition	Jan 2011	
102	IS 14491:1997   ISO 13887:2004	Low carbon high strength cold rolled steel sheets and coils for cold forming	Mar 2012	
103	IS 14650:1999	Carbon steel cast billet ingots, billets, blooms and slabs for re rolling purposes	Nov 2009	1
104	IS 15103:2002	Fire resistant steel	Feb 2013	1
105	IS 15391:2003   IEC 60404-8-2&3:1998	Cold rolled non-oriented electrical steel and strip delivered in semi processed state	Feb 2013	3
106	IS 15647:2006	Hot rolled steel narrow width strip for welded tubes & pipes	Sep 2010	
107	IS 15911:2010	Structural steel (ordinary quality) - Specification	May 2011	
108	IS 15914:2011   ISO 4978:1983	High tensile strength plat rolled steel plate (upto 6 mm), sheet and strip for the manufacture of welded gas cylinder	Sep 2011	
109	IS 15961:2012	Hot-dip aluminium zinc alloy metallic coated steel sheet & strip (plain)	Jun 2012	
110	IS 15962:2012   ISO 24314:2006	Structural steels for buildings and structures with improved seismic resistance	Jun 2012	
111	IS 15965:2012	Pre-painted aluminium zinc alloy metallic coated steel strip & sheet (plain)	Jun 2012	
112	IS 16124:2004 / ISO	Steel wire rod - dimensions and tolerances	Apr 2009	
113	IS 16160:2005 / ISO	Continuously hot rolled steel sheet products - Dimensional and shape tolerances	Aug 2012	
114	IS 16162:2005 / ISO	Continuously cold-rolled steel sheet products - Dimensional and shape tolerances	Aug 2012	
115	IS 16163:2005 / ISO	Continuously hot dipped coated steel steel products dimensional & shape tolerances	Aug 2012	

#### FINALISED DRAFTS UNDER PRINT

1	DOC.MTD 4(5055)	First Revision of IS 14246
2	DOC.MTD 4(5042)	Second revision of IS 1956(Pt 4)

\* INDICATES STANDARDS UNDER REVISION

\*\* INDICATES STANDARDS TO BE REVISED

**DRAFT STANDARDS FINALIZED BUT NOT YET UNDER PRINT**

1 DOC.MTD 4(4852) Second revision of IS 1762 (Pt 1)

**DRAFT STANDARD COMPLETED WIDE CIRCULATION**

1 DOC.MTD 4(5040) Second revision of IS 1956(Part 2)

2 DOC.MTD 4(5041) Second revision of IS 1956(Part 3)

**DRAFT STANDARDS ISSUED IN WIDE CIRCULATION**

1 DOC.MTD 4(5198) Draft Amendment No. 1 to IS 15914:2011

2 DOC.MTD 4(5206) Draft Amendment NO. 2 to IS 513:2008

3 DOC.MTD 4(5207) Galvanized steel sheet (plain and corrugated (seventh revision of IS 277)



MTD 5 FERRO ALLOYS SECTIONAL COMMITTEE

**SCOPE** - Standardization in the field of ferro alloys and other metallic additions used for iron steel making including their chemical/instrumental analysis  
LIAISON  
ISO/TC 132 Ferroalloys

SI. No.	IS Number/ DOC Number	Title	Reaffirm Date	No. of Amd.
<b>STANDARDS PUBLISHED</b>				
1	IS 1110:1990	Ferrosilicon (fourth revision)	Mar 2009	1
2	IS 1170:1992	Ferrochromium (second revision)	Mar 2009	1
3	IS 1171:2011	Ferromanganese (fifth revision)		
4	IS 1466:1985	Ferrovandium (third revision)	Mar 2009	
5	IS 1467:1993	Ferrotungsten ( third revision)	Mar 2009	
6	IS 1468:2000	Ferro titanium ( fourth revision)	Mar 2009	
7	IS 1469:1993	Ferromolybdenum ( fourth revision )	Mar 2009	
8	IS 1470:2011	Silicomanganese (fourth revision)		1
9	IS 1471:1988	Ferrophosphorous (second revision)	Mar 2009	
10	IS 2021:1993	Metallic manganese(second revision)	Mar 2009	
11	IS 2022:1997	Calcium silicon (third revision)	Mar 2009	
12	IS 2023:1993	Metallic chromium (second revision)	Mar 2009	
13	IS 2024:1988	Ferrosilicochromium (third revision)	Mar 2009	
14	IS 2085:1962	Code for designation of ferro alloys	Sep 2007	
15	IS 2301:2000	Metallic silicon (second revision)	Mar 2009	
16	IS 2391:1970	Foundry nickel (first revision)	Mar 2009	
17	IS 2782:1964	Primary nickel	Mar 2011	1

\* INDICATES STANDARDS UNDER REVISION  
/ INDICATES DUAL NUMBER STANDARDS

\*\* INDICATES STANDARDS TO BE REVISED  
/ INDICATES EQUIVALENT STANDARDS

18	* IS 3011:1973	Ferrosilicozirconium (first revision)	Mar 2011	
19	IS 3012:1985	Chromemanganese ( first revision )	Mar 2011	
20	IS 3013:1991	Ferroboron ( Third revision)	Mar 2011	
21	IS 3014:1993	Ferroniobium (Ferrocolumbium) (second revision)	Mar 2009	
22	IS 4182:1988	Misch metal (first revision)	Mar 2009	
23	IS 4409:1973	Ferronickel (first revision)	Mar 2011	1
24	IS 5632:1970	Wolframite concentrate	Mar 2011	
25	IS 5633:1973	Vanadium pentoxide (first revision)	Mar 2011	
26	IS 5634:1987	Molybdenum oxide (technical)(first revision)	Mar 2011	
27	IS 7148:1980	Ferro alloys for welding industry	Mar 2011	1
28	IS 7965:1976	Niobium (Columbium)	Mar 2011	
29	IS 11945:1987	Charge chrome	Mar 2011	
30	IS 12908:1990	Ferroaluminium	Mar 2009	
31	IS 13164:1991	Ferrosilicomagnesium	Mar 2011	
32	IS 15765:2008	Method of sampling ferro alloys for sieve analysis and size determination		

**STANDARDS UNDER REVISION**

**/ INDICATES DUAL NUMBER STANDARDS**

**\*\* INDICATES STANDARDS TO BE REVISED**

**| INDICATES EQUIVALENT STANDARDS**

MTD 6 PIG IRON AND CAST IRON SECTIONAL COMMITTEE

**SCOPE** - Standardization in the field of pig iron, various types of cast iron and castings  
LIAISON  
ISO/TC 5 Ferrous metal pipes and metallic fittings  
ISO/TC 25 Cast iron and pig iron

Sl. No.	IS Number/ DOC Number	Title	Reaffirm Date	No. of Amd.
<b>STANDARDS PUBLISHED</b>				
1	IS 210:2009	Grey iron castings (fifth revision) (Superseding IS 6331:1987)		
2	IS 1536:2001	Centrifugally cast (spun) iron pressure pipes for water, gas and sewage (fourth revision)	Jan 2012	4
3	IS 1537:1976	Vertically cast iron pressure pipes for water, gas and sewage (first revision)	Aug 2010	6
4	IS 1538:1993	Cast iron fittings for pressure pipes for water, gas and sewage (third revision)	Nov 2009	4
5	IS 1729:2002	Cast iron/ductile iron drainage pipes and pipe fittings for ground non-pressure pipe line socket and spigot series (second revision)	Dec 2012	4
6	IS 1865:1991	Iron castings with spheroidal or nodular graphite (third revision)	Aug 2010	
7	IS 1879:2010	Malleable cast iron pipe fittings (third revision)		3
8	IS 1956(Part 7):1976	Glossary of terms relating to Iron & Steel- Part 7 Wrought iron	Aug 2008	2
9	IS 2084:1991	Code for designation of pig iron (second revision)	Jan 2012	
10	IS 2749:1974	Austenitic iron castings (first revision)	Aug 2010	
11	IS 3005(Part 1):1979	Grey cast iron ingot moulds, stools and slag ladles Part 1 Bottom stools for large size ingot mould weighing 8 tonnes and higher (first revision)	Dec 2012	1
12	IS 3005(Part 2):1979	Part 2 Grey cast iron ingot moulds of mass more than 8 tonnes (first revision)	Aug 2010	1
13	IS 3005(Part 3):1982	Part 3 Grey cast iron ingot moulds of mass more than one tonne and up to 8 tonnes (first revision)	Aug 2010	1
14	IS 3005(Part 4):1984	Part 4 Grey cast iron ingot moulds of mass up to 1 tonne (first revision)	Aug 2010	1
15	IS 3355:1974	Grey iron castings for elevated temperatures for non-pressure containing parts (first revision)	Aug 2010	
16	IS 3516:1966	Cast iron pipe flanges and flanged fittings for petroleum industry	Aug 2010	1
17	IS 3896:1961	Comparison of Indian and overseas standards for iron castings	Aug 2010	

\* INDICATES STANDARDS UNDER REVISION

\*\* INDICATES STANDARDS TO BE REVISED

18	IS 3896(Part 1):1978	Comparison of Indian and overseas standards for iron castings Part 1 Grey iron castings (first revision)	Aug 2010	
19	IS 3896(Part 2):1985	Comparison of Indian and overseas standards for iron castings (first revision) Part 2 Spheroidal Graphite Iron Castings	Aug 2010	
20	IS 3989:2009	Centrifugally cast (spun) iron spigot and socket soil,waste ventilating and rain water pipes, fittings, and accessories (third revision)		2
21	IS 4771:1985	Abrasion-resistant iron castings (second revision)	Aug 2010	
22	IS 5519:1979	Deviations for untoleranced dimensions and mass of grey iron castings (first revision)	Aug 2010	
23	* IS 5531:1988	Cast iron specials for asbestos-cement pressure pipes for water, gas and sewage (second revision)	Dec 2012	
24	IS 5787:1986	Spheroidal or nodular graphite iron castings for paper mill dryer rolls (first revision)	Jan 2012	1
25	IS 5788:1986	Iron castings with spheroidal or nodular graphite for pressure containing partsfor use at elevated temperatures (first revision)	Aug 2010	1
26	IS 5789:1993	Austenitic spheroidal graphite iron casting for pressure containing parts suitable for low-temperature service (first revision)	Nov 2009	
27	IS 6418:1971	Cast iron and malleable cast iron flanges for general engineering purposes	Aug 2010	
28	IS 6629:1972	Cast iron rolls	Aug 2010	
29	IS 7181:1986	Horizontally cast iron double flanged pipes for water, gas and sewage (first revision)	Aug 2010	3
30	IS 7520:1974	Corrosion resistant high silicon iron castings	Aug 2010	
31	IS 7925:1976	Low alloy types of abrasion resistant iron castings	Nov 2009	
32	* IS 8329:2000	Centrifugally cast (spun) ductile iron pressure pipes for water, gas and sewage (third revision)	Aug 2010	2
33	IS 8349:1977	Deviations for untoleranced dimensions of malleable iron castings	Aug 2010	
34	IS 8350:1977	Deviations for untoleranced dimensions of spheroidal or nodular graphite iron castings	Aug 2010	1
35	IS 8794:1988	Cast iron detachable joints for use with asbestos cement pressure pipes (first revision)	Dec 2012	2
36	IS 9321:1979	Material for alloy cast iron valve seat inserts	Aug 2010	
37	* IS 9523:2000	Ductile iron fittings for pressure pipes for water,gas and sewage (first revision)	Aug 2010	3

38	IS 9630:1980	Recommended practice for production of spheroidal graphite	Nov 2009	1
39	IS 10207:1982	Methods of sampling grey iron and malleable iron castings	Aug 2010	
40	IS 10292:1988	Dimensional requirements for rubber sealing rings for C.I.D. joints in asbestos cement piping (first revision)	Dec 2012	
41	IS 10299:1982	Cast iron saddle pieces for service connection from asbestos cement pressure pipes	Aug 2010	
42	IS 11606:1986	Methods of sampling cast iron pipes & fittings	Aug 2010	
43	IS 12820:2004	Dimensional requirements of rubber gaskets for mechanical joints and push-on joints for use with cast iron pipes and fittings for carrying water, gas and sewage (first revision)	Nov 2009	2
44	IS 12987:1991	Cast iron detachable joints for use with asbestos cement pressure pipes (light duty)	Aug 2010	
45	IS 12988:1991	Dimensional requirements for rubber sealing rings for CID joints in asbestos cement piping for light duty AC pipes	Aug 2010	
46	* IS 13382:2004	Cast iron specials for mechanical and push-on flexible joints for pressure pipelines for water, gas and sewage - Specification (first revision)	Nov 2009	
47	IS 13502:1992	Pig iron	Aug 2010	
48	IS 14329:1995	Malleable iron castings	Aug 2010	
49	IS 15338:2003	Spectrometric analysis of cast iron by direct reducing optical emission vacuum spectrometer - Point to plane technique	Aug 2008	
50	IS 15905:2011	Hubless centrifugally cast (spun) iron pipes, fittings and accessories - spigot series - Specification		

#### **FINALISED DRAFTS UNDER PRINT**

1	DOC.MTD 6(5028)	Specification for Abrasion resistant iron castings (third revision of IS 4771)		
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#### **DRAFT STANDARDS FINALIZED BUT NOT YET UNDER PRINT**

1	DOC.MTD 6(5029)	Cast iron specials for asbestos cements pressure pipes for water and sewage - Specification (third revision of IS 5531)		
2	DOC.MTD 6(5203)	Cast iron specials for mechanical and push-on flexible joints for pressure pipelines for water, gas and sewage - Specification (second revision of IS 13382)		

MTD 7 LIGHT METALS AND THEIR ALLOYS SECTIONAL COMMITTEE

**SCOPE** - Standardization in the field of aluminium, magnesium, titanium and their alloys and products (other than structural sections) including their chemical instrumental analysis

LIAISON

ISO/TC 79 Light metals and their alloys

SI. No.	IS Number/ DOC Number	Title	Reaffirm Date	No. of Amd.
<b>STANDARDS PUBLISHED</b>				
1	SP 1 : 1967	Comparision of Indian and overseas standards on aluminium alloy castings	Dec 2012	
2	IS 21:1992	Wrought aluminium and aluminium alloys for manufacture of utensils (fourth revision)	Dec 2011	1
3	IS 23:1980	Primary aluminium ingots for remelting for aircraft purposes (third revision)	Dec 2011	
4	IS 202:1981	Aluminium casting alloy ingots and casting for aircraft purposes (third revision)	Dec 2011	1
5	IS 617:1994	Aluminium and aluminium alloy ingots and castings for general engineering purposes (third revision) (Superseded IS 20:1977)	Mar 2010	1
6	IS 733:1983	Wrought aluminium and aluminium alloy bars, rods and sections for general engineering purposes (third revision)	Dec 2011	1
7	IS 734:1975	Wrought aluminium and aluminium alloys, forging stock and forgings for general engineering purposes (second revision)	Dec 2011	
8	IS 736:1986	Wrought aluminium and aluminium alloy plate for general engineering purposes (third revision)	Dec 2011	
9	IS 737:2008	Wrought aluminium and aluminium alloy sheet and strip for general engineering purposes (fourth revision)	Dec 2012	
10	IS 738:1994	Wrought aluminium alloys, drawn tube for general engineering purposes (third revision)	Mar 2010	
11	IS 739:1992	Wrought aluminium and aluminium alloy wire for general engineering purposes (third revision)	Dec 2011	
12	IS 740:1977	Wrought aluminium and aluminium alloy rivet stock for general engineering purposes (second revision)	Dec 2011	
13	IS 1253:1992	Aluminium for use in iron and steel manufacture (third revision)	Dec 2011	
14	IS 1254:2007	Corrugated aluminium sheet (fourth revision)	Dec 2011	
15	IS 1284:1975	Wrought aluminium alloy bolt and screw stock for general engineering purposes (second revision)	Dec 2011	
16	IS 1285:2002	Wrought aluminium and aluminium alloys - Extruded round tube and hollow sections for general engineering purposes (third revision)	Dec 2012	

17	IS 1820:1979	Recommended shapes and sizes for aluminium notched bars and ingots for remelting purposes (first revision)	Dec 2011	
18	IS 2047:1992	Aluminium alloy hardeners (Master alloys) (second revision)	Dec 2011	1
19	IS 2066:1962	Coding and classification for non-ferrous scrap metals and residues	Mar 2010	
20	IS 2067:1975	Wrought aluminium wire for electrical purposes (first revision)	Dec 2012	1
21	IS 2304:1962	Procedure for inspection and testing of light metals (aluminium and magnesium) and their alloy ingots and castings for aircraft purposes	Dec 2011	
22	IS 2479:1981	Colour code for the identification of aluminium and aluminium alloys for general engineering purposes (second revision)	Dec 2011	
23	IS 2525:1982	Dimensions for wrought aluminium and aluminium alloys, wire (first revision)	Dec 2011	
24	IS 2590:1987	Primary aluminium ingots for remelting for general engineering purposes (second revision)	Dec 2011	
25	IS 2673:2002	Dimensions for wrought aluminium and aluminium alloys extruded round tube (second revision)	Dec 2012	
26	IS 2676:1981	Dimension for wrought aluminium and aluminium alloy sheet and strip (first revision)	Dec 2011	
27	IS 2677:1979	Dimensions for wrought aluminium and aluminium alloys, plates and hot rolled sheets (first revision)	Dec 2011	
28	IS 2678:1987	Dimensions and tolerances for wrought aluminium and aluminium alloy drawn roundtube (second revision)	Dec 2011	
29	IS 3420:1976	Procedure for inspection and testing of aluminium alloy sheets and strips for aircraft purposes (first revision)	Dec 2011	
30	IS 3436:1978	Aluminium clad aluminium alloy sheet and strip for aircraft purposes (Alloy 24345) (first revision)	Dec 2011	
31	IS 3577:1992	Wrought aluminium and aluminium alloys rivet, bolt and screw stock - Dimensions and tolerances (first revision)	Dec 2011	
32	IS 3704:1966	Methods for sampling of light metals and their alloy products	Dec 2011	
33	IS 3965:1981	Dimensions for wrought aluminium and aluminium alloy bar, rod and section (first revision)	Dec 2011	1
34	IS 4026:2007	Aluminium ingots billets and wire bars (EC grade) (fourth revision)	Dec 2011	
35	IS 5047(Part 1):1986	Glossary of terms relating to aluminium and aluminium alloys Part 1 Unwrought and wrought metals (second revision)	Dec 2011	
36	IS 5047(Part 2):1979	Part 2 Plant and operations, thermal treatment, control and testing, finishing	Dec 2011	

37	IS 5047(Part 3):1979	Part 3 Geometric properties and tolerances, structural and surface defects	Dec 2011	
38	IS 5052:1993	Aluminium and its alloys - Temper designations (first revision)	Dec 2012	
39	IS 5082:1998	Wrought aluminium and aluminium alloy bars, rods, tubes and sections for electrical applications (second revision)	Dec 2012	2
40	IS 5484:1997	EC grade aluminium rod produced by continuous casting and rolling (first revision)	Dec 2011	1
41	IS 6051:1970	Code for designation of aluminium and its alloys	Mar 2010	
42	IS 6477:1983	Dimensions for wrought aluminium and aluminium alloys, extruded hollow section (first revision)	Mar 2010	
43	IS 6694:1999	Magnesium ingot for remelting (second revision)	Mar 2010	
44	IS 6751:1972	Aluminium alloy castings and strips for bearings	Mar 2010	
45	IS 6754:1972	Aluminium alloy ingots for bearings	Mar 2010	
46	IS 7092(Part 1):1992	Aluminium alloy tubes for irrigation purposes Part 1 Welded tubes (second revision)	Dec 2011	
47	IS 7092(Part 2):1987	Part 2 Extruded tubes (second revision)	Dec 2011	2
48	IS 7428:1974	Aluminium alloy extruded bars, rods and sections (for aircraft purposes) (Alloy24345)	Dec 2011	
49	IS 7429:1974	Procedure for inspection and testing of aluminium and aluminium alloy extruded bars, rods and sections (for aircraft purposes)	Dec 2011	
50	IS 7670:2002	Aluminium alloy forging stock and forgings (for parts operated at elevated temperatures) for aerospace applications (Alloy 22588) (first revision)	Dec 2012	
51	IS 7674:1975	Procedure for inspection and testing of aluminium and aluminium alloy forging stock and forgings for aircraft purposes	Dec 2011	
52	IS 7793:1975	Aluminium alloys for IC engine pistons	Dec 2011	1
53	IS 7882:1975	Aluminium alloy sheet and strip for aircraft purposes (Alloy 19000)	Mar 2010	
54	IS 7883:1975	Aluminium-manganese sheet and strip for aircraft purposes (Alloy 31000)	Mar 2010	
55	IS 7902:2001	Aluminium alloy forging stock and forgings (Alloy 24345) for aircraft purposes (first revision)	Dec 2012	
56	IS 8474:1977	Procedure for inspection and testing of aluminium and aluminium alloy wires (for rivets) for aircraft purposes	Dec 2011	

\* INDICATES STANDARDS UNDER REVISION

\*\* INDICATES STANDARDS TO BE REVISED



57	IS 8513:1977	Aluminium alloy wire for cold forged rivets for aircraft purposes (Alloy 55000)	Mar 2010	1
58	IS 8514:1977	Aluminium alloy wire for cold forged rivets for aircraft purposes (Alloy 24530)	Mar 2010	1
59	IS 8515:1977	Aluminium wire for cold forged rivets for aircraft purposes (Alloy 19500)	Mar 2010	1
60	IS 8560:1977	Aluminium clad aluminium alloy sheet and strip for aircraft purposes (Alloy 24530)	Mar 2010	
61	IS 8561:1977	Aluminium alloy clad sheet and strip for aircraft purposes (Alloy 76528)	Mar 2010	
62	IS 8936:1978	Aluminium alloy for wire for cold forged rivets for aircraft purposes (Alloy 24350)	Dec 2011	
63	IS 8937:1978	Aluminium alloy wire for cold forged rivets for aircraft purposes (Alloy 22500)	Mar 2010	
64	IS 8938:1978	Aluminium alloy wire for cold forged rivets for aircraft purposes (Alloy 24345)	Mar 2010	
65	IS 9612:1980	Aluminium tubes for refrigeration purposes	Dec 2011	
66	IS 9997:1991	Aluminium alloy redraw rods for electrical purposes (first revision)	Dec 2011	1
67	IS 10257:1982	Aluminium foil stock	Mar 2010	
68	IS 10259:1982	General conditions for delivery and inspection of aluminium and aluminium alloy products	Mar 2010	
69	IS 11804:1986	Code of practice for manufacture of aluminium alloy pressure die castings	Dec 2011	
70	IS 11861:1986	Titanium and titanium alloy strip, sheet and plate	Mar 2010	
71	IS 11890:1987	High purity aluminium ingot for remelting for special applications	Dec 2011	
72	IS 11901:1986	Titanium sponge	Mar 2010	
73	IS 11902:1986	Titanium and titanium alloy bars and billets	Mar 2010	
74	IS 11998:1987	Aluminium for the manufacture of alloys for IC engine pistons	Dec 2011	
75	IS 12389:1988	Seamless and welded titanium and titanium alloy fitting	Mar 2010	
76	IS 12442:1988	Seamless and welded titanium and titanium alloy tubes for condensers and heat exchangers	Mar 2010	
77	IS 12644:1989	Titanium and titanium alloy pipe, seamless and welded	Mar 2010	

\* INDICATES STANDARDS UNDER REVISION  
/ INDICATES DUAL NUMBER STANDARDS

\*\* INDICATES STANDARDS TO BE REVISED  
| INDICATES EQUIVALENT STANDARDS

78	IS 12828:1989	Recommended practice for descaling and cleaning titanium and titanium alloy surfaces	Mar 2010	
79	IS 14712:1999	Wrought Aluminium and its alloy chequered tread sheets for general engineering purposes	Mar 2010	1
80	IS 15392:2003   ISO 7271:1982	Aluminium & Aluminium alloy bare foil for food packaging	Dec 2012	
81	IS 16011:2012	Aluminium and Aluminium alloy foil for pharmaceutical packaging	Nov 2012	
82	IS 16012:2012	Poly laminated aluminium cable wrap	Nov 2012	

**DRAFT STANDARDS FINALIZED BUT NOT YET UNDER PRINT**

1	DOC.MTD 7(5204)	Amendment No. 1 to IS 15392:2003		
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*\* INDICATES STANDARDS UNDER REVISION  
/ INDICATES DUAL NUMBER STANDARDS*

*\*\* INDICATES STANDARDS TO BE REVISED  
| INDICATES EQUIVALENT STANDARDS*

MTD 8 COPPER AND COPPER ALLOYS SECTIONAL COMMITTEE

**SCOPE** - Standardization in the field of copper and copper alloys and products and their chemical/instrumental analysis

LIAISON

ISO/TC 26 Copper and copper alloys

SI. No.	IS Number/ DOC Number	Title	Reaffirm Date	No. of Amd.
<b>STANDARDS PUBLISHED</b>				
1	IS 28:1985	Phosphor bronze ingots and castings (fourth revision)	Apr 2011	1
2	IS 191:2007	Copper (fourth revision)	Apr 2011	
3	IS 288:1981	Arsenical copper rods for boiler stay bolts and rivets (second revision)	Apr 2011	1
4	IS 291:1989	Naval brass rods and sections for machining purposes (third revision)	Apr 2011	
5	IS 292:1983	Leaded brass ingots and castings (second revision)	Apr 2009	1
6	IS 304:1981	High tensile brass ingots and castings (second revision)	Apr 2011	
7	IS 305:1981	Aluminium bronze ingots and castings (second revision)	Apr 2011	
8	IS 306:1983	Tin bronze ingots and castings (third revision)	Apr 2009	1
9	IS 318:1981	Leaded tin bronze ingots and castings (second revision)	Apr 2011	2
10	IS 319:2007	Free cutting brass bars, rods and sections (fifth revision)	Feb 2012	
11	IS 320:1980	High tensile brass rods and sections (other than forgings stock) (second revision)	Apr 2011	1
12	IS 407:1981	Brass tubes for general purposes (third revision)	Apr 2011	2
13	IS 410:1977	Cold rolled brass sheet, strip and foil (third revision)	Apr 2011	1
14	IS 422:1981	Brass sheet and strip for the manufacture of utensils (second revision)	Apr 2011	
15	IS 531:1981	Leaded brass strips for instrument parts (second revision)	Apr 2011	
16	IS 613:2000	Copper rods and bars for electrical purposes (third revision)	Apr 2011	1
17	IS 1028:1987	Silicon bronze ingots and castings (second revision)	Apr 2009	

\* INDICATES STANDARDS UNDER REVISION

\*\* INDICATES STANDARDS TO BE REVISED

18	IS 1264:1997	Brass gravity die castings (ingots and castings) (fourth revision)	Apr 2009	1
19	IS 1408:1968	Recommended procedure for inspection of copper-base alloy sand castings (first revision)	Apr 2011	
20	IS 1458:1965	Railway bronze ingots and casting (revised)	Apr 2011	4
21	IS 1545:1994	Solid drawn copper and copper alloy tubes for condenser and heat exc hangers - Specification (third revision)	Apr 2011	
22	IS 1897:2008	Copper strip for electrical purposes (third revision)	Nov 2008	
23	IS 2283:2000	Nickel silver sheet, strip and foil (second revision)	Apr 2011	
24	IS 2305:1988	Method for mercurous nitrate test for copper and copper alloys (first revision)	Apr 2009	
25	IS 2376:1963	Colour code for the identification of copper & copper alloys	Apr 2011	
26	IS 2378:1974	Code for designation of copper and copper alloys (first revision)	Apr 2011	
27	IS 2451:1994	Nickel silver ingots and castings for cutlery and hollow-ware (first revision)	Apr 2011	1
28	IS 2501:1995	Solid drawn copper tubes for general engineering purposes (third revision)	Apr 2011	
29	IS 2704:1983	Brass wires for cold-headed and machined parts (first revision)	Apr 2009	1
30	IS 2768:1982	Copper alloy strip for bullet envelope (first revision)	Apr 2009	
31	IS 2826:1986	Dimensions and tolerances for copper and copper alloy rods and bars for general engineering purposes (third revision)	Apr 2011	
32	IS 3051:1988	Dimensions and tolerances for wrought copper and copper alloy plate (first revision)	Apr 2011	
33	IS 3052:1986	Dimensions and tolerances for wrought copper and copper alloy sheet, strip and foil for general engineering purposes (second revision)	Apr 2011	
34	IS 3091:1999	Aluminium bronze ingots and castings for overhead fittings in electrical traction (First Revision)	Apr 2009	
35	IS 3167:1982	Cap copper alloy strip (first revision)	Apr 2009	
36	IS 3168:1981	Brass strip and foil for deep drawing (first revision)	Apr 2011	
37	IS 3288(Part 1):1986	Glossary of terms for copper and copper alloys Part 1 Materials (third revision)	Apr 2011	

\* INDICATES STANDARDS UNDER REVISION

\*\* INDICATES STANDARDS TO BE REVISED

38	IS 3288(Part 2):1986	Part 2 Unwrought form and cast form	Apr 2011	
39	IS 3288(Part 3):1986	Part 3 Wrought forms	Apr 2011	
40	IS 3288(Part 4):1986	Part 4 Processing	Apr 2011	
41	IS 3288(Part 5):1986	Part 5 Heat treatment	Apr 2011	
42	IS 3288(Part 6):1986	Part 6 Finishes	Apr 2011	
43	IS 3288(Part 7):1986	Part 7 Dimensional surfaces and structural characteristics	Apr 2011	
44	IS 3288(Part 8):1986	Part 8 Packing	Apr 2011	
45	IS 3331:2007	Copper and brass strips/foils for radiator cores (second revision)	Nov 2007	
46	IS 4076:1983	Hard brass wires for springs and other special purposes (first revision)	Apr 2009	1
47	IS 4131:1967	Nickel copper alloy castings	Apr 2011	
48	IS 4170:1967	Brass rods for general engineering purposes	Apr 2011	2
49	IS 4171:1983	Copper rods and bars for general engineering purposes (first revision)	Apr 2009	1
50	IS 4412:1981	Copper wires for general engineering purposes (first revision)	Apr 2011	1
51	IS 4413:1981	Brass wires for general engineering purposes (first revision)	Apr 2011	1
52	IS 4519:1977	Dimensions for copper commutator bars (first revision)	Apr 2011	
53	IS 5053:1969	Dimensions for wrought copper and copper alloy rods for fasteners	Apr 2011	
54	IS 5493:1981	Dimensions for wrought copper and copper alloy tubes (first revision)	Mar 2011	
55	IS 5743:1991	Copper master alloys - (first revision)	Apr 2011	
56	IS 5744:1991	Copper alloy screwed ferrules for condenser, heater and cooler tubes (first revision)	Apr 2011	1
57	IS 5885:1977	Copper for commutator bars (first revision)	Apr 2011	
58	IS 6912:2005	Copper and copper alloy forging stock and forgings (second revision) (Superseding IS 3488:1980)	May 2010	

\* INDICATES STANDARDS UNDER REVISION  
/ INDICATES DUAL NUMBER STANDARDS

\*\* INDICATES STANDARDS TO BE REVISED  
| INDICATES EQUIVALENT STANDARDS

59	IS 7608:1987	Phosphor bronze wire for general engineering purposes (first revision)	Apr 2011	1
60	IS 7811:1985	Phosphor bronze rods and bars (first revision)	Apr 2011	4
61	IS 7814:2005	Phosphor bronze sheet and strip (second revision)	May 2010	
62	IS 8328:2007	Free cutting copper bars, rods and sections (first revision)	Feb 2012	
63	IS 8362:1977	Copper and copper alloy rolled plates for condensers and heat exchangers	Apr 2011	
64	IS 8364:1989	Free cutting brass wire (first revision)	Apr 2011	
65	IS 8365:1991	Copper alloys for spot and seam resistance welding electrodes (first revision)	Apr 2011	
66	IS 8631:1977	Copper base alloys for marine propellers	Apr 2011	
67	IS 8859:1978	Cast copper tuyere	Apr 2011	
68	IS 9682:1980	Recommended procedure for inspection of cast copper tuyeres	Apr 2011	
69	IS 9713:1983	Hot rolled electrolytic copper wire rod for electrical conductors (first revision)	Apr 2009	
70	IS 9805:1981	High conductivity copper castings	Apr 2011	
71	IS 9861:1981	Dimensions for wrought copper and copper alloy wires for general engineering purposes	Apr 2011	
72	IS 10569:2005	Aluminium bronze rods and bars (first revision)	May 2010	
73	IS 10709:1983	Brass wires for fourdrinier cloth	Apr 2009	1
74	IS 10710:1983	Phosphor bronze wires used for fourdrinier cloth	Apr 2009	2
75	IS 10742:1983	Cast gun metal rods and bars	Apr 2009	1
76	IS 10757:1983	Nickel silver rods and bars	Apr 2009	1
77	IS 10773:1995	Copper tubes for refrigeration purposes (first revision)	Apr 2011	
78	IS 11109:1984	Silicon brass ingots and castings	Apr 2011	
79	IS 12228:1987 / ISO 4746 : 1977	Method for scale adhesion test for oxygen free copper	Apr 2011	

\* INDICATES STANDARDS UNDER REVISION  
/ INDICATES DUAL NUMBER STANDARDS

\*\* INDICATES STANDARDS TO BE REVISED  
/ INDICATES EQUIVALENT STANDARDS

80 2009	IS 12443:1988	Rolled brass plates for general engineering purposes	Apr	
81	IS 12444:1988	Continuously cast and rolled electrolytic copper wire rods for electrical conductors	Apr 2009	2
82	IS 12558:1988	Recommended shape, size and mass of copper and copper alloy ingots for remelting purposes	Apr 2009	
83	IS 14340:1996	Brass for current carrying parts in electrical wiring accessories	Apr 2011	
84	IS 14810:2000	Copper tubes for plumbing	Apr 2011	
85	IS 14811:2000	Rolled copper plate, sheet, strip and coils for general engineering purposes (Superseding IS 1550, IS 1972 & IS 3487)	Apr 2011	

**DRAFT STANDARD COMPLETED WIDE CIRCULATION**

1	DOC.MTD 8(4984)	Phosphor bronze rods and bars ( second revision of IS 7811)		
2	DOC.MTD 8(5092)	Continuously cast and rods electrolytic copper and oxygen free copper (OFC) wire rods for electrical conductors (first revision of IS 12444)		

**STANDARDS UNDER REVISION**

**\*\* INDICATES STANDARDS TO BE REVISED**

**/ INDICATES DUAL NUMBER STANDARDS**

**| INDICATES EQUIVALENT STANDARDS**

MTD 9 LEAD, ZINC, CADMIUM, TIN, ANTIMONY OTHER NON-FERROUS SPECIAL METALS AND THEIR ALLOYS SECTIONAL COMMITTEE

**SCOPE** - Standardization in the field of lead, zinc, cadmium, tin, antimony, nickel, molybdenum tungsten and other special non-ferrous metals (excluding light metals) and their alloys including their chemical/instrumental analysis  
LIAISON  
ISO/TC 18 Zinc and zinc alloys

Sl. No.	IS Number/ DOC Number	Title	Reaffirm Date	No. of Amd.
<b>STANDARDS PUBLISHED</b>				
1	IS 25:1979	Antifriction bearing alloys (third revision)	May 2008	
2	IS 26:1992	Tin ingot (fourth revision)	May 2008	1
3	IS 27:1992	Pig lead (fourth revision)	May 2008	2
4	IS 193:2000	Soft solder (fifth revision)	Jul 2010	1
5	IS 209:1992	Zinc ingot (fourth revision)	Feb 2012	2
6	IS 211:1992	Antimony ingot (fourth revision)	May 2008	
7	IS 404(Part 1):1993	Lead pipes Part 1 For other than chemical purposes (third revision)	May 2008	
8	IS 404(Part 2):1993	Part 2 For chemical purposes (third revision)	May 2008	
9	IS 405(Part 1):1992	Lead sheet and strips Part 1 For chemical industries (third revision)	May 2008	
10	IS 405(Part 2):1992	Part 2 For other than chemical purposes (third revision)	May 2008	2
11	IS 713:1981	Zinc base alloy ingots for die casting (second revision)	May 2008	
12	IS 742:1981	Zinc base alloy die castings (second revision)	May 2008	
13	IS 1654:1992	Lead antimony alloys (third revision)	May 2008	1
14	IS 1655:1991	Zinc alloys - Code of practice for manufacture of pressure die castings (second revision)	Feb 2012	
15	IS 1817:1961	Methods of sampling non-ferrous metals for chemical analysis	Jul 2010	
16	IS 1921:2005	Flux-cored solder wire (second revision)	Jul 2010	
17	IS 2258:1981	Rolled zinc plate, sheet and strip (second revision)	Jul 2010	
* INDICATES STANDARDS UNDER REVISION				
** INDICATES STANDARDS TO BE REVISED				
18	IS 3717:1977	Refined secondary lead (first revision)	May 2008	1



19	IS 4280:1992	Refined secondary tin ingot (second revision)	May 2008	
20	IS 4699:1984	Refined secondary zinc (first revision)	Feb 2012	2
21	IS 5479:1985	Solders for jointing aluminium and aluminium alloys (first revision)	Feb 2012	
22	IS 6344:2006	Cadmium metal (second revision)	Feb 2012	
23	IS 8439:1977	Methods for sampling of lead and lead alloys	May 2008	
24	IS 8475:1977	Lead based antifriction bearing alloy for heavy duty applications	May 2008	
25	IS 11516:2005	Soft solder for electronic applications (first revision)	Jul 2010	
26	IS 11900:1986	Tungsten rods and tungsten wire for lamps and electron devices	Jul 2010	
27	IS 12445:1988	Molybdenum plate, sheet, strip and foil	Jul 2010	
28	IS 12447:1988	Zinc wire for sprayed zinc coatings	May 2008	1
29	IS 12465:1988	Molybdenum wires for lighting and electronic application	Jul 2010	
30	IS 13229:1991	Zinc for galvanizing	May 2008	3
31	IS 13350:1992	Molybdenum rod	Jul 2010	
32	IS 13351:1992	Thoriated tungsten wires and rods	Jul 2010	
33	IS 13923:1993	Lead seal	Feb 2012	1
34	IS 14651:1999	Multifilamentary Nb-Ti super conducting wires	Jul 2010	
35	IS 14688:1999	Lead-Antimony alloy bricks for radiation shielding	Jul 2010	

**\* INDICATES STANDARDS UNDER REVISION**  
**/ INDICATES DUAL NUMBER STANDARDS**

**\*\* INDICATES STANDARDS TO BE REVISED**  
**| INDICATES EQUIVALENT STANDARDS**

MTD 10 PRECIOUS METALS SECTIONAL COMMITTEE  
**SCOPE** - Standardization in the field of precious metals  
 LIAISON  
 ISO/TC 174

Sl. No.	IS Number/ DOC Number	Title	Reaffirm Date	No. of Amd.
<b>STANDARDS PUBLISHED</b>				
1	IS 639:1982	Gold leaf (second revision)	Nov 2009	
2	IS 964:1956	Methods for chemical analysis of silver solder	Feb 2009	
3	IS 1417:1999	Gold and Gold alloys-jewellery/Artefacts -Fineness and Marking-Specification (third revision)	Mar 2009	3
4	IS 1418:2009	Method for assaying of gold in gold bullions gold alloys and jewellery/artefacts -Cupellation (Fire assay) method (second revision)		1
5	IS 1953:1973	Methods of chemical analysis of silver anodes (first revision)	Dec 2010	
6	IS 2112:2003	Grades of silver and silver alloys (first revision)	Dec 2010	4
7	IS 2113:2002	Methods for assaying of silver in silver and silver alloys (first revision)	Dec 2010	3
8	IS 2270:1965	Method for assaying of platinum and platinum alloys	Dec 2010	
9	IS 2271:1967	Recommended method for spectrographic analysis of platinum	Dec 2010	
10	IS 2275:1984	Grades of platinum (first revision)	Dec 2010	
11	IS 2279:1980	Fine silver bar, sheet, wire, granules and token (first revision)	Nov 2009	
12	IS 2767:1984	Gold thread (silver base)(first revision)	Dec 2010	
13	IS 2790:1999	Guidelines for manufacture of 23.3, 22, 21, 18, 14, 12 and 9 carat gold (first revision)	Dec 2010	
14	IS 3088:1967	Method for assaying of fine grade palladium	Dec 2010	
15	IS 3095:1999	Gold solders for use in manufacture of jewellery - Specification (second revision)	Nov 2009	1
16	IS 3096:2003	Fine grade palladium - Specification (first revision)	Dec 2010	
17	IS 3110:1982	Silver leaf (first revision)	Dec 2010	1
18	IS 3111:1984	Silver thread (first revision)	Dec 2010	

\* INDICATES STANDARDS UNDER REVISION  
 / INDICATES DUAL NUMBER STANDARDS

\*\* INDICATES STANDARDS TO BE REVISED  
 / INDICATES EQUIVALENT STANDARDS

19	IS 3112:1984	Gold and silver embroidery materials (first revision)	Dec 2010	
20	IS 3571:1985	Dental gold solders (first revision)	Dec 2010	
21	IS 3578:1985	Dental gold alloy wire (first revision)	Dec 2010	
22	IS 3610:1985	Dental gold foil (first revision)	Dec 2010	
23	IS 4134:1967	Recommended colour classification of rough diamonds	Dec 2010	
24	IS 4703:1968	Methods of chemical analysis of silver-manganese brazing alloys	Dec 2010	
25	IS 4704:1985	Silver tin dental amalgam alloy (first revision)	Dec 2010	1
26	IS 4705:1985	Dental mercury (first revision)	Dec 2010	
27	IS 4799:1985	Dental casting gold alloys, non-porcelain bonding (first revision)	Dec 2010	
28	IS 5954:1985	Dental white gold alloys (first revision)	Dec 2010	
29	IS 6018:1993	Platinum, platinum rhodium catalyst gauges (first revision)	Mar 2012	
30	IS 6019:1993	Platinum dish (first revision)	Nov 2009	
31	IS 6170:1971	Platinum crucible and lid	Nov 2009	
32	IS 6683:1998	Diameters of wires for platinum group metals and their alloys (First Revision)	Nov 2009	
33	IS 6882:1973	Platinum electrodes	Nov 2009	
34	IS 6889:2000	Method for chemical analysis of silver tin dental amalgam alloy (first revision)	Nov 2009	1
35	IS 6890(Part 1):1989	Method for chemical analysis of dental gold alloys Part 1 Determination of gold, silver, palladium and platinum (First Revision)	Nov 2009	
36	IS 6890(Part 2):1975	Part 2 Determination of nickel and zinc	Nov 2009	
37	IS 7225:1985	Dental cobalt chromium casting alloy (first revision)	Dec 2010	
38	IS 7255(Part 1):1974	Methods of chemical analysis of solders for use in goldware Part 1 Determination of gold, silver and copper	Nov 2009	
39	IS 7255(Part 2):1977	Part 2 Determination of cadmium and zinc by polarographic method	Nov 2009	

\* INDICATES STANDARDS UNDER REVISION  
/ INDICATES DUAL NUMBER STANDARDS

\*\* INDICATES STANDARDS TO BE REVISED  
/ INDICATES EQUIVALENT STANDARDS

40	IS 7562:1974	Gold cladding	Nov 2009	
41	IS 8858:1978	Methods for spectrographic analysis of fine silver ingot (grades 9999 and 999)	Dec 2010	
42	IS 8929:1978	High purity gold wire for electrical contacts	Nov 2009	
43	IS 9443:1980	Guidelines for marking purity of silver on silver articles/ornaments	Nov 2009	
44	IS 9925:1981	Method for determination of gold and silver in gold and silver thread and embroidery materials	Nov 2009	
45	IS 11095:1984	Bi-metallic strips and bars with precious metal on phosphor bronze base for electrical contacts	Nov 2009	
46	IS 12144:1987	Fine silver wire for electrical contacts	Nov 2009	
47	IS 13600:1992	Chemical analysis of silver palladium alloys	Nov 2009	
48	IS 14741:1998 / ISO 8654:1987	Colour of gold alloys - Definition, range of colour and designation	Dec 2010	
49	IS 15329:2003	Platinum and platinum alloys, jewellery/artefacts - Fineness and marking - Specification	Feb 2009	
50	IS 15766(Part 1):2007	Part 1 Classification	Mar 2012	1
51	IS 15766(Part 2):2007	Grading polished diamond Part 2 Test methods	Mar 2012	1
52	IS 15820:2009	General requirements for component or assaying & hallmarking centre		
53	IS 15892:2011 / ISO 8653:1986	Jewellery - Ring sizes - Definition Measurement and Designation		
54	IS 15893:2010 / ISO 10713:1992	Jewellery - Gold alloy coating		
55	IS 15940:2011	Jewellery - Determination of platinum in platinum jewellery alloys inductively coupled plasma (ICP) solution - spectrometric method using yttrium as internal standard element (adoption of ISO 11494:2008)		
56	IS 15941:2011	Jewellery - determination of palladium in palladium - jewellery alloys inductively coupled plasma (ICP) solution spectrometric method using yttrium as internal standard element (adoption of ISO 11495:2006)		

**FINALISED DRAFTS UNDER PRINT**

1	DOC.MTD 10(5076)	Gold and gold alloys, jewellery/artefacts - fineness and marking - specification (fourth revision of IS 1417)
2	DOC.MTD 10(5077)	Silver and silver alloys, jewellery/artefacts - fineness and marking -specification (third revision of IS 2112)

\* INDICATES STANDARDS UNDER REVISION  
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/ INDICATES EQUIVALENT STANDARDS

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/ INDICATES DUAL NUMBER STANDARDS*

*\*\* INDICATES STANDARDS TO BE REVISED  
| INDICATES EQUIVALENT STANDARDS*

MTD 11 WELDING GENERAL AND ITS APPLICATION SECTIONAL COMMITTEE

**SCOPE** - Standardization in the field of welding fundamental consumables , equipment (other than electrical) testing training safety etc. and all welding processes including joining, surfacing, repairing and thermal cutting, soldering, brazing, friction welding, explosive, ultrasonic welding etc.

LIAISON

ISO/TC 44 Welding and allied processes

SI. No.	IS Number/ DOC Number	Title	Reaffirm Date	No. of Amd.
<b>STANDARDS PUBLISHED</b>				
1	* SP:	ISI Handbook of manual metal-arc welding for welders	Sep 2008	
2	* SP 12 : 1975	ISI Handbook for gas welders	Sep 2008	
3	* SP 6(7) : 1972	Handbook for structural engineers simple welded girders	Mar 2011	
4	** IS 812:1957	Glossary of terms relating to welding and cutting of metals	Sep 2008	
5	IS 813:1986	Scheme of symbols for welding (revised)	Sep 2008	
6	IS 814:2004	Covered electrodes for manual metal arc welding of carbon and carbon manganese steel (sixth revision)	Mar 2011	1
7	IS 816:1969	Code of practice for use of metal arc welding for general construction in mildsteel (first revision)	Sep 2008	1
8	IS 817:1966	Code of practice for training and testing of metal arc welders (revised)	Sep 2008	
9	IS 817(Part 1):1992	Part 1 Manual metal arc welding (second revision)	Sep 2008	
10	IS 817(Part 2):1996	Part 2 Oxyfuel welding (second revision)	Sep 2008	
11	IS 818:1968	Code of practice for safety and health requirements in electric and gas welding and cutting operations (first revision)	Sep 2008	
12	IS 819:1957	Code of practice for resistance spot welding for light assemblies in mild steel	Sep 2008	1
13	IS 822:1970	Code of procedure for inspection of welds	Sep 2008	
14	IS 1024:1999	Code of practice for use of welding in bridges and structures subject to dynamic loading (first revision)	Jan 2012	
15	* IS 1179:1967	Equipment for eye and face protection during welding (first revision)	Sep 2008	1
16	IS 1261:1959	Code of practice for seam welding in mild steel	Sep 2008	1

\* INDICATES STANDARDS UNDER REVISION  
/ INDICATES DUAL NUMBER STANDARDS

\*\* INDICATES STANDARDS TO BE REVISED  
| INDICATES EQUIVALENT STANDARDS

17	IS 1278:1972	Filler rods and wires for gas welding (second revision)	Sep 2008	2
18	IS 1323:1982	Code of practice for oxy-acetylene welding for structural work in mild steels (second revision)	Sep 2008	
19	IS 1393:1961	Code of practice for training and testing of oxy acetylene welders	Sep 2008	
20	IS 1395:1982	Low and medium alloy steel covered electrodes for manual metal arc welding (third revision)	Sep 2008	
21	IS 2751:1979	Recommended practice for welding of mild steel plain and deformed bars for reinforced construction (first revision)	Sep 2008	
22	* IS 2811:1987	Recommendations for manual tungsten inert gas arc welding of stainless steel (first revision)	Sep 2008	1
23	* IS 2812:1993	Recommendations for manual tungsten inert gas arc welding of aluminium and aluminium alloys (first revision)	Sep 2008	
24	IS 2927:1975	Specification for brazing alloys (first revision)	Sep 2008	1
25	IS 3016:1982	Code of practice for fire precautions in welding and cutting operations (first revision)	Mar 2011	
26	IS 3023:1965	Recommended practice for building up by metal spraying	Sep 2008	
27	IS 3525:1998	Metal arc welding for hull constructions of merchant ships in carbon and carbon-manganese steels (second revision)	Sep 2008	
28	IS 3600(Part 1):1985	Methods of testing fusion welded joints and weld metal in steel (second revision) Part 1 Cruciform fillet weld tensile test	Sep 2008	
29	IS 3600(Part 2):1985	Part 2 Beam impact (charpy V-notch) test	Sep 2008	
30	IS 3600(Part 3):2009 / 4136:2001	Part 3 Transverse tensile test on butt welds		
31	IS 3600(Part 4):1984	Part 4 Longitudinal tensile test on cylindrical weld metal test pieces on butt welds	Mar 2011	
32	IS 3600(Part 5):1983 / ISO 5173:1981	Part 5 Transverse root and face bend test on butt welds (second revision)	Mar 2011	
33	IS 3600(Part 6):1983 / ISO 5177:1984	Part 6 Transverse side bend test on butt welds (second revision)	Sep 2008	
34	IS 3600(Part 7):1985	Part 7 Longitudinal root and face bend test on butt welds	Sep 2008	
35	IS 3600(Part 8):1985	Part 8 Nick break test and fillet weld fracture test	Sep 2008	
36	IS 3600(Part 9):1985	Part 9 Macro and micro examination	Sep 2008	

\* INDICATES STANDARDS UNDER REVISION  
/ INDICATES DUAL NUMBER STANDARDS

\*\* INDICATES STANDARDS TO BE REVISED  
/ INDICATES EQUIVALENT STANDARDS

37	* IS 3613:1974	Acceptance tests for wire flux combination for submerged arc welding (first revision)	Mar 2011	1
38	IS 4353:1995	Submerged arc welding of mild steel and low alloy steels - Recommendations (first revision)	Mar 2011	
39	IS 4943:1968	Assessment of butt and fillet fusion welds in steel sheet, plate and pipe	Sep 2008	
40	IS 4972:1968	Resistance spot welding electrodes	Sep 2008	
41	IS 5139:1995	Repair of cast iron castings by oxy-acetylene and manual metal arc welding - Recommendations (first revision)	Mar 2011	
42	IS 5206:1983	Covered electrodes for manual metal arc welding of stainless steel and other similar high alloy steels (first revision)	Sep 2008	
43	IS 5511:1991	Covered electrodes for manual metal arc welding of cast iron_(first revision)	Sep 2008	1
44	IS 5530:2005	Recommendations for production rectification and repair of steel castings by metal arc welding process (second revision)	Jan 2012	
45	IS 5687:1970	Glossary of terms relating to welding of plastics	Sep 2008	
46	IS 5856:1991	Corrosion and heat resisting chromium-nickel steel solid welding rods, bare electrodes (first revision)	Sep 2008	
47	IS 5857:1970	Nickel and nickel alloy bare solid welding rods and electrodes	Sep 2008	
48	IS 5897:1985	Aluminium and aluminium alloy welding rods and wires and magnesium alloy welding rods (first revision)	Sep 2008	
49	IS 5898:1970	Copper and copper alloy bare solid welding rods and electrodes	Sep 2008	
50	IS 5922:1970	Qualifying tests for welders engaged in aircraft welding	Sep 2008	1
51	IS 6016:2009 / ISO 3253:1998	Gas welding equipment - Hose connection for welding and cutting equipment (second revision)		
52	IS 6409:1971	Code of practice for oxy-acetylene flame cleaning	Sep 2008	
53	* IS 6419:1996	Welding rods and bare electrodes for gas shielded arc welding of structural steel (First revision)	Mar 2010	
54	IS 6431:1971	Tolerances on dimensions of plates cut by flame	Sep 2008	
55	IS 6560:1996	Molybdenum and chromium-molybdenum low alloy steel welding rods and bare electrodes for gas shielded arc welding (first revision)	Mar 2010	
56	* IS 6901:2009 / ISO 2503:1998	Specification for pressure regulators for gas cylinders used in welding, cutting and related processes (first revision)		1

\* INDICATES STANDARDS UNDER REVISION

\*\* INDICATES STANDARDS TO BE REVISED



57	IS 6916:1973	Code of practice for fabrication welding of steel castings	Sep 2008	
58	IS 7273:1974	Method of testing fusion welded joints in aluminium and aluminium alloys	Sep 2008	
59	* IS 7280:1974	Bare wire electrodes for submerged arc welding of structural steels	Sep 2008	1
60	IS 7303:1974	Covered electrodes for surfacing of metal by manual arc welding	Sep 2008	
61	IS 7307(Part 1):1974	Approval tests for welding procedures Part 1 fusion welding of steel	Sep 2008	
62	IS 7310(Part 1):1974	Approval tests for welders working to approved welding procedures Part 1 fusion welding of steel	Mar 2011	
63	IS 7318(Part 1):1974	Approval tests for welders when welding procedure approval is not required Part 1 Fusion welding of steel	Sep 2008	
64	IS 7318(Part 2):1974	Part 2 TIG or MIG welding of aluminium and its alloys	Sep 2008	
65	* IS 7653:1975	Manual blow pipes for welding and cutting	Sep 2008	
66	IS 8002:1976	Recommended procedure for welding of flexible PVC	Sep 2008	
67	IS 8004:1976	Recommended procedure for welding of rigid PVC	Sep 2008	
68	IS 8363:1976	Bare wire electrodes for electroslag welding of steels	Sep 2008	
69	IS 8455:1977	Recommended procedure for welding of polythene	Sep 2008	1
70	IS 8484:1998	Metal powders welding electrodes (first revision)	Mar 2010	
71	IS 8666:1977	Copper and copper alloy covered electrodes for manual metal arc welding	Sep 2008	
72	IS 8736:1977	Nickel and nickel alloy covered electrodes for metal arc welding	Sep 2008	
73	IS 8987:1978	Recommended practice for air carbon arc gauging and cutting	Sep 2008	
74	IS 9006:1978	Recommended practice for welding of clad steels	Sep 2008	
75	IS 9417:1989	Recommendations for welding cold worked bars for reinforced concrete construction (first revision)	Sep 2008	
76	IS 9495:1980	Test for brazeability of brazing alloys	Sep 2008	
77	IS 9524:1980	Recommended procedure for repair welding of steel components by aluminothermic process	Nov 2012	1

\* INDICATES STANDARDS UNDER REVISION  
/ INDICATES DUAL NUMBER STANDARDS

\*\* INDICATES STANDARDS TO BE REVISED  
/ INDICATES EQUIVALENT STANDARDS

78	IS 9595:1996	Metal arc welding of carbon and carbon manganese steels - Recommendations (first revision)	Jun 2007	
79	IS 10178:1995	CO2 gas shielded metal arc welding of structural steels - Recommendations (first revision)	Mar 2011	
80	IS 10186:1982	Recommendations for manual tungsten inert gas arc welding of copper and copper alloys	Sep 2008	
81	IS 10234:1982	Recommendations for general pipeline welding	Sep 2008	1
82	** IS 10793:1983 / ISO 6520:1982	Classification of defects in metallic fusion welds with explanations	Mar 2011	
83	* IS 10801:1984	Recommended procedure for heat treatment of welded fabrications	Sep 2008	
84	* IS 10803:1984	Method of sampling and preparation of weld pad for chemical analysis of weld metal from covered electrodes for manual metal arc welding	Jan 2012	1
85	IS 10811:1984	Oxygen and acetylene manifold regulators for welding, cutting and related processes	Mar 2011	
86	IS 10842:1984	Testing and evaluation procedure for Y groove crackability test	Mar 2011	
87	IS 11368(Part 1):1985	Comparison of Indian and overseas classification and coding of welding filler materials Part 1 Flux coated mild steel and medium tensile steel electrodes for manual metal arc welding	Sep 2008	1
88	** IS 11802:1986	Method of determination of diffusible hydrogen content of deposited weld metal from covered electrodes in welding mild and low alloy steels	Sep 2008	1
89	* IS 11991:1986	Recommended practice for flash butt welding of tubes, rods and other sections in carbon and alloy steel	Sep 2008	
90	IS 13007:1991   6848:1984	Tungsten electrodes for inert gas shielded arc welding and for plasma cutting and welding	Sep 2008	
91	IS 13043:1991   2401:1972	Covered manual metal arc welding electrodes - Determination of efficiency, metal recovery and depositin co-efficient	Sep 2008	
92	IS 13851:1993	Storage and redrying of covered electrodes before use - recommendations	Jan 2012	1
93	IS 14289:1995	Manual tungsten inert gas arc welding of nickel and nickel alloys - Recommendations	Mar 2011	
94	IS 14419:1996	Acceptance standards for radiographic examination of welds for ships - Recommendations	Sep 2008	
95	IS 15326(Part 1):2003 / ISO 3834(Pt 1):1994	Quality requirement for welding -Fusion welding of metallic material Part 1 Guidelines for selection and use	Sep 2008	
96	IS 15326(Part 2):2003 / ISO 3834(Pt 2):1994	Quality requirement for welding -Fusion welding of metallic material Part 2 Comprehensive quality requirements	Sep 2008	

\* INDICATES STANDARDS UNDER REVISION

\*\* INDICATES STANDARDS TO BE REVISED

97	IS 15326(Part 3):2003 / ISO 3834(Pt 3):1994	Quality requirement for welding -Fusion welding of metallic material Part 3 Standards quality requirements	Sep 2008
98	IS 15326(Part 4):2003 / ISO 3834(Pt 4):1994	Quality requirement for welding -Fusion welding of metallic material Part 4 Elementary quality requirements	Sep 2008
99	IS 15327:2003 / ISO 14731:1997	Welding coordination - Tasks and responsibility	Sep 2008
100	IS 15387:2003 / ISO 5830:1984	Resistance Spot Welding - Male Electrode Caps	Sep 2008
101	IS 15728:2006 / 15620:2000	Welding - Friction welding of metallic materials	Jan 2012
102	IS 16002(Part 1):2012 / ISO 17652-1:2003	Welding - Test for shop premiss in relation to welding and allied process - Part 1 General requirements	
103	IS 16002(Part 2):2012 / ISO 17652-2:2003	Welding - Test for shop primers in relation to welding and allied processes -Part 2: Welding properties of shop primers	
104	IS 16002(Part 3):2012 / ISO 17652-3:2003	Welding - Test for shop primers in relation to welding and allied processes - Part 3: Thermal cutting	
105	IS 16002(Part 4):2012 / ISO 17652-4:2003	Welding - Test for shop primers in relation to welding and allied processes - Part 4: Emission of fumes and gases	
106	IS 16003:2012 / ISO 15607:2003	Specification and qualification of welding procedures for metallic materials - General rules	

**FINALISED DRAFTS UNDER PRINT**

1	DOC.MTD 11(4959)	Recommended practice for manual tungsten inert gas welding of copper and copper alloys (first revision of IS 10186)	
2	DOC.MTD 11(4991) / ISO 9539:1988	Materials for equipment used in gas welding, cutting and allied processes	
3	DOC.MTD 11(4739)	Specification for classification and acceptance tests for bare solid wire electrodes and wire-flux combination for submerged arc welding of structural steel	

**DRAFT STANDARDS ISSUED IN WIDE CIRCULATION**

1	DOC.MTD 11(5178) / ISO 10882-1	Health and safety in welding and allied process - Sampling of air-borne particles and gases in the operators's breathing zone Pt 1 Sampling of airborne particles	
2	DOC.MTD 11(5179) / ISO 10882-2	Health and safety in welding and allied processes - Sampling of air-borne particles and gases in the operators breathing zone Part 2 Sampling of fases	
3	DOC.MTD 11(5180) / ISO 15011-1	Health and safety in welding and allied processes - Laboratory mehtod for sampling fume and gases - Pt 1 Determinaiton of fume emission rate during arc wedling and collection of fume for analysis	

\* INDICATES STANDARDS UNDER REVISION  
/ INDICATES DUAL NUMBER STANDARDS

\*\* INDICATES STANDARDS TO BE REVISED  
/ INDICATES EQUIVALENT STANDARDS

4	DOC.MTD 11(5181) / ISO 15011-2	Health and safety in welding and allied processes - Laboratory method for sampling fume and gases -Part 2 Determination of the emission related carbon monoxide (CO), carbon dioxide (CO <sub>2</sub> ), (NO) and (NO <sub>2</sub> ) during arc welding , cutting and gouging
5	DOC.MTD 11(5182) / ISO 15011-4	Health and safety in welding and allied processes - Laboratory method for sampling fume and gases Part 4 Fume data sheets
6	DOC.MTD 11(5183) / ISO 15011-5	Part 5 - Identification of thermal degradation products generated when welding as cutting through products composed wholly or partly of organic material using pyrolysis-gas chromatography mass spectrometry
7	DOC.MTD 11(5184) / ISO 15012-1	Health and safety in welding and allied processes - Requirements testing and marking of equipment for filtration - Part 1 Testing of the separation efficiency for welding fume
8	DOC.MTD 11(5185) / ISO 15012-2	Part 2 - Determination of the minimum air volume flow rate of capture hoods and nozzles
9	DOC.MTD 11(5186) / ISO 17846	Welding and allied processes - Health and safety - wordless precautionary labels for equipment and consumables used in arc welding and cutting

**\* INDICATES STANDARDS UNDER REVISION  
/ INDICATES DUAL NUMBER STANDARDS**

**\*\* INDICATES STANDARDS TO BE REVISED  
| INDICATES EQUIVALENT STANDARDS**

MTD 13 ORES AND RAW MATERIALS SECTIONAL COMMITTEE

**SCOPE** - Standardization in the field of ores and raw materials for metallurgical industry including their chemical instrumental analysis  
LIAISON  
ISO/TC 65 Manganese and chromium ores  
ISO/TC 102 Iron ores  
ISO/TC 129 Aluminium ores and minerals  
MTD 2, 29

SI. No.	IS Number/ DOC Number	Title	Reaffirm Date	No. of Amd.
<b>STANDARDS PUBLISHED</b>				
1	IS 1405:2010	Methods of sampling of iron ores (third revision)		
2	IS 1449:2010	Methods of sampling of manganese ore (second revision)		
3	IS 1472:1977	Methods of sampling ferro alloys for determination of chemical composition (first revision)	Oct 2011	1
4	IS 1999:1987	Methods of sampling bauxite (first revision)	Nov 2008	
5	IS 2109:1982	Methods of sampling of dolomite, limestone and other allied materials (first revision)	Nov 2008	
6	IS 2245:1962	Methods of sampling quartzite	Nov 2008	1
7	IS 2246:1963	Methods of sampling of fluor spar (fluorite)	Jan 2012	1
8	IS 3191:1968	Methods of sampling of cryolite and aluminium trifluoride	Jan 2012	
9	IS 4156:1967	Methods for sampling of barytes	Jan 2012	1
10	IS 4166:1967	Methods of sampling of ilmenite and rutile	Oct 2011	
11	IS 4574:1989	Fluor spar for use in metallurgical industries (second revision)	Nov 2008	
12	IS 4763:2006	Manganese ore for production of ferromanganese (second revision)	Oct 2011	
13	IS 5442:1992	Classification of haematite iron ore (second revision)	Nov 2008	
14	IS 5534:1969	Method for determination of specific surface area of powder ore samples	Nov 2008	
15	IS 5842:1986	Method for measuring bulk density of iron oxides: lump ores, sinter and pellets (first revision) (superseding IS 5483)	Nov 2008	1
16	IS 5893:1989	Cryolite for use in aluminium industry for the aluminium industry (first revision)	Nov 2008	

\* INDICATES STANDARDS UNDER REVISION  
/ INDICATES DUAL NUMBER STANDARDS

\*\* INDICATES STANDARDS TO BE REVISED  
| INDICATES EQUIVALENT STANDARDS

17	IS 5953:1985	Specification for bauxite for use in the production of alumina for the aluminium industry (first revision)	Nov 2008	
18	IS 6495:1984	Method of tumbler test for iron oxides:lump ores,sinter and pellets (first revision)	Nov 2008	
19	IS 8167:1989	Method for determination of reducibility index of iron ore oxides, lumps oore, sinter and pillets (first revision)	Oct 2011	1
20	IS 8562:1977	Methods of sampling chrome ore	Oct 2011	
21	IS 8604:1977	Determination of compression strength of iron ore pellets after reduction	Nov 2008	
22	IS 8624:1995	Method for determination of swelling index of iron ore pellets (first revision)	Oct 2011	
23	IS 8625:1986	Determination of crushing strength of iron ore pellets (first revision)	Nov 2008	1
24	IS 9101:1979	Methods of sampling iron ore pellets	Nov 2008	
25	IS 9592:1989	Aluminium trifluoride for use in aluminium industry (first revision)	Nov 2008	1
26	IS 9660:2001	Methods for determination of softening - melting characteristics of iron ore lumps/pellets/sinter (first revision)	Oct 2011	
27	IS 9959:1981	Guidelines for iron ore sinters for iron making in blast furnace	Nov 2008	
28	IS 9963:1981	Determination of shatter index of iron ore lumps, sinter and pellets	Nov 2008	1
29	IS 10345:2004	Flux grade limestone for use in steel plants (second revision)	Nov 2009	
30	IS 10346:2004	Flux grade dolomite for use in steel plants (second revision)	Nov 2009	
31	IS 10816:1984	Methods of sampling zinc and lead concentrates	Nov 2008	
32	IS 10817:1984	Bauxite for refractory industry	Nov 2008	
33	IS 10818:1984	Chromite for metallurgical industry	Nov 2008	
34	IS 10819:1999	Chromite for refractory industry (first revision)	Oct 2011	
35	IS 10823:2006	Methods for determination of thermal degradation index(TDI) and reduction degradation index(RDI) of iron oxides:lump ore,sinter and pellets Section 1 Static degradation test Section 2 Dynamic degradation test (second revision)	Oct 2011	
36	IS 11211:1984	Methods of sampling rock phosphate	Nov 2008	

\* INDICATES STANDARDS UNDER REVISION

\*\* INDICATES STANDARDS TO BE REVISED

37	IS 11281:2005	Manganese ore for use in iron and steel making (first revision)	Nov 2008	
38	IS 11282:2000	Guidelines for laboratory pot-grate sintering test for iron ore fines(first revision)	Aug 2005	
39	IS 11283:1985	Determination of softening point of iron oxides (in powder form):lump ore,sinterand pellets	Nov 2008	1
40	IS 11292:1985	Determination of relative reducibility of iron oxides:lump ore,sinter and pellets	Nov 2008	
41	IS 11321:1985	Graphite for graphite crucibles	Nov 2008	
42	IS 11336:1985	Guidelines for heat hardened iron ore pellets for iron making in blast furnaces	Nov 2008	
43	IS 11348:1989	Iron ore pellets - Apparent specific gravity, true specific gravity and porosity - Method for determination apparent (first revision)	Nov 2008	
44	IS 11373:1985	Guidelines for laboratory disc pelletisation test for iron ore pellets	Oct 2011	
45	IS 11607:1986	Methods of sampling iron ore sinters	Nov 2008	
46	IS 11894:1986	Classification of magnetite iron ores,	Nov 2008	
47	IS 11895:1986	Classification of manganese ore, ferruginous manganese ore, silicious manganese ore and magniferrous iron ore	Nov 2008	
48	IS 11896:1986	Determination of apparent specific gravity, true specific gravity and apparent porosity of iron ore lump and sinter	Nov 2008	
49	IS 11897:1986	Guidelines for methods to be adopted for minerelological identification of iron oxides: lump ore, sinter and pellets	Nov 2008	
50	IS 12394:1988	Method for Weathering test on iron ore sinter	Nov 2008	
51	IS 12550:1988	Methods of determining particle size distribution of iron ore fines	Nov 2008	2
52	* IS 12595:1989	Classification of terminology for exploration of mineral deposits	Nov 2009	
53	IS 12596:1989	Manganese ore sinter for blending for ferromanganese production	Nov 2009	
54	IS 12871:1989	Copper concentrates - Methods of sampling	Oct 2011	
55	IS 12871:2011 / ISO 12743:2006	Copper, lead, zinc and nickel concentrates - Sampling procedure for determination of metal and moisture content		
56	* IS 13054:1991	Quartzite/quartz for the production of ferroalloys	Nov 2008	

\* INDICATES STANDARDS UNDER REVISION

\*\* INDICATES STANDARDS TO BE REVISED

57	IS 13344:1992	Method for checking the bias of sampling of ores	Nov 2008	
58	IS 13676:1993	Quartzite for iron making in blast furnace	Nov 2008	
59	IS 13751:1993	Tungsten for hard metal industry	Nov 2008	1
60	IS 14296:1995	Dolomite for refractory industry	Oct 2011	
61	IS 14301:1995	Kyanite for refractory industry	Oct 2011	
62	IS 14302:1995	Beach sand silimanite for refractory industry	Oct 2011	
63	IS 14303:1995	Magnesite for refractory industry	Oct 2011	
64	IS 14713:1999	Synthetic Alumina & Mulite grains for refractory industry	Oct 2011	
65	IS 14852:2000	Graphite for refractory industry	Oct 2011	
66	IS 15944:2011	Iron ores - Experimental methods for checking the bias of sampling		

**FINALISED DRAFTS UNDER PRINT**

1	DOC.MTD 13(5071)	Iron ore - Determination of aluminium content - Part 1 Flame atomic absorption spectrometric method (first revision of IS 1493(Pt 4) (based on ISO 4688-1)
2	DOC.MTD 13(5072)	Iron ores - Determination of titanium content - Dianthpyrpimethane spectrophotometric method (based on ISO 46910
3	DOC.MTD 13(5073)	Iron ores - Determination of copper content - Part 1: 2:2 Biquindyl spctrophotometric method (based on ISO 5417-1)
4	DOC.MTD 13(5074)	Determination vanadium - Part 12 BPHA spectrophotometric method (based on ISO 9683-)
5	DOC.MTD 13(5075)	Determination of arsenic content - Molybdenum blue spectrophotometric method(second revision of IS 1493(Pt 8) (based on ISO 6834)

**DRAFT STANDARDS ISSUED IN WIDE CIRCULATION**

1	DOC.MTD 13(4921)	Methods of chemical anlysis of iron ore Part 1 Determination of common constituents (first revision of IS 1493(Part 1)
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*\* INDICATES STANDARDS UNDER REVISION  
/ INDICATES DUAL NUMBER STANDARDS*

*\*\* INDICATES STANDARDS TO BE REVISED  
| INDICATES EQUIVALENT STANDARDS*



MTD 14 FOUNDRY AND STEEL CASTING SECTIONAL COMMITTEE

**SCOPE** - Standardization in the field of foundry materials, foundry practice and steel castings

LIAISON

ISO/TC 17/SC 11 Steel castings

Sl. No.	IS Number/ DOC Number	Title	Reaffirm Date	No. of Amd.
<b>STANDARDS PUBLISHED</b>				
1	IS 276:2000	Austenitic manganese steel castings (fifth revision)	Feb 2012	
2	IS 1030:1998	Carbon steel castings for general engineering purposes(fifth revision)	Sep 2010	
3	IS 1280:1975	Foundry moulding boxes of steel construction (second revision)	Dec 2008	1
4	IS 1305:1984	Graphite for use in foundry coatings (third revision)	Feb 2012	2
5	IS 1513:1980	Wooden Pattern equipment for foundries (second revision)	Dec 2008	2
6	IS 1752:1973	Coal dust for use in cast iron foundry (second revision)	Sep 2010	
7	IS 1811:1984	Methods of sampling foundry sands (first revision)	Sep 2010	
8	* IS 1918:1966	Methods of physical tests for foundry sands	Nov 2012	
9	IS 1987:2002	High silica sand for use in foundry (second revision)	Dec 2007	
10	IS 2644:1994	High tensile steel castings (fourth revision)	Sep 2010	
11	IS 2707:1996	Carbon steel castings for surface hardening (fourth revision)	Dec 2007	1
12	IS 2708:1993	1.5 Percent manganese steel castings for general engineering purposes (third revision)	Sep 2010	
13	IS 2763:1999	Glossary of terms relating to foundry technology	Dec 2008	
14	IS 2856:1999	Carbon steel castings for pressure containing parts suitable for fusion welding (fourth revision)	Sep 2010	
15	IS 2985:1990	Steel castings for ships structure (third revision)	Sep 2010	
16	IS 2986:1990	Steel castings for marine engines and boilers (second revision)	Sep 2010	1
17	IS 3018:1977	Standard silica sand for raw material testing in foundries	Dec 2008	

\* INDICATES STANDARDS UNDER REVISION  
/ INDICATES DUAL NUMBER STANDARDS

\*\* INDICATES STANDARDS TO BE REVISED  
| INDICATES EQUIVALENT STANDARDS

18	IS 3038:2006	Martensitic Stainless Steel and Alloy Steel Castings For Pressure Containing Parts Suitable For High Temperature Service(fourth Revision)	Feb 2012	
19	IS 3339:1975	Silica flour for use in foundries (first revision)	Dec 2008	
20	IS 3343:1965	Natural moulding sand for use in foundries	Dec 2008	
21	IS 3444:1999	Corrosion resistant alloy steel and nickel base castings for general applicatis (third revision)	Sep 2010	
22	IS 4269:1981	Dextrin for use in foundries (first revision)	Dec 2008	
23	IS 4475(Part 1):1986	Crane-suspended ladles for foundries Part 1 Straight/taper sided geared ladles 0.25 to 10 tonnes for iron and steel foundries (second revision)	Dec 2008	
24	IS 4475(Part 2):1986	Cylindrical geared ladles 0.25 to 3.0 tonnes for iron foundries (second revision)	Dec 2008	
25	IS 4475(Part 3):1989	Part 3 Straight/taper sided ladles 0.25 to 3.0 tonnes capacities for S.G. Iron foundries (second revision)	Dec 2008	
26	IS 4475(Part 4):1988	Part 4 Taper sided non geared ladles 15 to 50 tonnes capacities for iron and steel foundries	Dec 2008	
27	IS 4491:1994	Steel castings for high magnetic permeability (third revision)	Sep 2010	
28	IS 4522:1986	Heat resistant alloy steel and nickel base castings (second revision)	Sep 2010	
29	IS 4604:1975	Pattern plates for machine moulding boxes (first revision)	Dec 2008	
30	IS 4606:1983	Steel shots for use in foundries (first revision)	Dec 2008	1
31	IS 4683:1968	Chilled iron shot and grit for use in foundries	Dec 2008	
32	IS 4843:1968	Code for designation of ferrous castings	Sep 2010	
33	IS 4896:1992	One percent chromium steel castings for resistance to abrasion (second revision)	Dec 2007	
34	IS 4897:1994	Deviations on untoleranced dimensions and mass of steel castings (third revision)	Sep 2010	
35	IS 4898:1989	Steel castings for case carburizing (second revision)	Sep 2010	1
36	IS 4899:2006	Ferritic and martensitic steel casting for use at low temperature (third revision)	Feb 2012	
37	IS 4981:1984	Guide pins for foundry pattern plates (second revision)	Dec 2008	1
38	IS 4982:1984	Closing pins for foundry moulding boxes (second revision)	Dec 2008	1

\* INDICATES STANDARDS UNDER REVISION  
/ INDICATES DUAL NUMBER STANDARDS

\*\* INDICATES STANDARDS TO BE REVISED  
/ INDICATES EQUIVALENT STANDARDS

39	IS 5032:1983	Recommended sizes of cupola furnace for foundry (second revision)	Feb 2012	
40	* IS 5303:1974	Zircon flour for use in foundries (first revision)	Dec 2008	
41	IS 5824:1970	Lancets for use in foundries	Dec 2008	
42	IS 5841:1970	Fluted core cleaners for use in foundries	Dec 2008	
43	IS 5850:1970	Star (triangular) cutters for use in foundries	Dec 2008	
44	IS 5873:1970	Steel cut-wire shots for use in foundries	Dec 2008	
45	IS 5904:1978	Steel chaplets for use in ferrous foundries (first revision)	Dec 2008	
46	IS 5981:1986	Sleekers for use in foundries (first revision)	Dec 2008	
47	IS 5988:1970	Spring dowel sleeves (light and heavy patterns) for use in foundries	Dec 2008	
48	IS 6013:1970	Trowels for use in foundries	Feb 2012	
49	IS 6079:1989	Low alloy cast steel grinding media (second revision)	Sep 2010	1
50	IS 6366:1971	Sprue plugs for use in foundries	Sep 2010	
51	IS 6376:1986	Pattern lifting pins and hooks for use in foundries (first revision)	Dec 2008	
52	IS 6377:1971	Mellets for use in foundries	Dec 2008	
53	IS 6378:1986	Pattern lifting and rapping plates (first revision)	Dec 2008	
54	IS 6401:1986	Dowel pins for use in foundries (first revision)	Dec 2008	
55	IS 6443:1971	Lifters and cleaners for use in foundries	Feb 2012	
56	IS 6447:1986	Vent wires for use in foundries (first revision)	Dec 2008	
57	IS 6482:1971	Tempers and rammers for use in foundries	Sep 2010	
58	IS 6601:1987	Permissible deviations in chemical composition for products analysis of steelcastings (first revision)	Sep 2010	1
59	* IS 6773:2008	Sodium silicate for use in foundries (second revision)		

\* INDICATES STANDARDS UNDER REVISION  
/ INDICATES DUAL NUMBER STANDARDS

\*\* INDICATES STANDARDS TO BE REVISED  
/ INDICATES EQUIVALENT STANDARDS

60	IS 6788:1973	Chromite sand for use in foundries	Dec 2008	
61	IS 6907:1992	Steel castings - Method of sampling (first revision)	Dec 2007	
62	IS 7295:1974	Chamotte	Dec 2008	
63	IS 7297:1974	Olivine sand and flour for use in steel foundries	Dec 2008	
64	IS 7547:1987	Steel Nails used as internal chills in steel castings (first revision)	Dec 2008	
65	IS 7806:1993	Martensitic and austenitic high alloy steel castings for high temperature service (second revision)	Feb 2012	
66	IS 7899:2006	Alloy steel castings suitable for pressure services (third revision)	Sep 2010	
67	IS 8092:1992	Code for inspection of surface quality of steel castings for valves, fittings and other piping components (visual method) (first revision)	Nov 2012	
68	IS 8228:1976	Bauxite sand	Dec 2008	
69	IS 8246:1976	Liquid resins for use in shell process in foundries	Dec 2008	
70	IS 8250:1988	Foundry parting agents (first revision)	Dec 2008	
71	IS 8779:1978	Core gums (sodium silicate based) for use in foundries	Dec 2008	
72	* IS 8785:1978	Carbon dioxide core binder system (binder and breakdown agent) for use in foundries	Dec 2008	
73	IS 8800:1997	Technical delivery conditions for steel castings (excluding investment casting) (third revision)	Sep 2010	1
74	IS 8939:1978	Code of practice for use of oxygen in Iron Steel, and non-ferrous metal foundries	Dec 2008	
75	IS 8988:1978	Bauxite powder for foundry washes	Dec 2008	
76	IS 9007:1978	Zircon sand for use in foundries	Dec 2008	
77	IS 9008:1978	Core repairing paste for use in foundries	Dec 2008	
78	IS 9009:1992	Foundry core oils (first revision)	Feb 2012	
79	IS 9139:1979	Malleable iron shots and grits for use in foundries	Dec 2008	1
80	IS 9541:1987	Cast CTC segments (first revision)	Dec 2007	

\* INDICATES STANDARDS UNDER REVISION  
/ INDICATES DUAL NUMBER STANDARDS

\*\* INDICATES STANDARDS TO BE REVISED  
| INDICATES EQUIVALENT STANDARDS

81	IS 9565:1995	Acceptance standards for ultrasonic inspection of steel castings(second revision)	Sep 2010	
82	IS 9661:1980	Hand shank ladles	Dec 2008	
83	IS 9674:1980	Test Methods for fluid self hardening sand	Dec 2008	1
84	* IS 10032:1981	Organic no bake binders for use in foundries	Dec 2008	
85	IS 10033:1991	Zircon and Graphite based core and mould washes (First Revision)	Dec 2008	
86	IS 10034:1981	Basic requirement for equipment for determining moisture content in foundry sand	Dec 2008	
87	IS 10091:1981	Iron oxide powder for use in foundries	Dec 2008	
88	IS 10094:1998	Code of practice for pattern making by using expanded polystyrene material (first revision)	Sep 2010	
89	IS 10214:1982	Methods of sampling bentonite	Dec 2008	
90	IS 10343:1999	Carbon and low alloy steel investment castings for general applications (first revision)	Sep 2010	
91	IS 10469:1983	Antipiping compound for foundry	Sep 2010	
92	IS 10487:1983	Sand rammer	Sep 2010	
93	IS 10498:1983	Apparatus for determining permeability of foundry sand	Dec 2008	
94	IS 10504:1983	Exothermic feeding aid for foundry	Sep 2010	
95	IS 10518:1983	Snap flask moulding boxes and jackets	Dec 2008	
96	IS 10724:1990	Acceptance standard for magnetic particle testing of steel casting (first revision)	Sep 2010	
97	IS 10774:1993	Specification for corrosion resistant high alloy and nickel base investment castings for general applications (first revision)	Sep 2010	1
98	IS 10979:1984	Powder resins for use in shell process in foundries	Dec 2008	
99	IS 11099:1984	Universal sand testing machines	Sep 2010	1
100	IS 11166:1993	Permissible deviations on dimensions, surface roughness and mass of steel castings made with investment casting process (first revision)	Sep 2010	
101	IS 11266:1985	Flake resins for use in shell process in foundries	Dec 2008	

\* INDICATES STANDARDS UNDER REVISION  
/ INDICATES DUAL NUMBER STANDARDS

\*\* INDICATES STANDARDS TO BE REVISED  
/ INDICATES EQUIVALENT STANDARDS

102	IS 11286:1995	Corrosion resistant high alloy steel nickel base and cobalt base investment castings for severe applications	Sep 2010	1
103	IS 11709:2007	Technical delivery conditions for investment castings of steel (second revision)	Feb 2012	
104	IS 11732:1995	Acceptance standards for dye penetrant inspection of steel castings (first revision)	Sep 2010	
105	IS 11758:1994	Precipitation hardening stainless steel castings (first revision)	Sep 2010	1
106	IS 12006:1987	Metal pattern and epoxy resin pattern equipment for foundries	Dec 2008	
107	IS 12117:1996	Norms for classification of steel foundries for quality assurance (first revision)	Nov 2012	
108	IS 12272:1987	Divided blast cupola furnace	Feb 2012	
109	IS 12424:1988	Hot box resin for use in foundries	Dec 2008	
110	IS 12446:2007	Bentonite for use in foundries(first revision)	Feb 2012	
111	IS 12799:1989	Recommended practice for impregnation of castings	Sep 2010	
112	IS 12880:1989	Guidelines for controlling foundry rejection	Sep 2010	
113	IS 12938:1990	Acceptance standards for radiographic inspection of steel castings	Sep 2010	
114	IS 12968:1991	Steel castings for crankshafts for marine engines	Feb 2012	
115	IS 13100:1991	Pitch powder for use in cast iron foundry	Dec 2008	
116	IS 13126:1991	Silicon carbide chills	Dec 2008	
117	** IS 13505:1992	Centrifugally cast high alloy steel and nickel base tubing for pressure application at high temperature	Nov 2012	
118	IS 15865:2009	Extheromic and insulating sleeves for use in foundries		

#### **FINALISED DRAFTS UNDER PRINT**

1	DOC.MTD 14(5031)	Specification for polyurethane cold box binders for use in foundries
2	DOC.MTD 14(4961)	Specification for organic no bake (self-setting) binders for use in foundries(first revision of IS 10032)

\* INDICATES STANDARDS UNDER REVISION  
/ INDICATES DUAL NUMBER STANDARDS

\*\* INDICATES STANDARDS TO BE REVISED  
| INDICATES EQUIVALENT STANDARDS

MTD 15 REFRACTORIES SECTIONAL COMMITTEE  
**SCOPE** - Standardization in the field of refractories  
 LIAISON

ISO/TC 33 Refractories

Sl. No.	IS Number/ DOC Number	Title	Reaffirm Date	No. of Amd.
<b>STANDARDS PUBLISHED</b>				
1	* SP 37 : 1987	Handbook for refractories Part 3 Cement Kiln Systems		Nov 2012
2	IS 8:1994	High heat duty fireclay refractories (fifth revision)		Jul 2011
3	IS 195:2005	Fireclay mortar for laying fireclay refractory bricks (third revision)		May 2010
4	IS 483:1972	Fireclay refractories for oil-fired boiler furnaces of naval ships (first revision)		Nov 2012
5	IS 484:1980	Silica refractories for general purposes (second revision)		Nov 2012
6	IS 1292:1991	Silica mortar for laying silica bricks in furnaces (first revision)		Nov 2012
7	IS 1522:1998	Fireclay glass tank blocks (second revision)		Nov 2012
8	IS 1523:1972	Bottom pouring refractories for steel plants (first revision)		Nov 2012
9	IS 1524:1968	Refractory sleeves (first revision)		Nov 2012
10	IS 1525:1968	Ladle refractories for steel plants (first revision)		Nov 2012
11	IS 1526:1960	Sizes and shapes for firebricks		Nov 2012 1
12	IS 1528(Part 1):2010	Methods of sampling and physical tests for refractory materials Part 1 Determination of pyrometric cone equivalent (PCE) or softening point (third revision)		
13	** IS 1528(Part 2):2010	Determination of refractoriness under load (first revision)		Feb 2009
14	IS 1528(Part 3):2010	Determination of spalling resistance (third revision)		
15	IS 1528(Part 4):2012	Method of sampling and physical tests for refractories materials Part 4 Determination of cold crushing strength (second revision)		
16	IS 1528(Part 5):2007 / ISO 5014:1997	Methods of sampling and physical tests for refractory materials Part 5 Method for determination of modulus of rupture at ambient temperature of dense and insulating shaped refractory products (third revision)		Nov 2012

\* INDICATES STANDARDS UNDER REVISION  
 / INDICATES DUAL NUMBER STANDARDS

\*\* INDICATES STANDARDS TO BE REVISED  
 / INDICATES EQUIVALENT STANDARDS

17	IS 1528(Part 6):2010	Determination of permanent linear change change after reheating for shaped insulating and dense refractories (second revision)	
18	IS 1528(Part 7):2010	Method of sampling and criteria for conformity (second revision)	
19	IS 1528(Part 9):2007 / ISO 5018:1983	Part 9 Determination of true density (fourth revision)	Nov 2012
20	IS 1528(Part 1):2010	Method of sampling and physical tests for refractory materials Pt 1 Determination of pyrometric cone equivalent (PCE) or softening poing (third revision)	
21	** IS 1528(Part 10):1974	Determination of size of refractory bricks (first revision)	Feb 2009
22	IS 1528(Part 11):1993	Determination of wrapage (second revision)	May 2010
23	IS 1528(Part 12):2007 / ISO 5016:1997	Part 12 Method for determination of bulk density and true porosity of shaped insulating refractory products (second revision)	Nov 2012
24	IS 1528(Part 13):2007 / ISO 12676:2000	Part 13 Determination of resistance to carbon monoxide (second revision)	Nov 2012
25	** IS 1528(Part 14):1974	Sieve analysis (first revision)	Feb 2009
26	IS 1528(Part 15):2007 / ISO 5017:1998	Part 15 Method for determination of bulk density, apparent porosity and true porosity of dense shaped refractory products (first revision)	Nov 2012
27	IS 1528(Part 16):2007 / ISO 8894-2:1990	Part 16 Determination of thermal conductivity according to hot-wire method (parallel)	Nov 2012
28	IS 1528(Part 17):1993 / ISO 8895:1986	Determination of cold crushing strength of shaped insulating refractory products	Feb 2009
29	IS 1528(Part 18):1993 / ISO 3187:1989	Determination of creep in compression	Feb 2009
30	** IS 1528(Part 19):1991	Determination of thermal expansion	Feb 2009
31	IS 1528(Part 2):2011	Part 2 Determination of refractoriness under load (second revision of IS 1528(Pt 2))	
32	IS 1528(Part 20):1993 / ISO 5013:1985	Determination of modulus of rupture at elevated temperature	Feb 2009
33	IS 1528(Part 21):2007 / ISO 8894-1:1987	Part 21 Determination of thermal conductivity according to hot-wire method (cross-assay)	Nov 2012
34	IS 1528(Part 22):2007 / ISO 8841:1991	Part 22 Method for Determination of permeability to gases of dense shaped refractory products	Nov 2012
35	IS 1528(Part 23):2011	Part 23 Methods of test for dense shaped refractory products - Determination of resistance to abrasion at ambient temperature	
36	IS 1529:1971	Blast furnace refractories for steel plants (first revision)	Nov 2012

\* INDICATES STANDARDS UNDER REVISION  
/ INDICATES DUAL NUMBER STANDARDS

\*\* INDICATES STANDARDS TO BE REVISED  
/ INDICATES EQUIVALENT STANDARDS



37	IS 1748:1981	Sizes of graphite crucibles (first revision)	Nov 2007	
38	IS 1749:2005	Burnt magnesite refractories - Specification (third revision)	Mar 2012	
39	IS 1750:1995	Dead burnt pea magnesite (third revision)	Jul 2011	
40	IS 1751:1984	Fireclay cupola refractories (second revision)	Nov 2012	
41	IS 2042:2006	Insulating bricks - Specification (second revision)	Mar 2012	1
42	IS 2043:1984	Siliceous fireclay refractories (first revision)	Nov 2012	
43	IS 2044:2005	Silimanite refractories for glass melting tank furnaces (second revision)	Mar 2012	
44	IS 3304:2005	Specification for Burnt magnesite-chrome refractories for general purposes (first revision)	Nov 2012	
45	IS 3305:2005	Specification for Burnt chrome-magnesite refractories for general purposes (first revision)	Nov 2012	
46	IS 4041:2006 / ISO 836:2001	Glossary of terms relating to refractory materials (first revision)	Jul 2011	
47	IS 4564:1968	Fireclay nozzles	Nov 2012	
48	IS 4565:1968	Fireclay stoppers	Nov 2012	
49	IS 4801:1980	Chemically-bonded magnesite-chrome refractories for roof lining (first revision)	Nov 2012	
50	IS 4812:1996	Silica refractories for coke oven (second revision)	Jul 2011	
51	IS 4813:1980	Chemically-bonded chrome-magnesite refractories for general purposes (first revision)	Nov 2012	
52	IS 4814:1980	Chemically-bonded magnesite-chrome refractories for general purposes (first revision)	Nov 2012	
53	IS 5495:1969	Sizes and shapes for firebricks (300 mm and higher sizes)	Nov 2012	1
54	IS 6727:1972	Fireclay checker bricks for open hearth furnace	Nov 2012	
55	IS 6728:1972	Recuperator tubes, tiles and collars for soaking pits in steel plants	Nov 2012	
56	IS 7199:2008	Blast furnace stove refractories	Nov 2007	
57	IS 8953:2006	Specification for 62 percent alumina bricks and blocks for blast furnaces (first revision)	Mar 2012	

\* INDICATES STANDARDS UNDER REVISION  
/ INDICATES DUAL NUMBER STANDARDS

\*\* INDICATES STANDARDS TO BE REVISED  
/ INDICATES EQUIVALENT STANDARDS

58	IS 8966:1978	Magnesite nozzles	Nov 2012
59	IS 8977:1978	Clay bonded graphite crucibles	Nov 2012
60	IS 9010:1978	Super heat duty fireclay refractories	Nov 2012
61	IS 9929:1981	Method of determining life of graphite crucibles	Nov 2012
62	IS 9930:2005	Zircon refractories for glass furnace application (first revision)	May 2010
63	** IS 10047:1981	Methods for testing refractory ramming masses	Feb 2009
64	IS 10551:2005	Zircon mullite refractories for glass furnace applications (first revision)	May 2010
65	IS 10570:2011	Methods for testing refractory castables (first revision)	
66	IS 10607:1983	Refractories for cement rotary kilns	Nov 2012
67	IS 11036:1984	Graphite stopper heads	Nov 2012
68	** IS 11452:1985	Method of testing air-setting refractory mortars	Feb 2009
69	IS 12847:1997	Carbon bonded silicon carbide crucibles (first revision)	Nov 2012
70	IS 12893:2006 / ISO 1146:1988	Pyrometric reference cones for laboratory use of specification (first revision)	Mar 2012
71	IS 12951:2006	Specification for mica Insulation Bricks for High temperature application (first revision)	Mar 2012
72	IS 13150:1991	Silica mortars for laying silica bricks in coke ovens	Nov 2012
73	IS 13173:1991	Code of practice for handling and usage of graphite and silicon carbide crucibles	Nov 2012
74	IS 13185:1991	Method of test for determination of drying shrinkage of refractory mortars	Nov 2012
75	IS 14313:1995	70 Percent alumina bricks - specification	Jul 2011
76	IS 14374:1996	Refractories for chimney - Recommendation	Jul 2011
77	IS 14406:1996	Refractories for forge and heat treatment furnaces _ Recommendations	Jul 2011
78	IS 14447:1997	Refractories for use in foundry industry - Recommendations	Nov 2012

\* INDICATES STANDARDS UNDER REVISION  
/ INDICATES DUAL NUMBER STANDARDS

\*\* INDICATES STANDARDS TO BE REVISED  
/ INDICATES EQUIVALENT STANDARDS

79	IS 15507:2004	Basic insulating coating material for application in tundish at steel plants - Specification	May 2010
80	IS 15508:2004	Refractory mass (Basic Gunning) for Steel Plant Application - Specification	May 2010
81	IS 15541:2005	Specification for low cement and ultra low cement castable for general purposes	Jul 2011
82	IS 15895:2011	High alumina refractory cement - Specification	
83	IS 16051(Part 1):2013 / ISO 12678-1:1996	Refractory products -Measurement of dimensions and external defects of refractory bricks - Part 1 Dimensions and conformity to drawing	
84	IS 16051(Part 2):2013 / ISO 12678-2:1996	Refractory products -Measurement of dimensions and external defects of refractory bricks Part 2 Corners and edge defects and other surface imperfections	
85	IS 16052(Part 1):2013 / ISO 13765-1:2004	Refractory mortars - Part 1 Determination of consistency using the penetrating cone method	
86	IS 16052(Part 2):2013 / ISO 13765-2:2004	Refractory mortars - Part 2 Determination of consistency using the reciprocating flow table method	
87	IS 16052(Part 3):2013 / ISO 13765-3:2004	Refractory mortars - Part 3 Determination of joint stability	
88	IS 16052(Part 4):2013 / ISO 13765-4:2004	Refractory mortars - Part 4 Determination of flexural bonding strength	
89	IS 16052(Part 5):2013 / ISO 13765-5:2004	Pt 5 Determination of grain size distribution (sieve analysis)	
90	IS 16052(Part 6):2013 / ISO 13765-6:2004	Pt 6 Determination of moisture content of ready-mixed mortars	

**FINALISED DRAFTS UNDER PRINT**

1	DOC.MTD 15(5018) / ISO 8895:2004	Methods of sampling and physical tests for refractory materials Part 17 shaped insulating refractory products Determination of cold crushing strength IS 1528 (Part 17):1993	
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**DRAFT STANDARDS ISSUED IN WIDE CIRCULATION**

1	DOC.MTD 15(5106)	Method for determination of thermal conductivity of dense as well as insulating fired refractories, refractory monolithics and precloseprefied (PCPF) shapes	
2	DOC.MTD 15(5107)	Methods for chemical analysis of chrome-magnesite & magnestie chrome-Refractories	

\* INDICATES STANDARDS UNDER REVISION  
/ INDICATES DUAL NUMBER STANDARDS

\*\* INDICATES STANDARDS TO BE REVISED  
| INDICATES EQUIVALENT STANDARDS

MTD 16 ALLOY STEELS AND FORGING SECTIONAL COMMITTEE

**SCOPE** - Standardization in the field of alloy & special steels and forging including/chemical/instrumental analysis, classification designaiton and coding of related steels MTD 4, ISO/TC 17 Steel, SC 4 and SC & LIAISON

MTD 1 and 4, ISO/TC 17 Steel

Sl. No.	IS Number/ DOC Number	Title	Reaffirm Date	No. of Amd.
<b>STANDARDS PUBLISHED</b>				
1	IS 963:1958	Chrome molybdenum steel bars and rods for aircraft purposes	May 2009	2
2	IS 1570(Part 1):1978	Schedules for wrought steels Part 1 Steels specified by tensile and/or yield properties (first revision)	May 2009	1
3	IS 1570(Part 2/Sec 1):1979	Schedules for wrought steels Part 2 Carbon steels (unalloyed steels) Section I Wrought products (other than wire) with specified chemical composition and related properties (first revision)	Jan 2012	
4	IS 1570(Part 2/Sec 2):1988	Schedules for wrought steels Part 2 Carbon steels (unalloyed steels) Section IICarbon steel wires with related properties (first revision)	May 2009	
5	IS 1570(Part 3):1979	Schedules for wrought steels Part 3 Carbon and carbon manganese free cutting steels (first revision)	May 2009	
6	IS 1570(Part 4):1988	Schedules for wrought steels Part 4 Alloy steels (Alloy constructional and spring steels) with specified chemical composition and mechanical properties(firstrevision)	Jan 2012	
7	IS 1570(Part 5):1985	Schedules for wrought steels Part 5 Stainless and heat resisting steels (secondrevision)	May 2009	
8	IS 1570(Part 6):1996	Schedules for wrought steels Pt 6 Carbon and alloy tool steels (first revision)	Jan 2012	
9	IS 1570(Part 7):1992	Schedule for wrought steels Part 7 Steels for elevated temperature service (creep resistant steels)	May 2009	
10	IS 1870:1965	Comparison of Indian and overseas standards for wrought steels for general engineering purposes	May 2009	
11	IS 1871(Part 1):1987	Commentary on Indian Standard Schedules for wrought steels Part 1 Steels specified by Tensile and/or yield properties (Complementary to IS 1570(Part 1):1978) (first revision)	May 2009	
12	IS 1871(Part 2):1987	Commentary on Indin Standard Schedules for wrought steels Part 2 Carbon steels (unalloyed steels) (Complementary to IS 1570 Part 2):1979) (first revision)	May 2009	
13	IS 1871(Part 3):1987	Commentary on Indian Standard Schedules for woruhgt steels Part 3 Carbon and carbon-manganese free cutting steels_(complementary to IS 1570(part 3):1979)(firstrevision)	May 2009	
14	IS 1875:1992	Carbon steel billets, blooms, slabs and bars for forgings (fifth revision)	May 2009	2

\* INDICATES STANDARDS UNDER REVISION

\*\* INDICATES STANDARDS TO BE REVISED

15	IS 1956(Part 6):1976	Forging (including drop forging)	Jan 2012	2
16	IS 2004:1991	Carbon steel forgings for general engineering purposes (third revision)	Jan 2012	
17	IS 2611:1964	Carbon chromium molybdenum steel forgings for high temperature services	Jan 2012	
18	IS 3261:1980	Carbon steel forgings for shipbuilding industry (first revision)	Jan 2012	
19	IS 3445:1992	Forged steel rolls (First Revision)	May 2009	
20	IS 3469(Part 1-3):1974	Tolerances for closed die steel forgings (first revision)	Jan 2012	
21	IS 3479:1966	General requirements for steel drop, upset and press forgings	Jan 2012	
22	IS 3739:1987	Dimensional tolerances for carbon and alloy constructional steel products (first revision)	Jan 2012	
23	* IS 3748:1990	Tool and die steels (second revision) (Superseding IS 3749)	Jan 2012	
24	* IS 3930:1994	Flame and induction hardening steels (second revision)	May 2009	
25	IS 4367:1991	Alloy steel forgings for general industrial use (first revision)	May 2009	1
26	IS 4368:1967	Alloy steel billets, blooms and slabs for forging for general engineering purposes	May 2009	1
27	IS 4397:1999	Cold rolled carbon steel strip for ball and roller bearing cages (first revision)	May 2009	1
28	* IS 4398:1994	Carbon chromium steel for the manufacture of ball, rollers and bearing races (second revision)	May 2009	
29	IS 4430:1979	Mould steels (first revision)	May 2009	2
30	* IS 4431:1978	Carbon and carbon manganese free cutting steels (first revision)	May 2009	2
31	* IS 4432:1988	Case hardening steels(first revision)	May 2009	
32	IS 4882:1979	Low carbon steel wire for rivets for use in bearing industry (first revision)	May 2009	2
33	IS 5489:1975	Carburizing steels for use in bearing industry (first revision)	May 2009	2
34	* IS 5517:1993	Steels for hardening and tempering (second revision)	May 2009	
35	IS 5518:1996	Steels for die blocks for drop forging (second revision)	Jan 2012	

\* INDICATES STANDARDS UNDER REVISION  
/ INDICATES DUAL NUMBER STANDARDS

\*\* INDICATES STANDARDS TO BE REVISED  
/ INDICATES EQUIVALENT STANDARDS

36	IS 5522:1992	Stainless steel sheets and strips for utensils (second revision)	May 2009	
37	IS 5651:1987	Steels for pneumatic tools (first revision)	May 2009	2
38	IS 6527:1995	Stainless steel wire rod (first revision)	May 2009	
39	IS 6528:1995	Stainless steel wire (first revision)	Jan 2012	
40	IS 6529:1996	Stainless steel blooms, billets and slabs for forging (first revision)	Jan 2012	
41	IS 6603:2001	Stainless steel bars and flats (first revision)	May 2009	
42	IS 6911:1992	Stainless steel plate, sheet and strip (first revision)	May 2009	1
43	* IS 7291:1981	High speed tool steels (first revision)	May 2009	
44	* IS 7494:1981	Steel for valves for internal combustion engines (first revision)	May 2009	
45	IS 8748:1978	Forged/rolled CTC segments	Jan 2012	1
46	IS 8811:1998	Method for spectrographic analysis of plain Carbon and low alloy Steels by the point to plane spark technique (first revision)	Jan 2012	
47	IS 9100:1979	Methods of sampling steel forgings	Jan 2012	
48	IS 9175(Part 1):1979	Rationalized steels for the automobile and ancillary industry, Part I chemical composition	May 2009	
49	IS 9175(Part 2):1985	Rationalized steels for the automobile mechanical and physical properties Part 2 15C8 Grade steel	May 2009	
50	IS 9175(Part 3):1985	25C8 Grade Steel	May 2009	
51	IS 9175(Part 4):1985	30C8 Grade Steel	May 2009	
52	IS 9175(Part 5):1985	35C8 Grade Steel	May 2009	
53	IS 9175(Part 6):1986	40C8 Grade Steel	May 2009	
54	IS 9175(Part 7):1986	45C8 Grade steel	May 2009	
55	IS 9175(Part 8):1985	55C8 Grade steel	May 2009	
56	IS 9175(Part 9):1985	11C10S25 Grade steel	May 2009	

\* INDICATES STANDARDS UNDER REVISION  
/ INDICATES DUAL NUMBER STANDARDS

\*\* INDICATES STANDARDS TO BE REVISED  
/ INDICATES EQUIVALENT STANDARDS

57	IS 9175(Part 10):1985	14C14S14 Grade steel	May 2009
58	IS 9175(Part 11):1985	25C12S14 Grade steel	May 2009
59	IS 9175(Part 12):1988	35C16Mo35Si5 Grade steel	May 2009
60	IS 9175(Part 13):1987	40C15S12 Grade steel	May 2009
61	IS 9175(Part 15):1987	37C15 Grade steel	May 2009
62	IS 9175(Part 16):1987	35Mn6Mo3 Grade steel	May 2009
63	IS 9175(Part 17):1987	35Mn6Mo4 Grade steel	May 2009
64	IS 9175(Part 18):1987	15Cr3 Grade steel	May 2009
65	IS 9175(Part 19):1986	46Mn5Cr4 Grade steel	May 2009
66	IS 9175(Part 20):1986	20MnCr5 Grade steel	May 2009
67	IS 9175(Part 21):1987	40Cr4 Grade steel	May 2009
68	IS 9175(Part 22):1987	40Cr4Mo3 Grade steel	May 2009
69	IS 9175(Part 23):1987	25Cr13Mo6 Grade steel	May 2009
70	IS 9175(Part 24):1987	35NiSCr2 Grade steel	May 2009
71	IS 9175(Part 25):1987	15Ni5Cr4Mo1 Grade steel	May 2009
72	IS 9175(Part 26):1986	16Ni3Cr2 Grade steel	May 2009
73	IS 9175(Part 27):1987	15Ni7Cr4Mo2 Grade steel	May 2009
74	IS 9175(Part 28):1987	40Ni6Cr4Mo3 Grade steel	May 2009
75	IS 9175(Part 29):1987	40Ni10Cr3Mo6 Grade steel	May 2009
76	IS 9175(Part 30):1987	20Ni7CrMo2 Grade steel	May 2009
77	IS 9175(Part 31):1987	20Ni7Mo2 Grade steel	May 2009

\* INDICATES STANDARDS UNDER REVISION  
/ INDICATES DUAL NUMBER STANDARDS

\*\* INDICATES STANDARDS TO BE REVISED  
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78	IS 9175(Part 32):1987	20NiCrMo2 Grade steel	May 2009	
79	IS 9175(Part 33):1988	42Cr6V10 Grade steel	May 2009	
80	IS 9175(Part 34):1986	14CrNi6 Grade steel	May 2009	
81	IS 9294:1979	Cold rolled stainless steel strips for razor blades	May 2009	2
82	IS 9516:1980	Heat resisting steel	May 2009	1
83	IS 9683:1980	Carbon and low alloy steel forgings for fired and unfired pressure vessels	Jan 2012	
84	IS 9684:1980	Technical conditions for the supply of hot rolled billets blooms, slabs and bars for closed die forgings	Jan 2012	
85	IS 9879:1998	Method for spectrographic analysis of austenitic and ferritic Stainless steels by the point to plane technique (first revision)	May 2009	
86	IS 10604(Part 1):1983	Machining allowances and tolerances for open die steel forgings Part 1 carbon and low alloy steel forgings	Jan 2012	
87	IS 10604(Part 2):1983	Machining allowances and tolerances for open die steel forgings Part 2 High alloy steel forgings	Jan 2012	
88	IS 10631:1983	Stainless steel for welding electrode core wire	May 2009	
89	IS 10632(Part 1):1983	Non Magnetic stainless steels for electrical applications Part 1 General requirements	May 2009	
90	IS 10632(Part 2):1983	Specific requirements for binding wire	May 2009	
91	IS 10632(Part 3):1983	Specific requirements for sheets, strips and plates for electrical appliances	May 2009	
92	* IS 11169(Part 1):1984	Steels for cold heading/cold extrusion application Part 1 Wrought carbon and low alloy steels	May 2009	
93	IS 11169(Part 2):1988	Steels for cold heading/cold extrusion Part 2 Stainless steel	May 2009	
94	IS 11185:1984	Technical supply conditions for hot rolled and forged steel bars for use in machine tool industry	May 2009	1
95	IS 11946:1987	Soft magnetic iron strips	Jan 2012	
96	IS 11947:1987	Soft magnetic iron rods, bars, flats and sections	Jan 2012	
97	IS 11952:1986	Steels for piston pins (Gudgeon pins)	May 2009	
98	IS 12045:1987	Alloys used in electrical resistance metallic heating elements	Jan 2012	

\* INDICATES STANDARDS UNDER REVISION  
/ INDICATES DUAL NUMBER STANDARDS

\*\* INDICATES STANDARDS TO BE REVISED  
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99	IS 12145:1987	Quenched and tempered alloy steel forgings for pressure vessels	Mar 2001
100	IS 12146:1987	Carbon manganese steel forgings for pressure vessels	Jan 2012
101	IS 12390:1988	Iron nickel alloy 36 for ceramic sealing	May 2009
102	IS 12391:1988	Iron nickel controlled expansion sealing alloys	May 2009
103	IS 12549:1988	Iron nickel cobalt sealing alloys	May 2009
104	IS 12658:1989	Grinding media rolled/forged carbon and carbon-chromium steels	Jan 2012
105	IS 12836:1989	36-Nickel iron soft magnetic rods	May 2009
106	IS 12881:1990	36-Nickel iron soft magnetic strips	May 2009
107	IS 12882:1990	48-Nickel iron soft magnetic strip	May 2009
108	IS 13352:1992	Stock for forgings produced from continuously cast billets, blooms, slabs and bars - specification	May 2009
109	IS 13387:1992	Tool steel forgings for metal forming	May 2009
110	IS 13795(Part 1):1993	Glossary of terms for special alloys Part 1 Soft magnetic materials	May 2009
111	IS 14331:1995	Steels for high temperature bolting applications	Jan 2012
112	IS 14652:1999	18% Nickel maraging steel bars & rods	Jan 2012
113	IS 14698:1999	Carbon and low alloy billets, blooms and slabs for manufacture of shell bodies of shells used in defence services - Specification	Jan 2012
114	IS 15997:2012	Low nickel austenitic stainless steel sheet & strip for utensils and kitchen appliances - Specification	

**DRAFT STANDARDS ISSUED IN WIDE CIRCULATION**

1	DOC.MTD 16(5208)	Stainless steel, sheets and strips for utensils - Specification (third revision of IS 5522)	
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\* INDICATES STANDARDS UNDER REVISION  
/ INDICATES DUAL NUMBER STANDARDS

\*\* INDICATES STANDARDS TO BE REVISED  
| INDICATES EQUIVALENT STANDARDS

MTD 19 STEEL TUBES, PIPES AND FITTINGS SECTIONAL COMMITTEE  
**SCOPE** - Standardization in the field of steel tubes, pipes and fittings including classification, designation and coding of steel tubes  
 LIAISON

ISO/TC 5 Ferrous metal pipes and metallic fittings  
 ISO/TC 17 Steel  
 ISO/TC 67/SC 2 Pipeline transportation system  
 ISO/TC 67/SC 5 Casing, tubing and drilling pipe

Sl. No.	IS Number/ DOC Number	Title	Reaffirm Date	No. of Amd.
<b>STANDARDS PUBLISHED</b>				
1	IS 1161:1998	Steel tubes for structural purposes (fourth revision)	Mar 2009	5
2	IS 1239(Part 1):2004	Steel Tubes, tubulars and other wrought steel fittings - Specification (Part 1) Steel tubes (Sixth revision)	Feb 2010	4
3	IS 1239(Part 2):2011	Steel tubes, tubulars and other wrought steel fittings - Specification Part 2 Steel pipe fittings (fifth revision)		2
4	IS 1956(Part 8):1976	Glossary of terms relating to iron and steel - Part 8 - Steel tubes and pipes	Mar 2009	
5	IS 2039(Part 1-3):1991	Steel tubes for bicycle and allied purposes (second revision)	Mar 2009	1
6	IS 2416:1986	Boiler and superheater tubes for marine and naval purposes (first revision)	Mar 2009	1
7	* IS 3074:2005	Steel tubes for automotive purposes (second revision)	Dec 2010	3
8	IS 3183:2007 / ISO 3183:2007	Petroleum and natural gas industries - steel pipe for pipeline transportation systems (Amalgamation of IS 1978 & IS 1979)	May 2012	
9	IS 3589:2001	Steel pipes for water and sewage (168.3 to 2540 mm outside diameter) (third revision)	Feb 2012	4
10	IS 3601:2006	Steel tubes for mechanical and general engineering purposes (second revision)	Feb 2012	1
11	IS 4270:2001	Steel tubes used for water wells (third revision)	Nov 2006	1
12	IS 4711:2008	Methods for sampling of steel pipes, tubes and fittings (second revision)	May 2012	
13	IS 4712:1984	Forged steel, socket-welding fittings (first revision)	Mar 2009	1
14	IS 4923:1997	Hollow steel sections for structural use (second revision)	Mar 2009	6
15	IS 5429:1979	Dimensions for steel tubes for automotive purposes (first revision)	Mar 2009	
16	IS 5433:1969	Oil well steel casing pipes and couplings	Mar 2009	

\* INDICATES STANDARDS UNDER REVISION  
 / INDICATES DUAL NUMBER STANDARDS

\*\* INDICATES STANDARDS TO BE REVISED  
 / INDICATES EQUIVALENT STANDARDS

17	IS 5504:1997	Spiral welded pipes (first revision)	Mar 2009	4
18	IS 6286:1971	Seamless and welded steel pipes for sub-zero temperature service	Mar 2009	1
19	IS 6392:1971	Steel pipe flanges	Mar 2009	1
20	IS 6630:1985	Seamless ferritic alloy steel pipes for high temperature steam service (first revision)	Mar 2009	
21	IS 6631:1972	Steel pipes for hydraulic purposes	Mar 2009	1
22	IS 6647:1972	Drill pipes for use in oil or natural gas wells	Mar 2009	1
23	IS 6913:1973	Stainless steel tubes for the food and beverage industry	Mar 2009	
24	IS 7138:1973	Steel tubes for furniture purposes	Mar 2009	2
25	IS 7174:1974	Carbon steel tubes for use on board ships for working pressure 0.7 to 1.7 N/mm	Mar 2009	1
26	IS 8036:1976	Mild steel transformer cooling tubes	Mar 2009	2
27	IS 8119:1976	Copper brazed steel tubing	Mar 2009	1
28	IS 9158:1979	Cold-drawn high pressure fluid power cylinder tubes	Mar 2009	1
29	IS 9295:1983	Steel tubes for idlers for belt conveyors (first revision)	Mar 2009	4
30	IS 10577:1982	Lancing pipes	Mar 2009	1
31	IS 11428(Part 1-3):1985	Wrought carbon steel butt welding pipe fittings	Mar 2009	
32	IS 11714(Part 1-5):1986	Steel tubes for heat exchangers	Mar 2009	
33	IS 11722:1986	Thin walled flexible quick coupling pipes	Mar 2009	5
34	IS 12620:1989	Seamless steel tubes for manufacturing high pressure gas cylinders	Mar 2009	
35	IS 12791:1989	High carbon chromium (bearing) steel tubes for the manufacture of bearing races	Mar 2009	
36	IS 13197:1991	Grooved couplings - Specification	Mar 2009	

#### FINALISED DRAFTS UNDER PRINT

1	DOC.MTD 19(5101)	Steel tubes for automotive purposes - Specification (third revision of IS 3074)		
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\* INDICATES STANDARDS UNDER REVISION  
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\*\* INDICATES STANDARDS TO BE REVISED  
/ INDICATES EQUIVALENT STANDARDS

**DRAFT STANDARDS FINALIZED BUT NOT YET UNDER PRINT**

- |   |                  |  |
|---|------------------|--|
| 1 | DOC.MTD 19(5202) | Dimensions for steel tubes for automotive purpose<br>(second revision of IS 5429)  |
| 2 | DOC.MTD 19(5205) | Steel tubes for structural purposes - Specification (fifth<br>revision of IS 1161) |

MTD 21 NON-DESTRUCTIVE TESTING SECTIONAL COMMITTEE  
**SCOPE** - Standardization in the field of non-destructive testing  
 LIAISON

ISO/TC 135 Non-destructive testing  
 MTD 11 & 17

Sl. No.	IS Number/ DOC Number	Title	Reaffirm Date	No. of Amd.
<b>STANDARDS PUBLISHED</b>				
1	IS 1182:1983	Recommended practice for radiographic examination of fusion welded butt joints in steel plates (second revision)	Feb 2010	
2	IS 2417:2003	Glossary of terms relating to ultrasonic testing (second revision)	Aug 2008	
3	IS 2478:1991	Glossary of terms relating to industrial radiography (second revision)	Feb 2010	
4	IS 2595:2008	Code of practice for radiographic testing (second revision)		
5	IS 2953:1985	Glossary of terms used for interpretation of welds and castings radiographs (first revision)	Feb 2010	
6	IS 3415:1998	Glossary of terms used in magnetic particle flaw detection (second revision)	Aug 2008	
7	IS 3657:1978	Radiographic image quality indicators(first revision)	Feb 2010	
8	IS 3658:1999	Code of practice for liquid penetrant flaw detection (second revision)	Feb 2010	
9	IS 3664:1981	Code of practice for ultrasonic pulse echo testings by contact and immersion methods (first revision)	Aug 2008	
10	IS 3703:2004	Code of practice for magnetic particle flaw detection (second revision)	Feb 2010	
11	IS 4225:2004	Recommended practice for straight beam ultrasonic testing of steel plates (second revision)	Feb 2010	
12	IS 4260:2004	Recommended practice for ultrasonic testing of butt welds in ferritic steel (third revision)	Aug 2010	
13	IS 4853:1982	Recommended practice for radiographic inspection of fusion welded butt joints in steel pipes (first revision)	Aug 2008	
14	IS 4904:2006	Calibration blocks for use in ultrasonic non-destructive testing (fourth revision)	Dec 2011	
15	* IS 5334:2003	Code of practice for magnetic particle flaw detection of welds (first revision)	Aug 2008	
16	IS 6394:2006	Code of practice for ultrasonic testing of seamless metallic tubular products by contact and immersion methods (second revision)	Dec 2011	

\* INDICATES STANDARDS UNDER REVISION

\*\* INDICATES STANDARDS TO BE REVISED

17	IS 6398:1983	Code of practice for eddy current testing of ferrous seamless pipes and tubes (first revision)	Feb 2010	
18	IS 6410:1991	Specification for magentic flaw detection inks and powders (first revision)	Feb 2010	
19	IS 6752:1991	Code of practice for magnetic particle flaw detection of ferrous pipes and tubes (first revision)	Feb 2010	
20	IS 7343:1986	Code of practice for ultrasonic testing of ferrous welded pipes and tubular products (first revision)	Feb 2010	
21	IS 7666:1988	Recommended procedure for ultrasonic examination of ferritic castings of carbon and low alloy steel (first revision)	Feb 2010	1
22	IS 7743:2006	Recommended practice for magnetic particle testing and inspection of steel forgings (first revision)	Dec 2011	
23	IS 7810:1999	Code of practice for radiographic examination of resistance spot welds on aluminium and its alloys (first revision)	Feb 2010	
24	IS 8780:2004	Code of practice for non destructive testing of steel castings(first revision)	Feb 2010	
25	IS 8791:1978	Code of practice for ultrasonic flaw detection of ferritic steel forgings	Aug 2008	
26	IS 8973:1991	Glossary of terms relating to leak detection techniques (first revision)	Feb 2010	
27	IS 9902:2004	Recommended practice for leak testing (first revision)	Feb 2010	
28	IS 10543:1983	Method for dry powder magnetic particle testing	Feb 2010	
29	IS 11612:2004	Code of practice for eddy current testing of non-ferrous seamless pipes and tubes (first revision)	Feb 2010	
30	IS 11626:2005	Recommended practice for ultrasonic testing and acceptance for forging quality steel blooms (first revision)	Feb 2010	
31	IS 11630:2005	Method for ultrasonic testing of steel plates for pressure vessels and special applications (first revision)	Feb 2010	
32	IS 11655:1986	Procedure for stray flux testing of ferrous magnetic seamless steel tubular products	Feb 2010	
33	IS 12147:1987	Recommended practice for wet magnetic particle examination	Aug 2008	
34	IS 12148:1987	Guidelines for requirements for non-destructive testing agencies	Aug 2008	
35	* IS 12666:1988	Methods for performance assessment of ultrasonic flaw detection equipment	Aug 2008	
36	IS 12710:1989	Glossary of terms used in accoustic emission testing	Feb 2010	

\* INDICATES STANDARDS UNDER REVISION

\*\* INDICATES STANDARDS TO BE REVISED

37	IS 12782:1989	Guidelines for using thermography for monitoring of industrial components	Feb 2010	
38	IS 12860:1989	Method for determination of metallic coating thickness by X-ray fluorescence techniques	Feb 2010	
39	IS 12889:1989	Performance evaluation of liquid penetrants	Feb 2010	
40	IS 12965:1990	Glossary of terms used in electromagnetic (eddy current) testing	Feb 2010	
41	IS 13190:1991	Recommended practice for eddy current examination by rotating probe method of round steel bars	Feb 2010	
42	IS 13805:2004	General standards for qualification and certification of non destructive testing personnel (first revision)	Feb 2010	1
43	IS 14669:1999	Thermal neutron radiography - Recommendations	Feb 2010	
44	IS 14670:1999	Recommended practice for acoustic emission inspection during hydrostatic pressure testing of system	Feb 2010	
45	IS 14800:2000	Recommended practice for sorting of ferrous/non-ferrous materials using electromagnetic (eddy current) technique	Feb 2010	
46	IS 15404:2003	Recommended practice for measuring ultrasonic velocity in materials	Aug 2008	
47	IS 15435:2003	Recommended practice for measuring thickness using ultrasonic method	Aug 2008	
48	IS 15452:2004	Flaw size using DGS Method - Specification	Feb 2010	
49	IS 15468:2004	Performance evaluation of ultrasonic thickness gauge	Feb 2010	
50	IS 15531:2004	Recommended practice for ultrasonic testing of weld fillets of non-linear joints	Feb 2010	
51	IS 15539:2004	Recommended practice for magnetic particle examination of steam turbine rotor blades	Feb 2010	
52	IS 15540:2004	Recommended practice for eddy current testing of installed non-ferromagnetic heat exchangers tubing using dual frequency method	Feb 2010	
53	IS 15643:2006	Code of practice for non-destructive examination of polymer based composite materials	Feb 2010	
54	IS 15775:2008	Glossary of terms for signal analysis related to non-destructive testing		
55	IS 3057:1998 / ISO	Non-destructive testing - Metallographic replica technique of surface examination		
56	IS 5580:2010 / ISO	Non-destructive testing radiographic illuminators - minimum requirements		

\* INDICATES STANDARDS UNDER REVISION

\*\* INDICATES STANDARDS TO BE REVISED

**FINALISED DRAFTS UNDER PRINT**

1	DOC.MTD 21(4997)	Recommended practice for non-destructive testing of concrete structure using impace-echo technique
2	DOC.MTD 21(4995)	Recommended practice for wet magnetic partile testing ( IS 12147)
3	DOC.MTD 21(5039)	Performance assessment of ultrasonic flaw detection of ferritic steel forgings (first revision of IS 12666)
4	DOC.MTD 21(4994)	Magnetic flow detection inks and powders - Specifications (second revision of IS 6410)
5	DOC.MTD 21(5037)	Magnetic particle flaw detection of welds - Code of practice (third reviiion of IS 5334)

**DRAFT STANDARDS FINALIZED BUT NOT YET UNDER PRINT**

1	DOC.MTD 21(5038)	Code of practice for ultrasonic flaw detection of ferritic steel forgings (IS 8791)
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**DRAFT STANDARDS ISSUED IN WIDE CIRCULATION**

1	DOC.MTD 21(5035)	Guidelines for selection of aids for visual examination
2	DOC.MTD 21(5036)	Real time radiosopic examination of weldments and castings
3	DOC.MTD 21(5044)	Guidelines for infrared thermography inspection of electrical installations
4	DOC.MTD 21(5171) / ISO 10893-3:2011	Non-destructive testing of steel tubes - Part 3 Automated full peripheral flux leakage testing of seamless and welded (except detection of longitudinal and submerged arc welded) ferro magnetic steel for the or transverse imperfections
5	DOC.MTD 21(5201)	Code of practice for magnetic particle flaw detection of ferrous pipes & tubes (second revision of IS 6752)

**STANDARDS UNDER REVISION****\*\* INDICATES STANDARDS TO BE REVISED****/ INDICATES DUAL NUMBER STANDARDS****| INDICATES EQUIVALENT STANDARDS**



MTD 22 METALLOGRAPHY AND HEAT-TREATMENT SECTIONAL COMMITTEE

**SCOPE** - Standardization in the field of metallography and heat-treatment of ferrous and non-ferrous metals and alloys

LIAISON

MTD 4,6 & 16

Sl. No.	IS Number/ DOC Number	Title	Reaffirm Date	No. of Amd.
<b>STANDARDS PUBLISHED</b>				
1	IS 1956(Part 1):1976	Glossary of terms relating to iron and steel Part I General metallurgy, heat treatment and testing (first revision)	Nov 2012	
2	IS 3848:1981	Method for end quench test for hardenability of steel (first revision)	Apr 2009	
3	IS 4075:1985	Method for macrostreak flaw test for steel (first revision)	Nov 2012	
4	IS 4163:2004 / ISO 4967:1998	Steel - Determination of content of nonmetallic inclusions - Micrographic method using standard diagrams (third revision)	Jun 2010	
5	IS 4748:2009 / ISO 643:2003	Steel - Micrographic determination of the apparent grain size (second revision) (Superseding IS 2853)		
6	IS 5699:1970	Method for chill testing of cast iron	Apr 2009	
7	IS 6396:2000	Method of measuring decarburized depth of steel (second revision)	Feb 2012	
8	IS 6416:1988	Method of measuring case depth of steel (first revision)	Nov 2012	
9	IS 7739(Part 1):1975	Code of practice for preparation of metallurgical specimens Part 1 General features	Jun 2010	
10	IS 7739(Part 2):1975	Electrolytic polishing	Nov 2012	
11	IS 7739(Part 3):1975	Aluminium and its alloys and their examination	Nov 2012	
12	IS 7739(Part 4):1975	Copper and its alloys and their examination	Nov 2012	
13	IS 7739(Part 5):1976	Iron and steel and their examination	Nov 2012	
14	IS 7739(Part 6):1975	Lead and its alloys and their examination	Nov 2012	
15	IS 7739(Part 7):1975	Magnesium and its alloys and their examination	Nov 2012	
16	IS 7739(Part 8):1975	Nickel and its alloys and their examination	Nov 2012	

\* INDICATES STANDARDS UNDER REVISION  
/ INDICATES DUAL NUMBER STANDARDS

\*\* INDICATES STANDARDS TO BE REVISED  
| INDICATES EQUIVALENT STANDARDS

17	IS 7739(Part 9):1975	Gold, silver, platinum, palladium and their alloys	Nov 2012
18	IS 7739(Part 10):1975	Tin and its alloys and their examination	Nov 2012
19	IS 7739(Part 11):1976	Zinc and its alloys and their examination	Nov 2012
20	IS 7754:1975	Method for designation of microstructure of graphite in cast iron	Nov 2012
21	IS 8795:1978	Method for determining case depth of carburized steel by fracture test	Nov 2012
22	IS 8860:1978	Code of practice for heat treatment of aluminium alloys	Nov 2012
23	IS 9415:1980	Method for determination of hardenability and grain size of tool steels by penetration fracture test	Feb 2012
24	IS 10138:2010	Macroscopic method for assessing the content of non metallic inclusion in wrought steel (second revision) (Amalgamating IS 10138(Pt 1):1992, IS 10138(Pt 2):1983 and IS 10138(Pt 3):1983	
25	IS 11371:1985	Method for macroetch test for wrought steel products	Nov 2012
26	IS 12037:1987	Macrographic examination by sulphur print (Baumann method)	Feb 2012
27	IS 12211:1987	Micrographic method for assessing the distribution of carbides in tool steel and bearing steels using photomicrographs	Feb 2012
28	IS 12366:1988	Recommended practice for heat treatment for titanium and titanium alloys	Feb 2012
29	IS 12378:1988	Method of macroetch test for titanium alloys	Feb 2012
30	IS 12573:2010	Macroetch test for wrought aluminium alloy products	
31	IS 13015:1991	Macroetch testing, inspection and rating of steel products	Nov 2012
32	IS 13417:1992	Code of practice for heat treatment of steels	Nov 2012
33	IS 13484:1992	Macroetch test for copper alloys	Dec 2007
34	IS 13605:1992	Method for macroetch test for zinc and zinc alloys	Nov 2012
35	IS 13655:1993	Code of practice for heat treatment of steels cast iron	Feb 2012
36	IS 13691:1993 / ISO 4970:1979	Determination of total or effective thicknesses of thin surfaces hardened layers	Feb 2012

\* INDICATES STANDARDS UNDER REVISION  
/ INDICATES DUAL NUMBER STANDARDS

\*\* INDICATES STANDARDS TO BE REVISED  
/ INDICATES EQUIVALENT STANDARDS

37	IS 14598:1998	Heat treatment of maraging steel - Code of practice	Nov 2012
38	IS 15426:2004 / ISO 14250:2000	Steel - Metallographic characterization of duplex grain size and distributions	Jun 2010
39	IS 15839:2009 / 13520:2002	Determination of ferrite content in Austenitic stainless steel castings	

MTD 24 CORROSION PROTECTION AND FINISHES SECTIONAL COMMITTEE

**SCOPE** - Standardization in the field of corrosion, passivation and protection of metals, metal products in different applications, characteristics of protective and decorative metallic coatings, anodic oxide coatings, applied by electrolysis, hot dipping, thermal spraying, chemical means their testing and inspection methods

LIAISON

MTD 20

ISO/TC 156 Corrosion of metals and alloys

ISO/TC 107 Metallic and other non-organic coatings

SI. No.	IS Number/ DOC Number	Title	Reaffirm Date	No. of Amd.
<b>STANDARDS PUBLISHED</b>				
1	IS 1067:1981	Electroplated coatings of silver for decorative and protective purposes (second revision)	Mar 2011	
2	IS 1068:1993	Electroplated coatings of nickel plus chromium and copper plus nickel plus chromium (third revision)	Mar 2011	1
3	IS 1327:1988	Methods of determination of mass of tin coatings of tinplate (third revision)	Mar 2011	
4	IS 1337:1993	Electroplated coatings of hard chromium for engineering purposes (third revision)	Mar 2011	1
5	IS 1340:1977	Code of practice for chromate conversion coating on zinc and cadmium coated articles and zinc base alloys (first revision)	Mar 2011	
6	IS 1359:1992	Electroplated coatings of tin (third revision)	Mar 2011	
7	IS 1378:1987	Oxidized-copper finishes (third revision)	Mar 2011	
8	IS 1572:1986	Electroplated coatings of cadmium on iron and steel (second revision)	Mar 2011	
9	IS 1573:1986	Electroplated coatings of zinc on iron and steel (second revision)	Mar 2011	
10	IS 1771:1986	Electroplated coatings of silver and silver alloys for general engineering purposes (second revision)	Mar 2011	
11	IS 1772:1973	Electroplated coatings of copper (first revision)	Mar 2011	
12	IS 1773:1982	Electroplated coatings of brass	Mar 2011	1
13	IS 1868:1996	Anodic coatings on aluminium and its alloys (third revision)	Mar 2011	
14	IS 1958:1989	Nickel anodes for electroplating (second revision)	Mar 2011	1
15	IS 1959:1994	Silver anodes for electroplating (second revision)	Mar 2011	

\* INDICATES STANDARDS UNDER REVISION

\*\* INDICATES STANDARDS TO BE REVISED

16	IS 1985(Part 1):1980	Recommended practice for preparation of iron and steel for electroplating Part 1 high carbon steel (first revision)	Mar 2011	
17	IS 1985(Part 2):1980	Part 2 Low carbon steel (first revision)	Mar 2011	
18	IS 1985(Part 3):1980	Part 3 Iron castings (first revision)	Mar 2011	
19	IS 1986:1981	Code of practice for hard chromium plating on iron and steel for general engineering purposes (first revision)	Mar 2011	
20	IS 1992:1979	Electroplated coatings of lead(first revision)	Mar 2011	
21	IS 2384:1963	Tin anodes for electroplating	Mar 2011	1
22	IS 2450:1963	Recommended practice for plating on aluminium and its alloys	Mar 2011	
23	IS 2601:1987	Brass anodes for electroplating (first revision)	Mar 2011	
24	IS 2602:1989	Cadmium anodes for electroplating (first revision)	Mar 2011	
25	IS 2603:1983	Copper anodes for electroplating (first revision)	Mar 2011	
26	IS 2604:1988	Lead anodes for electroplating (second revision)	Mar 2011	
27	IS 2605:1985	Zinc anodes for electroplating (first revision)	Mar 2011	
28	IS 2606:1987	Alloy lead anodes for chromium plating (second revision)	Mar 2011	
29	IS 2629:1985	Recommended practice for hot-dip galvanizing on iron and steel (first revision)	Mar 2011	3
30	IS 2633:1986	Methods for testing uniformity of coating of zinc coated articles (second revision)	Mar 2011	
31	IS 2679:1964	Recommendations for equipment for electroplating	Mar 2011	
32	IS 3194:1980	Recommended practice for cleaning of metals prior to electroplating (first revision)	Mar 2011	
33	IS 3203:1982	Methods of testing local thickness of electroplated coatings_(first revision)	Mar 2011	1
34	IS 3266:1982	Electroplated coatings of gold for general engineering purposes (first revision)	Mar 2011	
35	IS 3531:1997	Glossary of terms relating to corrosion of metals (second revision)	Jun 2007	
36	IS 3554:1966	Glossary of terms relating to electroplating	Mar 2011	

\* INDICATES STANDARDS UNDER REVISION  
/ INDICATES DUAL NUMBER STANDARDS

\*\* INDICATES STANDARDS TO BE REVISED  
| INDICATES EQUIVALENT STANDARDS

37	IS 3618:1966	Phosphate treatment of iron and steel for protection against corrosion	Jun 2007	
38	IS 3655:1985	Recommended practice for electroplating (first revision)	Mar 2011	
39	IS 3656:1968	Code of recommended practice for mechanical polishing of metals for electroplating	Mar 2011	
40	IS 3821:1973	Methods for determination of weight of coating on hot-dip aluminized iron and steel articles	Mar 2011	
41	IS 4180:1967	Code of practice for corrosion protection of light gauge steel sections used in building	Jun 2007	1
42	IS 4252:1982	Electroplated coatings of gold for decorative purposes (first revision)	Mar 2011	
43	IS 4736:1986	Hot-dip zinc coatings on mild steel tubes (first revision)	Mar 2011	4
44	IS 4759:1996	Hot-dip zinc coatings on structural steel and other allied products (third revision)	Mar 2011	1
45	IS 4777:1968	Performance tests for protection schemes used in protection of light gauge steel against corrosion	Jun 2007	
46	IS 4826:1979	Hot-dipped galvanized coatings on round steel wires (first revision)	Mar 2011	3
47	IS 5523:1983	Method of testing anodic coating on aluminium and its alloys (first revision)	Mar 2011	
48	IS 5528:1985	Method of testing corrosion resistance of electroplated and anodized aluminium coating by copper accelerated acetic acid salt spray (CASS) test (first revision)	Mar 2011	
49	IS 5555:1970	Code of procedure for conducting field studies on atmospheric corrosion of metals	Jun 2007	1
50	IS 5905:1989	Sprayed aluminium and zinc coatings on iron and steel (first revision)	Mar 2011	
51	IS 5925:1978	Recommended practice for silver plating for general engineering purposes	Mar 2011	
52	IS 6005:1998	Code of practice for phosphating of iron and steel	Jun 2007	
53	IS 6009:1970	Method for evaluation of results of accelerated corrosion test	Mar 2011	
54	IS 6012:1992	Method for measurement of coating thickness by eddy current (first revision)	Mar 2011	
55	IS 6057:1988	Hard anodic coatings on aluminium and aluminium alloys (first revision)	Mar 2011	
56	IS 6158:1984	Recommended practice for safeguarding against embrittlement of hot-dipped galvanized iron and steel products (second revision)	Mar 2011	1

\* INDICATES STANDARDS UNDER REVISION

\*\* INDICATES STANDARDS TO BE REVISED

57	IS 6159:1998	Recommended practice for design and fabrication of material prior to galvanizing (first revision)	Mar 2011	
58	IS 6586:1989	Recommended practice for metal spraying for protection of iron steel (first revision)	Mar 2011	
59	IS 6651:1972	Anodized aluminium for automobile use	Mar 2011	
60	IS 6697:1988	Hot-dip aluminium coatings on ferrous parts (other than sheet,strip and wire) for general purposes (first revision)	Mar 2011	
61	IS 6745:1972	Method for determination of mass of zinc coating on zinc coated iron and steel articles	Mar 2011	5
62	IS 6910:1985	Method of testing corrosion resistance of electroplated and anodized aluminium coatings by acetic acid salt spray (AAS) test (first revision)	Mar 2011	1
63	IS 7088:1973	Recommended practice for anodizing of aluminium and its alloys	Mar 2011	
64	IS 7808:1975	Code of procedure for conducting studies on underground corrosion of metals	Jun 2007	
65	IS 8038:1985	Method of testing corrosion resistance of metallic and other non organic coatings by corrodokote test (first revision)	Mar 2011	
66	IS 8062:2006	Cathodic protection of buried pipeline/structure for transportation of Natural Gas Oil and liquids - Code of practice (first revision)		1
67	IS 8062(Part 2):1976	Code of practice for cathodic protection of steel structures, Part 2 Underground pipelines	Jun 2007	
68	IS 8062(Part 3):1977	Code of practice for cathodic protection of steel structure,part 3 Ship's hull	Jun 2007	
69	IS 8062(Part 4):1979	Code of practice for cathodic protection of steel structures ,part 4 Galvanic protection of dockgates, caissons, piers and jetties	Jun 2007	
70	IS 8221:1976	Code of practice for corrosion prevention of metals and metal components in packages	Jun 2007	
71	IS 8375:1977	Method for checking continuity of anodized coatings	Mar 2011	
72	IS 8376:1988	Electroplated coatings of nickel plus chromium on plastics for decorative purposes (first revision)	Mar 2011	
73	IS 8435:1977	Methods for measurement of thickness of metallic coatings on plastics	Mar 2011	
74	IS 8436:1989	Methods for thermal cycling test for evaluation of electroplated plastics (first revision)	Mar 2011	
75	IS 8508:1988	Code of practice for hot-dip aluminizing of iron and steel (first revision)	Mar 2011	
76	IS 8554:1977	Method of checking insulation of anodized coating by measurement of break down potential	Mar 2011	

\* INDICATES STANDARDS UNDER REVISION

\*\* INDICATES STANDARDS TO BE REVISED

77	IS 8602:1977	Method of tests for chromate coatings on zinc and cadmium surfaces	Mar 2011	
78	IS 8629(Part 1):1977	Code of practice for protection of iron and steel structures from atmospheric corrosion, part 1 General principles of corrosion and its prevention	Mar 2011	1
79	IS 8629(Part 2):1977	Code of practice for protection of iron and steel structures from atmospheric corrosion Part 2 Pretreatment	Mar 2011	1
80	IS 8629(Part 3):1977	Code of practice for protection of iron and steel structures from atmospheric corrosion Part 3 Protection schemes	Mar 2011	1
81	IS 9077:1979	Code of practice for corrosion protection of steel reinforcement in RB and RCC construction	Jun 2007	
82	IS 9172:1979	Recommended design practice for corrosion prevention of steel structures	Mar 2011	
83	IS 9530:1980	Method of testing microhardness of electroplated coatings	Mar 2011	
84	IS 9531:1989	Recommended practice for preparation of copper and copper-base alloys for electroplating (first revision)	Mar 2011	
85	IS 9838:1981	Method for determination of coating mass per unit area of conversion coatings on metallic materials by gravimetric method	Mar 2011	
86	IS 9839:1981	Chromate conversion coatings on electroplated zinc and cadmium coatings	Mar 2011	
87	IS 9844:1981	Method of testing corrosion resistance of electroplated and anodized aluminium coatings by neutral salt spray test	Mar 2011	
88	IS 10117:2000	Code of practice for passivation of stainless steel articles, industrial equipments and components including pipe line (first revision)	Mar 2011	
89	IS 10173:1982	Recommended practice for preparation of zinc alloy die castings for electroplating	Mar 2011	
90	IS 10209:1982	Electroplated coatings of tin-lead alloy (solder)	Mar 2011	
91	IS 10221:2008	Code of practice for coating and wrapping of underground mild steel pipelines (first revision)		
92	IS 10461(Part 1):1994	Method for determination of resistance to intergranular corrosion of austenitic stainless steel Part 1 Corrosion tests in nitric acid medium by measurement of loss in mass (Huoy test) (first revision)	Mar 2011	
93	IS 10461(Part 2):1994	Method for determination of resistance to intergranular corrosion of austenitic stainless steels, Part 2 copper sulphate / sulphuric acid test (Monypenny stratest)	Jun 2007	
94	IS 10471:1983	Recommended practice for corrosion prevention in electronic component and assemblies	Jun 2007	
95	IS 10493:1983	Corrosion protection tests for temporary corrosion preventives	Jun 2007	



96	IS 11232:1985	Chromate conversion coatings on aluminium	Jun 2007
97	IS 11268:1985	Method for estimation of loss of absorptive power of anodic oxide coatings after sealing dye spot test with prior acid treatment for anodized aluminium and its alloys	Mar 2011
98	IS 11579:1986	Recommended practice for chromate conversion coatings on aluminium	Jun 2007
99	IS 11598(Part 1):1986	Code of practice for corrosion protection in fertilizer plants Part 1 Phosphoric acid plant	Jun 2007
100	IS 11759:1986	Recommended practice for repair of damaged hot-dip galvanized coatings	Mar 2011
101	IS 11812:1986	Recommended practice for safeguarding against warpage and distortion of hot-dipped galvanized articles	Mar 2011
102	IS 11826:1986	Recommended practice for chemical colouring for engineering components in general and for bicycle components	Mar 2011
103	IS 11857:1986	Anodized wrought aluminium for external architectural applications	Mar 2011
104	IS 11864:1986	Recommended construction practice of apparatus for spray cabinet for various salt spray tests	Mar 2011
105	IS 12393:1988	Electroplated coatings of nickel	Mar 2011
106	IS 12560:1988	Code of practice for cathodic protection of heat exchangers and condensers	Mar 2011
107	IS 12594:1988	Hot-dip zinc coating on structural steel bars for concrete reinforcement	Mar 2011
108	IS 12643:1989	Corrosion protection of steel by fiberglass reinforced polyester lining code of practice	Mar 2011
109	IS 12753:1989	Electrogalvanized coatings on round steel wire	Mar 2011
110	IS 13147:1990	Blackoxide coatings on stainless steel parts	Mar 2011
111	IS 13177:1991	Passivation of stainless steel parts	Mar 2011
112	IS 13212:1991	Blackoxide coatings for iron and steel parts	Mar 2011
113	IS 13515:1992	Rust converter	Jun 2007
114	IS 13647:1993	Electroplated coatings of rhodium for engineering purposes	Mar 2011
115	IS 13677:1993	Electronless nickel - phosphorus coatings	Mar 2011

\* INDICATES STANDARDS UNDER REVISION  
/ INDICATES DUAL NUMBER STANDARDS

\*\* INDICATES STANDARDS TO BE REVISED  
/ INDICATES EQUIVALENT STANDARDS

116	IS 14126:1994 / ISO 2177:1985	Metallic coatings - measurement of thickness - coulometric method	Mar 2011	
117	IS 14149:2008 / ISO 3543:1981	Metallic and non-metallic coatings - Measurement of thickness - Beta backscatter method (first revision)		
118	IS 14191:1996	Corrosion of Metals and alloys - classification of corrosivity of atmosphere	Mar 2011	
119	IS 14297:1995	Corrosion of metals and alloys - Corrosivity of atmospheres-Determination of corrosion rate of standard specimens for the evaluation of corrosivity	Mar 2011	
120	IS 14321:1995	Corrosion of metals and alloys - Recommended values for the corrosivity categories of atmospheres	Mar 2011	
121	IS 14322:1996	Corrosion of Metals and Alloys - Corrosivity of atmosphere - Measurement of pollution - Methods	Mar 2011	
122	IS 14503:1998	Testing of phosphate coatings - Methods	Mar 2011	
123	IS 15337:2003	Coal tar based anticorrosion tape for protection of underground mild steel pipelines	Oct 2008	1
124	IS 15659(Part 1):2006	Petroleum and natural gas industries - External coatings for buried or submerged pipelines used in pipeline transportation of gas and liquid hydrocarbons	Mar 2011	
125	IS 15659(Part 2):2006	Petroleum and natural gas industries - External coatings for buried or submerged pipelines used in pipeline transportation of gas and liquid hydrocarbons	Mar 2011	

**DRAFT STANDARDS FORMULATED**

1	DOC.MTD 24(5051)	Single Pack Zinc Rich Coating		
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\* INDICATES STANDARDS UNDER REVISION  
/ INDICATES DUAL NUMBER STANDARDS

\*\* INDICATES STANDARDS TO BE REVISED  
| INDICATES EQUIVALENT STANDARDS

MTD 25 POWDER METALLURGICAL MATERIALS AND PRODUCTS SECTIONAL  
COMMITTEE

**SCOPE** - Standardization in the field of powder metallurgical materials and products  
LIAISON

ISO/TC 119 Powder metallurgy

SI. No.	IS Number/ DOC Number	Title	Reaffirm Date	No. of Amd.
<b>STANDARDS PUBLISHED</b>				
1	IS 4507:2000 / ISO 4507:2000	Sintered ferrous materials, carburized or carbnitrited - Determination and verification of case hardening depth by a micro-hardness test		
2	IS 4840:2006 / ISO 4490:2001	Metallic powder - Determination of flow time by means of a calibrated funnel (Hall flow meter) (second revision)	Dec 2011	
3	IS 4841:1982	Method for determination of density of sintered metallic materials (first revision)		Feb 2009
4	IS 4842:1982	Method for transverse testing of hardmetals (first revision)		Feb 2009
5	IS 4848:1981	Method for determination of apparent density of free flowing powders for powder metallurgical purposes (first revision)		Feb 2009
6	IS 4857:2005 / ISO 3927 : 2001	Metallic powders,excluding powders for hardmetals - Determination of compressibility in uniaxial compression(fourth revision)		Dec 2011
7	* IS 5432:1982	Glossary of terms relating to powder metallurgy (first revision)		Feb 2009
8	IS 5461:1984	Method for sieve analysis of metal powders (first revision)		Feb 2009
9	* IS 5642:1991 / ISO 2738 : 1987	Permeable sintered metal materials - Determination of density,oil content,and open porosity (second revision)		Feb 2009
10	IS 5644(Part 1):1993 / ISO 4491-1:1997	Metallic powders - Determination of oxygen content by reduction methods Part 1 General guidelines (third revision)		Feb 2009
11	IS 5644(Part 2):2005 / ISO 4491-2:1997	Part 2 Loss of mass on hydrogen reduction (hydrogen loss) (fourth revision)		Dec 2011
12	IS 5644(Part 3):2005 / ISO 4491-3:1997	Part 3 Hydrogen - Reducible oxygen (fourth revision)		Dec 2011
13	IS 5644(Part 4):1993 / ISO 4491-4:1989	Part 4 Total oxygen by reduction extraction (third revision)		Feb 2009
14	IS 5652(Part 1):1993 / ISO 3738-1:1982	Hardmetals - Rockwell hardness test (scale A) Part 1 Test method (second revision)		Feb 2009
15	IS 6492:1972	Methods for sampling of powders for powder metallurgical purposes		Feb 2009
16	IS 7438:1985	Method for test for acid-insoluble content in iron, copper, tin, and bronze powders (first revision)		Feb 2009

\* INDICATES STANDARDS UNDER REVISION  
/ INDICATES DUAL NUMBER STANDARDS

\*\* INDICATES STANDARDS TO BE REVISED  
/ INDICATES EQUIVALENT STANDARDS

17	IS 7505:1985	Cobalt powder for hardmetals (first revision)	Feb 2009	
18	IS 7506:1987	Nickel powder (first revision)	Feb 2009	
19	IS 7512:2006	Method for the determination of average particle size of metal powders by Fisher subsieve sizer	Dec 2011	
20	IS 7970:1987	Tantalum powder for capacitors (first revision)	Feb 2009	1
21	IS 8367:1993	Tin powder (first revision)	Feb 2009	1
22	* IS 8368:2010	Tungsten carbide powder for hardmetals (second revision)		
23	IS 8369:2010	Titanium carbide powder for hardmetals (second revision)		
24	* IS 8370:1977	Iron powder for powder metallurgical applications	Feb 2009	
25	IS 8392:1985	Tungsten powder for hardmetals (first revision)	Feb 2009	1
26	* IS 8485:1977	Copper powder for powder metallurgical applications	Feb 2009	
27	IS 8871:2004 / ISO 3953:1993	Metallic Powders - Determination of tap density (second revision)	Dec 2011	
28	IS 8876:1978	Method for the determination of residue on chlorination of tungsten metal powder	Feb 2009	
29	IS 10035:1993	Bronze powder for metallic filters (first revision)	Feb 2009	
30	IS 10385:1982	Method for determination of radial crushing strength of sintered metal powder bearings	Feb 2009	
31	IS 11110:1984	Copper lead powder	Feb 2009	
32	IS 11111:1984	Leaded bronze powders	Feb 2009	
33	IS 11506:2004 / ISO 13944:1996	Method for determination of lubricant content of lubricated metallic powder by Soxhlet extraction (first revision)	Dec 2011	
34	IS 11518:1985	Determination of (the magnetization) coercivity in hardmetals	Feb 2009	
35	IS 11520:1985	Method for metallographic sample preparation of hardmetals	Feb 2009	
36	IS 11627:1986	Method for determination of apparent density of metallic powders by Scott volumeter	Feb 2009	
37	IS 11959:1987	Method for metallographic determination of microstructure in hardmetals	Feb 2009	

\* INDICATES STANDARDS UNDER REVISION  
/ INDICATES DUAL NUMBER STANDARDS

\*\* INDICATES STANDARDS TO BE REVISED  
/ INDICATES EQUIVALENT STANDARDS

38	IS 11960:1987	Methods for metallographic determination of apparent porosity and uncombined carbon in hardmetals	Feb 2009
39	IS 12279:2005 / ISO 3325:1996	Sintered metal materials (excluding hardmetals) - Determination of transverse rupture strength (first revision)	Dec 2011
40	IS 12286:1988	Method for determination of abrasive wear resistance of hardmetals	Feb 2009
41	IS 12473(Part 1):1988	Chemical analysis of hardmetals by flame atomic absorption spectrometry Part I General requirements	Feb 2009
42	IS 12473(Part 2):1988	Part 2 Determination of calcium, potassium, magnesium and sodium in contents from 0.001 to 0.02 percent (m/m)	Feb 2009
43	IS 12473(Part 3):1988	Part 3 Determination of cobalt, iron, manganese and nickel in contents from 0.01 to 0.5 percent (m/m)	Feb 2009
44	IS 12473(Part 4):1988	Part 4 Determination of molybdenum, titanium and vanadium in contents from 0.01 to 0.5 percent (m/m)	Feb 2009
45	IS 12473(Part 5):1988	Part 5 Determination of cobalt, iron, manganese, molybdenum, nickel, titanium and vanadium in contents from 0.5 to 2 percent (m/m)	Feb 2009
46	IS 12473(Part 6):1988	Part 6 Determination of chromium in contents from 0.01 to 2 percent (m/m)	Feb 2009
47	IS 12483:1988	Determination of titanium in hardmetals by spectrophotometric method	Feb 2009
48	IS 12513:1988	Determination of cobalt in hardmetals by potentiometric method	Feb 2009
49	IS 12539:1988	Determination of total carbon in hardmetals by gravimetric method	Feb 2009
50	IS 12548:1988	Determination of insoluble (free) carbon in hardmetals by gravimetric method	Feb 2009
51	IS 12570:1988	Method for determination of dimensional changes associated with compacting and sintering of metallic powders (excluding powders for hardmetals)	Feb 2009
52	IS 12571:1988	Method for determination of green strength by transverse rupture of rectangular compacts of metallic powder	Feb 2009
53	IS 12783:1989	Hardmetals - Vickers hardness test	Feb 2009
54	IS 13780:1993 / ISO 4506:1979	Hardmetals - Compression test	Feb 2009
55	IS 13781:1993 / ISO 4003:1977	Permeable sintered metal materials - Determination of bubble test pore size	Feb 2009
56	IS 13782:1993 / ISO 4022:1987	Permeable sintered metal materials - Determination of fluid permeability	Feb 2009
57	IS 13803:1993 / ISO 3312:1987	Sintered metal materials and hardmetals - Determination of young modulus	Feb 2009

\* INDICATES STANDARDS UNDER REVISION

\*\* INDICATES STANDARDS TO BE REVISED

58	IS 15554:2004 / ISO 2740:1999	Sintered metal material, excluding hard metal - Tensile test piece	Dec 2011
59	IS 15567:2005 / ISO 3928:1999	Sintered metal material, excluding hard metal - Fatigue test piece	Dec 2011
60	IS 15574:2005 / ISO 5754:1978	Sintered metal materials excluding hardmetals - Unnotched impact test piece	Dec 2011
61	IS 15585:2005 / ISO 5755:2001	Sintered metal material - Specificaiton	Dec 2011
62	IS 15703:2006 / 4498:2005	Sintered metal material, excluding hard metals - Determination of apparent hardness and microhardness	Dec 2011

**DRAFT STANDARDS FINALIZED BUT NOT YET UNDER PRINT**

1	DOC.MTD 25(5136)	Sintered metal materials, excluding hardmetals - Permeable sintered metal materials - Determination of density, oil content and open porosity (based on ISO 2738) (third revision of IS 5642)
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*/ INDICATES DUAL NUMBER STANDARDS*

*| INDICATES EQUIVALENT STANDARDS*

MTD 26 INDUSTRIAL FUEL-FIRED FURNACES SECTIONAL COMMITTEE  
**SCOPE - Standardization in the field of industrial fuel fired furnaces**

Sl. No.	IS Number/ DOC Number	Title	Reaffirm Date	No. of Amd.
<b>STANDARDS PUBLISHED</b>				
1	IS 8849:1991	Glossary of terms relating to fuel fired industrial furnaces	Mar 2012	
2	IS 9180:2011	Recommendations for performance rating of fuel-fired furnaces (second revision)		
3	IS 9444:2007	Code of practice for installation of oil supply units for fuel fired furnaces (first revision)	Mar 2012	
4	IS 9977:1998	Design and construction of box type forging furnaces - Guidelines (first revision)	Mar 2012	
5	IS 10298:1982	Guidelines for design and construction of mould and core drying ovens for foundries	Mar 2011	
6	IS 11462:1985	Mould and core sand dryers rotary type	Mar 2011	
7	IS 12368:1988	Guidelines for design and construction of hot air generators	Mar 2011	1
8	IS 12392:1988	Code of practice for design manufacture and testing of metallic recuperators	Mar 2011	
9	IS 12553:1988	Code of practice for design, construction, installation and operation of industrial gas/oil burning equipment	Mar 2011	
10	IS 12826(Part 1):1989	Code of practice for ordering, testing and acceptance of industrial furnaces Part 1 purchaser's data sheet for ordering of industrial furnaces	Mar 2011	1
11	IS 12826(Part 2):1990	Part 2 Supplier's data sheet for ordering of industrial furnaces	Mar 2012	
12	IS 12826(Part 3):1990	Part 3 Testing and acceptance of industrial furnaces	Mar 2012	
13	IS 14245:1995	Protective atmosphere for heat treatment furnaces - Recommendations	Mar 2012	
14	IS 14492:1997	Drying preheating and commissioning of furnace installations, steam boilers, industrial kilns and chimneys - Recommendations	Mar 2012	
15	IS 15562:2005	Design and construction of bogie hearth type heat treatment furnaces - Guidelines	Mar 2011	
<b>FINALISED DRAFTS UNDER PRINT</b>				
1	DOC.MTD 26(5080)	Safety for gas fired furnaces		
2	DOC.MTD 26(5081)	Safety for oil fired furnaces		

\* INDICATES STANDARDS UNDER REVISION

\*\* INDICATES STANDARDS TO BE REVISED

MTD 30 SPONGE IRON AND SMELTING REDUCTION SECTIONAL COMMITTEE

**SCOPE** - Standards in the field of sponge iron/direct reduced iron (DRI) and feedstock for smelting reduction

LIAISON

PCD 7 Solid mineral fuel sectional committee  
ISO/TC 102

SI. No.	IS Number/ DOC Number	Title	Reaffirm Date	No. of Amd.
<b>STANDARDS PUBLISHED</b>				
1	IS 10852:2012	Guidelines for storage and transportation of sponge iron/direct reduced iron(DRI) and hot briquetted iron (HBI) (first revision)		
2	IS 11092:2001	Iron ore pellets for direct reduction processes (second revision)	Mar 2011	
3	IS 11093:2001	Iron ore lumps for direct reduction processes (second revision)	Mar 2011	1
4	IS 11284:1985	Method of rotary tube test for iron bearing materials for the manufacture of sponge iron/direct reduced iron(DRI )	Mar 2011	1
5	IS 11285:2001	Various tests on raw materials to be used for coal based direct rotary kiln direct reduction (first revision)	Mar 2011	
6	IS 11795:1996	Guidelines for ash softening studies on solid reductants for direct reduction (first revision)	Mar 2012	1
7	IS 11860:1998	Guidelines for non -coking coals for solid reductant based direct reduction in rotary kilns(and other reactors (first revision)	Oct 2008	2
8	IS 12052:2007	Method for determination of re-oxidation rate of sponge iron/direct reduced iron(DRI) in contact with humid air and in direct contact with water (first revision)	Mar 2012	
9	IS 12263:1987	Method for determination of rigidity of sponge iron/DRI during transportation and handling	Oct 2008	
10	IS 12381:1994	Methods of determination of coal (char) reactivity for direct reduction processes (first revision)	Mar 2012	1
11	IS 12668:1989	Melting characteristics of sponge iron/direct reduced iron (DRI)	Mar 2011	1
12	IS 12929:2007   ISO 11257:1998	Feedstock (iron oxides and natural gas) for gas based direct reduction processes- guidelines (first revision) (superseding IS 14373, 14405)	Mar 2012	
13	* IS 13885:2001	Non-Magnetics/char in sponge iron (DRI)-Methods of determination (first revision)	Mar 2012	1
14	IS 14719:1999	Density of hot briquetted iron (HBI) - Method for determination	Mar 2011	1
15	IS 14795:2000	Method for determination of clustering of feedstock for DR process	Mar 2011	1



16	IS 14796:2000	Feedstock for smelting reduction process - guidelines 1	Mar 2011	
17	IS 14797:2000	Classification of smelting reduction process	Mar 2011	1
18	IS 14991:2001	Method of determination of coal char strengths	Mar 2012	
19	IS 15774:2007	Sponge Iron/Direct Reduction Iron (DRI) hot briquettes iron (HBI) and cold briquettes for steel making (amalgamating IS 10812, IS 13839 and IS 13905)	Mar 2012	2

**FINALISED DRAFTS UNDER PRINT**

1	DOC.MTD 30(4947)	Magnetics in char from coal based sponge iron (DRI) - Methods of determination		
2	DOC.MTD 30(5056) / ISO 5416:2006	Direct reduced iron - Determination of metallic iron - Bromine-methanol titrimetric method		
3	DOC.MTD 30(5057)	Direct reduced iron and hot briquetted iron - Sampling and sampling preparation (based on ISO 10835:2007)		
4	DOC.MTD 30(5058)	Direct reduced iron - Determination of tumble strength of hot briquetted iron (HBI) (based on ISO 15967:2000)		
5	DOC.MTD 30(5059)	Direct reduced iron - Determination of apparent density and water absorption of hot briquetted iron (HBI) (based on ISO 15968:2000)		

**DRAFT STANDARD COMPLETED WIDE CIRCULATION**

1	DOC.MTD 30(5175)	Guidelines for use of synthesis gas from coal gasifier for production of sponge iron		
2	DOC.MTD 30(5174)	First Revision of IS 15774		
3	DOC.MTD 30(5176)	Draft Amendment No., 1 to IS 11092		
4	DOC.MTD 30(5177)	Draft Amendment No. 2 to IS 11093		

**INDICATES STANDARDS UNDER REVISION**  
/ **INDICATES DUAL NUMBER STANDARDS**

**\*\* INDICATES STANDARDS TO BE REVISED**  
/ **INDICATES EQUIVALENT STANDARDS**

MTD 32 METAL CONTAINERS SECTIONAL COMMITTEE  
**SCOPE** - Standardization in the field of metal containers  
 LIAISON

ISO/TC 52

Sl. No.	IS Number/ DOC Number	Title	Reaffirm Date	No. of Amd.
<b>STANDARDS PUBLISHED</b>				
1	IS 916:2000	18 litre square tins (fourth revision)	Mar 2011	
2	** IS 1394:1984	Glossary of terms relating to metal containers (third revision)	Mar 2011	1
3	IS 1406:1995	Rectangular tins for liquids (fourth revision)	Mar 2011	
4	IS 1407:1980	Round paint tins (second revision)	Mar 2011	
5	* IS 1783(Part 1):1993	Drums,large,fixed ends, Part 1 Grade A drums (third revision)	Mar 2011	2
6	* IS 1783(Part 2):1988	Drums, large, fixed ends, Part 2 Grade B drums (third revision)	Mar 2011	1
7	* IS 1784:1998	Screwed closures for drums (third revision)	Mar 2011	
8	* IS 1994:1987	Crown closures (second revision)	Mar 2011	
9	IS 2034:1987	Round open top sanitary cans for butter and cheese (first revision)	Mar 2011	
10	IS 2087:1988	Square tins for general purpose (third revision)	Mar 2011	1
11	IS 2123:1977	Vial (goldie) seals (first revision)	Nov 2008	
12	IS 2134:1981	Round tins for general purposes (second revision)	Mar 2011	
13	IS 2471:1963	Methods of test for metal containers	Mar 2011	
14	IS 2474:1982	Metal closures for drums (first revision)	Mar 2011	3
15	IS 2552:1989	Steel drums (galvanized and ungalvanized) (third revision)	Nov 2008	1
16	IS 3101:1995	Aluminium collapsible tubes (second revision)	Nov 2008	
17	IS 3259:1966	Methods of sampling of metal containers	Mar 2011	
* INDICATES STANDARDS UNDER REVISION				
** INDICATES STANDARDS TO BE REVISED				
18	IS 3286:1980	Round grease tins (first revision)	Mar 2011	

19	IS 3575:1993	Bitumen drums (third revision)	Mar 2011	2
20	IS 3603:1988	Seamless aluminium bottles (first revision)	Mar 2011	
21	IS 3680:1987	Round printing ink containers (first revision)	Mar 2011	
22	IS 4638:1981	Seamless rectangular fish tins (first revision)	Mar 2011	
23	IS 5241:1987	Shoe polish containers (first revision)	Mar 2011	1
24	IS 5682:1991	Open top drums and kegs (first revision)	Mar 2011	
25	IS 6941:1973	Method for sampling metal closures	Nov 2008	
26	IS 7182:1973	Methods of tests for aluminium collapsible tubes	Nov 2008	
27	IS 7852:1975	Eye ointment tubes, small	Sep 2006	
28	IS 8393:1977	Roll seal pilferproof closures	Nov 2008	1
29	* IS 8449:1999	Non-returnable metal aerosol dispensers	Mar 2011	
30	IS 8469:1977	Methods of tests for flammability of aerosol products	Nov 2008	
31	IS 8932:1978	Prefomed metal screw caps for glass containers	Nov 2008	
32	IS 8933:1978	Mess tins	Mar 2011	
33	IS 8996:1988	20 litre steel jerry cans (first revision)	Mar 2011	
34	IS 9209:1979	Methods of test for the compatibility of aerosol products with the metal aerosol dispensers	Mar 2011	
35	* IS 9396(Part 1):1987	Round open top sanitary cans for processed foods, Part I Tinline requirements(first revision)	Mar 2011	
36	IS 9396(Part 2):2012	Round open top sanitary cans for foods and drinks, Part 2 Sizes and general requirements (second revision)		
37	IS 9445:1980	Aluminium containers for packing of liquid pesticides (capacity 5 litres and above)	Mar 2011	1
38	IS 9503:1988	Aluminium bottles for packing of liquid pesticides (first revision)	Mar 2011	1

\* INDICATES STANDARDS UNDER REVISION  
/ INDICATES DUAL NUMBER STANDARDS

\*\* INDICATES STANDARDS TO BE REVISED  
/ INDICATES EQUIVALENT STANDARDS

39	IS 9634:1980	Aerosol valves - 25.4 mm diameter	Mar 2011	
40	IS 9635:1980	Methods for sampling of aerosol valves	Mar 2011	
41	IS 9976:1981	Method of sampling of open top sanitary (OTS) cans	Mar 2011	
42	IS 9991:1981	Condensed milk cans	Mar 2011	
43	IS 9992:1991	Round and rectangular tinplate cans for liquid pesticides (first revision)	Mar 2011	1
44	IS 10325:2000	Square tins-15 kg for ghee, vanaspati, edible oils and bakery shortenings (second revision)	Mar 2011	
45	IS 10339:2000	Ghee, vanaspati and edible oil tins (second revision)	Mar 2011	
46	IS 11078:1993	Open top sanitary cans for milk powder (first revision)	Mar 2011	
47	* IS 11079:1984	Metal cans for pan masala and zarda	Nov 2008	
48	IS 11104:2012	Glossary of terms relating to open top sanitary cans		1
49	IS 12219:1987	Methods of determination of gross-lidded capacity of open top sanitary cans	Mar 2011	
50	IS 12340:1988	Round open top aluminium containers for liquid pesticides	Mar 2011	1
51	* IS 13997:1994	Drums large open top	Mar 2011	1
52	IS 14407:1996	Aluminium cans for beverages	Mar 2011	

**FINALISED DRAFTS UNDER PRINT**

1	DOC.MTD 32(4943)	Specification for Round open top sanitary cans for butter and cheese (first revision)		
2	DOC.MTD 32(4945)	Round open top sanitary cans for milk powder specification (second revision)		
3	DOC.MTD 32(5079)	Screwed closures for drums - Specification (Third revision of IS 1784)		
4	DOC.MTD 32(5082)	Drums, large, fixed ends Part 1 Grade A drums (third revision of IS 1783 (Part 1):1993)		
5	DOC.MTD 32(5083)	Drums, large, fixed ends Part 2 Grade B Drums (fourth revision of IS 1783 (Part 2):2012)		
6	DOC.MTD 32(5097)	Drums large open top - Specification (first revision of IS 13997)		

\* INDICATES STANDARDS UNDER REVISION  
/ INDICATES DUAL NUMBER STANDARDS

\*\* INDICATES STANDARDS TO BE REVISED  
/ INDICATES EQUIVALENT STANDARDS

**DRAFT STANDARDS FORMULATED**

- |   |                  |   |
|---|------------------|---|
| 1 | DOC.MTD 32(4996) | Round open top sanitary cans for processed foods<br>Part 1 Tinplate requirements (second revision of IS 9396) |
| 2 | DOC.MTD 32(5099) | Specification for crown closures (third revision of IS<br>1994)   |
| 3 | DOC.MTD 32(5100) | Specification for metal cans for pan masala, and zarda<br>(first revision of IS 11079)                        |

*\* INDICATES STANDARDS UNDER REVISION  
/ INDICATES DUAL NUMBER STANDARDS*

*\*\* INDICATES STANDARDS TO BE REVISED  
| INDICATES EQUIVALENT STANDARDS*

MTD 33 NANOTECHNOLOGIES SECTIONAL COMMITTEE, MTD 33  
**SCOPE** - Standardization in the field of Nanotechnologies  
 LIAISON  
 ISO/TC 229 Nanotechnologies

SI. No.	IS Number/ DOC Number	Title	Reaffirm Date	No. of Amd.
<b>FINALISED DRAFTS UNDER PRINT</b>				
1	DOC.MTD 33(5109)	Nanotechnologies - Model taxonomic framework for use in developing vocabularies - Core concepts (based on ISO/TR 12885:2008)		
2	DOC.MTD 33(5110)	Nanotechnologies - Nanomaterial risk evaluation (based on ISO/TR 13121:2011)		
3	DOC.MTD 33(5111)	Nanotechnologies - Vacabulary - Part 1: Core terms (based on ISO/TS 80004-1:2010)		
4	DOC.MTD 33(5112)	Nanotechnologies - Vacabulary - Part 3: Carbon nano-objets (based on ISO/TS 80004-3:2010)		
5	DOC.MTD 33(5113)	Nanotechnologies - Methodology for the classification and categorization of nanomaterials (based on ISO/TR 11360:2010)		
6	DOC.MTD 33(5114)	Nanotechnologies - Health and safety practices in occupational settings relevant to nanotechnologies (based on ISO/TR 12802:2010)		
<b>DRAFT STANDARD COMPLETED WIDE CIRCULATION</b>				
1	DOC.MTD 33(5168)	Nanotechnologies - Materials specifications - Guidance on specifying nano-objects (based on ISO/TS 12805:2011)		
2	DOC.MTD 33(5165)	Nanotechnologies - Vocabulary - Part 4 - Nanostructured materials (based on ISO/TS 80004-4:20110)		
3	DOC.MTD 33(5166)	Nanotechnologies - Vocabulary - Part 5: Nano/bio interface (based on ISO/TSC 80004-5:2011)		
4	DOC.MTD 33(5167)	Nanotechnologies - Vocabulary - Part 7: Diagonstics and therapeutics for healthcare (based on ISO/TS 80004-7:2011)		
5	DOC.MTD 33(5169)	Nanotechnologies - Determination of elemental impurites in samples of carbon nanotubes using inductively coupled plasma mass spectrometry (based on ISO/TS 13278:20110)		
6	DOC.MTD 33(5170)	Nanotechnologies - Endotoxin test on nanomaterial samples for in vitro systems - Limulus amebocyte lysate (LAL) test (based on ISO 29701:2010)		
7	DOC.MTD 33(5115)	Nanotechnolgies - Nanomaterial risk evaluation (based on ISO/TR 13121:2011)		

\* INDICATES STANDARDS UNDER REVISION

\*\* INDICATES STANDARDS TO BE REVISED

MTD 34 METHODS OF CHEMICAL ANALYSIS OF METALS SECTIONAL COMMITTEE

**SCOPE** - Standardization in the field of chemical/ instrumental analysis of ferrous, non-ferrous metals, ores and raw materials

LIAISON

ISO/TC 26 Copper and Copper alloys

ISO/TC 17/SC 1 Steel/ Method of determination of chemical composition

ISO/TC 18 Zinc and Zinc Alloys

ISO/TC 79/SC 1 Light Metals and Their Alloys/Method of chemical and spectrochemical analysis

ISO/TC 132 Ferroalloys

ISO/TC 102/SC 2 Iron Ores/Chemical analysis

ISO/TC 129 Aluminium Ores and Minerals

SI. No.	IS Number/ DOC Number	Title	Reaffirm Date	No. of Amd.
<b>STANDARDS PUBLISHED</b>				
1	IS 228(Part 1):1987	Methods of chemical analysis of steels (part 1) Determination of carbon by volumetric method (for carbon 0.05 to 2.50 percent) (third revision)	Sep 2012	1
2	IS 228(Part 2):1987	Part 2 Determination of Manganese in plain carbon and low alloy steels by arsenite method (third revision)	Sep 2012	
3	IS 228(Part 3):1987	Part 3 Determination of phosphorus by alkalimetric method (third revision)	Sep 2012	
4	IS 228(Part 4):1987	Part 4 Determination of total carbon by gravimetric method (for carbon greater than or equal to 0.1 percent) (third revision)	Sep 2012	
5	IS 228(Part 5):1987	Part 5 Determination of nickel by dimethyl glyoxime (gravimetric) method (for nickel greater than or equal to 0.1 percent) (third revision)	May 2009	
6	IS 228(Part 6):1987	Part 6 Determination of chromium by persulphate oxidation method (for chromium greater than or equal to 0.1 percent) (third revision)	May 2009	
7	IS 228(Part 7):1990	Part 7 Determination of molybdenum by alpha-benzoinoxime method (for molybdenum greater than 1 percent) (third revision)	Sep 2012	
8	IS 228(Part 8):1989	Part 8 Determination of silicon by gravimetric method (for silicon 0.05 to 0.50 percent) (third revision)	Nov 2009	
9	IS 228(Part 9):1989	Part 9 Determination of sulphur in plain carbon steels by evolution method (for sulphur 0.01 to 0.25 percent) (third revision)	Nov 2009	
10	IS 228(Part 10):1989	Part 10 Determination of molybdenum by thiocyanate (photometric) method in low and high alloy steels (for molybdenum 0.01 to 1.5 percent) (third revision)	May 2009	
11	IS 228(Part 11):1990	Part 11 Determination of total silicon by reduced molybdo-silicate spectro photometric method in carbon steels and low alloy steels (for silicon 0.01 to 0.05 percent) (third revision)	May 2009	
12	IS 228(Part 12):2001	Part 12 Determination of manganese by periodate spectrophotometric method in low and high alloy steels (for manganese 0.01 to 2.0 percent) (fourth revision)	May 2009	

13	IS 228(Part 13):1982	Part 13 Determination of arsenic	May 2009
14	IS 228(Part 14):1988	Part 14 Determination of carbon by thermal conductivity method (for carbon 0.005 to 2.000 percent)	Nov 2009
15	IS 228(Part 15):1992	Part 15 Determination of copper by thiosulphate iodide method (for copper 0.05 to 5 percent)	May 2009
16	IS 228(Part 16):1992	Part 16 Determination of tungsten by spectrophotometric method (for tungsten 0.1 to 2 percent)	May 2009
17	IS 228(Part 17):1998	Part 17 Determination of nitrogen by thermal conductivity method (for nitrogen upto 0.4 percent)	Sep 2010
18	IS 228(Part 18):1998	Part 18 Determination of oxygen by instrumental method	Sep 2012
19	IS 228(Part 19):1998	Part 19 Determination of nitrogen by steam distillation	Sep 2010
20	IS 228(Part 20):2003	Methods of chemical analysis of steels Part 20 Determination of carbon and sulphur by infra-red absorption method	Dec 2008
21	IS 228(Part 21):2003	Methods of chemical analysis of steel Part 21 Determination of copper by spectrometric method (for copper 0.02 to 0.5 percent) (Revision of IS 228)	Dec 2008
22	IS 228(Part 22):2003	Methods of chemical analysis of steels Part 22 Determination of total hydrogen in steel by thermal conductivity method	Dec 2008
23	IS 228(Part 23):2003	Methods of chemical analysis of steel Part 23 Determination of nitrogen in steel by optical emission spectrometer	Dec 2008
24	IS 228(Part 24):2003	Methods of chemical analysis of steel Part 24 Determination of nitrogen steel by inert gas fusion-thermal conductivity method	Dec 2008
25	IS 403:1964	Methods of chemical analysis of lead and antimonial lead (revised)	Jul 2010
26	IS 406:1964	Methods of chemical analysis of slab zinc (spelter) (revised)	Jul 2010
27	IS 440:1964	Methods of chemical analysis of copper (revised)	Feb 2012
28	IS 504:1963	Methods of chemical analysis of aluminium and its alloys (revised)	Mar 2010
29	IS 504(Part 1):2002	Methods of Chemical analysis of aluminium and its alloys Part 1 Determination of silicon (first revision)	Sep 2012
30	IS 504(Part 2):2000	Part 2 Determination of iron (first revision)	Sep 2012
31	IS 504(Part 3):2003	Part 3 Determination of copper (first revision)	Sep 2012

\* INDICATES STANDARDS UNDER REVISION

\*\* INDICATES STANDARDS TO BE REVISED



32	IS 504(Part 4):2002	Part 4 Determination of zinc (first revision)	Sep 2012
33	IS 504(Part 5):2002	Part 5 Determination of manganese (first revision)	Sep 2012
34	IS 504(Part 6):2002	Part 6 Determination of magnesium (first revision)	Sep 2012
35	IS 504(Part 7):2002	Methods of chemical analysis of aluminium and its alloys Part 7 Determination of nickel (first revision)	Sep 2012
36	IS 504(Part 8):2002	Part 8 Determination of chromium (first revision)	Sep 2012
37	IS 504(Part 9):2002	Part 9 Determination of tin (first revision)	Sep 2012
38	IS 504(Part 10):2002	Part 10 Determination of antimony (first revision)	Sep 2012
39	IS 504(Part 11):2002	Part 11 Determination of titanium (first revision)	Sep 2012
40	IS 504(Part 12):2002	Part 12 Determination of vanadium (first revision)	Sep 2012
41	IS 504(Part 13):2003	Part 13 Determination of Sodium	Sep 2012
42	IS 504(Part 14):2003	Part 14 Determination of Berrileum	Sep 2012
43	IS 504(Part 15):2003	Part 15 Determination of Zirconium	Sep 2012
44	IS 504(Part 16):2003	Part 16 Determination of Lithium	Sep 2012
45	IS 998(Part 1):1983	Methods of chemical analysis of solders (soft and rosin cored) Part 1 Determination of tin and antimony (first revision)	May 2008
46	IS 998(Part 2):1983	Part 2 Determination of iron,copper and arsenic (first revision)	May 2008
47	IS 998(Part 3):1983	Part 3 Determination of cadmium, zinc, aluminium, bismuth and nickel (first revision)	May 2008
48	IS 999:1959	Method of chemical analysis of brazing solder	May 2008
49	IS 1047:1965	Methods of chemical analysis of antimony (revised)	Jul 2010
50	IS 1335:1979	Methods for direct determination of alumina in refractory materials (first revision)	Oct 2011
51	IS 1409:1959	Methods of chemical analysis of antifriction bearing alloys	Jul 2010
52	IS 1473:2004	Methods of chemical analysis of manganese ores(first revision)	Oct 2011

\* INDICATES STANDARDS UNDER REVISION  
/ INDICATES DUAL NUMBER STANDARDS

\*\* INDICATES STANDARDS TO BE REVISED  
/ INDICATES EQUIVALENT STANDARDS

53	* IS 1493:1959	Methods of chemical analysis of iron ores	Oct 2011
54	IS 1493(Part 1):1981	Methods of chemical analysis of iron ores Part 1 Determination of common constituents	Oct 2011
55	IS 1493(Part 3):1987	Part 3 Determination of titanium, chromium, vanadium, calcium and magnesium by atomic absorption spectrophotometry	Oct 2011
56	IS 1493(Part 4):1988	Part 4 Determination of aluminium by atomic absorption spectrophotometry	Oct 2011
57	IS 1493(Part 5):1990 / ISO 4693:1986	Part 5 Determination of copper content atomic absorption spectrometric method	Oct 2011
58	IS 1493(Part 6):1990 / ISO 6831:1986	Part 6 Determination of sodium and/or potassium contents-Flame atomic absorption spectrometric method	Oct 2011
59	IS 1493(Part 7):1993 / ISO 8753:1987	Part 7 Determination of lead and or zinc content - Flame atomic absorption spectrometric method (first revision)	Oct 2011
60	IS 1493(Part 8):1993 / ISO 7834:1987	Part 8 Determination of arsenic content - Molybdenum blue spectrophotometric method (first revision)	Oct 2011
61	IS 1527:1972	Methods for chemical analysis of high silica refractory materials (first revision)	Oct 2011
62	* IS 1559:1961	Methods of chemical analysis of ferro alloys	Sep 2012
63	IS 1559(Part 1):1988	Methods of chemical analysis of ferro silicon Part 1 Determination of silicon (second revision)	Mar 2009
64	IS 1559(Part 2):1982	Part 2 Determination of carbon (first revision)	Sep 2012
65	IS 1559(Part 3):1982	Part 3 Determination of sulphur (first revision)	Sep 2012
66	IS 1559(Part 4):1982	part 4 Determination of phosphorus (first revision)	Sep 2012
67	IS 1559(Part 5):2003	Chemical analysis of ferrosilicon, Part 5 Determination of aluminium in ferrosilicon (Aluminium 0.05 to 1.75%) (second revision of IS 1559)	Mar 2009
68	IS 1559(Part 6):1982	Part 6 Determination of calcium (first revision)	Sep 2012
69	IS 1559(Part 7):1982	Part 7 Determination of manganese (first revision)	Sep 2012
70	IS 1760(Part 1):1991	Methods of chemical analysis of limestone, dolomite and allied materials Part 1 Determination of loss on ignition (first revision)	Oct 2011
71	IS 1760(Part 2):1991	Part 2 Determination of silica (first revision)	Oct 2011
72	IS 1760(Part 3):1992	Part 3 Determination of iron oxide, alumina, calcium oxide and magnesia (first revision)	Oct 2011

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73	IS 1760(Part 4):1991	Part 4 Determination of carbon dioxide (first revision)	Oct 2011	
74	IS 1760(Part 5):1991	Part 5 Determination of chlorides (first revision)	Oct 2011	
75	* IS 1760(Part 6):2001	Part 6 Determination of free silica (first revision)	Oct 2011	
76	IS 1917(Part 1):1991	Chemical analysis of quartzite and high silica sand Part 1 Determination of loss on ignition (first revision)	Oct 2011	
77	IS 1917(Part 2):1991	Part 2 Determination of sodium and potassium by flame photometry (first revision)	Oct 2011	
78	IS 1917(Part 3):1992	Part 3 Determination of silica (first revision)	Oct 2011	
79	IS 1917(Part 4):1991	Part 4 Determination of aluminium by AAS method (first revision)	Oct 2011	
80	IS 1917(Part 5):1992	Part 5 determination of iron by AAS method (first revision)	Oct 2011	
81	IS 1917(Part 6):1992	Part 6 Determination of calcium and magnesium by atomic absorption spectrometric method (first revision)	Oct 2011	
82	* IS 1917(Part 7):2001	Part 7 Determination of titania (first revision)	Oct 2011	
83	IS 1940:1969	Methods of chemical analysis of tin ingot (first revision)	Jul 2010	
84	IS 1952:1963	Methods of chemical analysis of nickel anodes	Jul 2010	1
85	IS 2000(Part 1):1985	Methods of chemical analysis of bauxite Part 1 Determination of loss on ignition(first revision)	Oct 2011	
86	IS 2000(Part 2):1985	Part 2 Determination of silica (first revision)vision)	Oct 2011	
87	IS 2000(Part 3):1985	Part 3 Determination of alumina (first revision)	Oct 2011	
88	IS 2000(Part 4):1985	Part 4 Determination of ferric oxide (first revision)	Oct 2011	
89	IS 2000(Part 5):1985	Part 5 Determination of titania (first revision)	Oct 2011	
90	IS 2000(Part 6):1985	Part 6 Determination of vanadium (first revision)	Oct 2011	
91	IS 2000(Part 7):2001	Part 7 Determination of phosphorus pentoxide (first revision)	Oct 2011	
92	IS 2000(Part 8):1989	Part 8 Determination of manganese by atomic absorption spectrophotometric method (first revision)	Oct 2011	
93	IS 2000(Part 9):1989	Part 9 Determination of magnesium and calcium by atomic absorption spectrophotometric method (first revision)	Oct 2011	

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94 2012	IS 2017:1967	Methods of Chemical analysis of metallic manganese	Sep	
95	* IS 2018:1998	Methods of chemical analysis of calcium silicon (second revision)	Sep 2012	
96	IS 2020(Part 1):1968	Methods of chemical analysis of silico chromium Part 1 analysis of silicon and chromium	Sep 2012	
97	IS 2277:1964	Methods of chemical analysis of metallic silicon	Sep 2012	
98	IS 2390:1967	Methods for chemical analysis of foundry nickel	Jul 2010	
99	IS 2411:1963	Methods of chemical analysis of fluorspar (fluorite)	Oct 2011	
100	IS 2599:1983	Methods for spectrographic analysis of high purity zinc and zinc base alloys for die casting (first revision)	Jul 2010	
101	IS 2600(Part 1):1988	Methods of chemical analysis of zinc and zinc base alloys for die castings Part 1 Determination of copper, iron, nickel, tin and thallium by spectrophotometric method (first revision)	May 2008	
102	IS 2600(Part 2):1988	Part 2 Determination of copper, iron, lead and cadmium by atomic absorption spectrophotometric method (first revision)	May 2008	
103	IS 2600(Part 3):1993	Part 3 Determination of Indium by atomic absorption spectrometry method (first revision)	May 2008	
104	IS 2600(Part 4):1993	Part 4 - Determination of chromium by spectrophotometric method	May 2008	
105	IS 2766(Part 1):1968	Methods of chemical analysis of primary nickel	Jul 2010	
106	IS 3186:1965	Methods of chemical analysis of cadmium copper	Feb 2012	
107	IS 3187:1965	Methods of chemical analysis of copper-nickel zinc alloys	Feb 2012	
108	IS 3200:2001	Methods of chemical analysis of cryolite (first revision)	Sep 2012	1
109	IS 3295(Part 1):1969	Method of chemical analysis of ferroboron Part 1 Analysis of carbon, silicon and aluminium	Mar 2009	
110	IS 3295(Part 2):1970	Part 2 Determination of boron	Mar 2009	1
111	IS 3685:1966	Methods of chemical analysis of brasses	Sep 2012	
112	IS 3863:1966	Methods of chemical analysis of copper-tellurium alloys	Feb 2012	
113	IS 4027(Part 1):1987	Methods of chemical analysis of bronzes Part 1 Determination of copper and lead by electrolytic method (first revision)	Feb 2012	

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114	IS 4027(Part 2):1987	Part 2 Determination of manganese-photometric method (first revision)	Feb 2012	
115	IS 4027(Part 3):1987	Part 3 Determination of phosphorus by volumetric method (first revision)	Feb 2012	
116	IS 4027(Part 4):1987	Part 4 Determination of nickel-dimethylglyoxime photometric method (first revision)	Feb 2012	
117	IS 4027(Part 5):1987	Part 5 Determination of tin-iodimetric method (first revision)ethod (first revision)	Feb 2012	
118	IS 4027(Part 6):1987	Part 6 Determination of zinc by complexometric (EDTA) method (first revision)	Feb 2012	
119	IS 4027(Part 7):1990	Part 7 Determination of antimony by Rhodamine B spectrophotometric method (firsr revision)	Sep 2012	
120	IS 4027(Part 8):1991	Part 8 Determination of iron (first revision)	Sep 2012	
121	IS 4027(Part 9):1991	Part 9 Determination of aluminium by AAS method (first revision)	Sep 2012	
122	IS 4027(Part 10):2000	Part 10 Determination of silicon	Feb 2012	
123	IS 4027(Part 11):2000	Part 11 Determination of Lead- Ethylenediamine Tetraacetic acid (EDTA) - Titrimetric method	Feb 2012	
124	IS 4104:1967	Method of chemical analysis of rutile	Oct 2011	
125	IS 4129:1967	Methods of chemical analysis of aluminium trifluoride	Oct 2011	1
126	IS 4354(Part 1):1967	Methods of chemical analysis of magnesium, aluminium brazing alloys, Part 1 Analysis of aluminium, manganese, zinc and silicon	Jul 2010	
127	IS 4548(Part 1):1967	Methods of chemical analysis of copper gold brazing alloys Part 1 Analysis of gold and copper	Feb 2012	
128	IS 4646(Part 1):1968	Methods of chemical analysis of copper phosphorus brazing alloys, Part 1 Analysis for silver and copper	Sep 2012	
129	IS 4646(Part 2):1976	Part 2 Determination of phosphorusnation of phosphorus	Sep 2012	
130	IS 4667(Part 1):1968	Methods of chemical analysis of silver copper brazing alloys Part 1 Analysis for silver and copper	Sep 2012	
131	IS 4667(Part 2):1969	Part 2 Determination of silver, copper and tin	Sep 2012	
132	IS 4667(Part 3):2001	Part 3 Determination of nickel, cadmium and zinc	Feb 2012	
133	IS 4667(Part 4):2001	Part 4 Determination of copper, cadmium and zinc by electrolytic method	Feb 2012	1
134	IS 5425(Part 1):1969	Methods of chemical analysis of misch metal Part 1 Determination of cerium	Sep 2012	

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135	IS 5425(Part 2):1984	Part 2 Determination of total rare earths	Sep 2012
136	IS 5425(Part 3):1987	Part 3 Determination of iron	Mar 2010
137	IS 5425(Part 4):1987	Part 4 Determination of aluminium	Mar 2010
138	IS 5425(Part 5):1987	Part 5 Determination of carbon	Mar 2010
139	IS 6226(Part 1):1994	Recommendations for apparatus for chemicals analysis of metals,Part 1 Apparatusfor determination of carbon by direct combustion (first revision)	Sep 2012
140	IS 6226(Part 2):1987	Part 2 Determination on of sulphur by direct combustion	Feb 2008
141	IS 6516:1972	Methods for chemical analysis of tin and lead in secondary tin	Jul 2010
142	IS 6744(Part 1):1972	Methods of chemical analysis of ilemenite	Oct 2011
143	IS 7658:1975	Spectrographic analysis of aluminium	Mar 2010
144	IS 7659(Part 1):1975	Reagents and standard solutions for use in chemical analysis of metals, ores and minerals Part 1 volumetric solution	Nov 2010
145	IS 8097:1976	Methods of chemical analysis of soft solders for jointing aluminium and aluminium alloys	Jul 2010
146	IS 8812(Part 1):1978	Methods for chemical analysis of hard solders for jointing aluminium and aluminium alloys, Part 1 Determination of silver, copper, zinc, antimony ,arsenic, iron and bismuth	May 2008
147	IS 8812(Part 2):1982	Part 2 Determination of aluminium	May 2008
148	IS 8816:1978	Methods for selection and preparation of samples for spectrographic analysis of zinc and zinc alloy ingots	Jul 2010
149	IS 9386:1979	Methods for chemical analysis of rock phosphate	Nov 2010
150	* IS 10085:2003	Methods for chemical analysis of zircon flour or sand (first revision)	Nov 2008
151	IS 11035:1984	Methods for spectrographic analysis of wrought aluminium alloys	Mar 2010
152	IS 11690:1986	Methods of moisture determination of iron ore lot	Nov 2008
153	IS 12107(Part 1):1987	Methods of chemical analysis of alumino-silicate refractory materials Part 1 Determination of loss on ignition	Oct 2011
154	IS 12107(Part 2):1987	Part 2 Determination of silica	Oct 2011

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155	IS 12107(Part 3):1987	Part 3 Determination of aluminium	Oct 2011	
156	IS 12107(Part 4):1987	Part 4 Determination of phosphorus	Oct 2011	
157	IS 12107(Part 5):1987	Part 5 Determination of titanium	Oct 2011	
158	IS 12107(Part 6):1987	Part 6 Determination of iron	Oct 2011	
159	IS 12107(Part 7):1987	Part 7 Determination of manganese	Oct 2011	
160	IS 12107(Part 8):1987	Part 8 Determination of calcium and magnesium	Oct 2011	
161	IS 12107(Part 9):1987	Part 9 Determination of sodium and potassium by flame photometry	Oct 2011	
162	IS 12107(Part 10):2001	Part 10 Determination of iron, manganese, calcium and magnesium by AAS method	Oct 2011	
163	IS 12308(Part 1):1987	Method for chemical analysis of cast iron and pig iron Part 1 Determination of total carbon by thermal conductivity method (for carbon 1.00 to 4.50 percent)	Sep 2012	
164	IS 12308(Part 2):1987	Part 2 Determination of sulphur by iodimetric titration after combustion (for sulphur 0.005 to 0.25 percent)	Sep 2012	
165	IS 12308(Part 3):1987	Part 3 Determination of manganese by periodic spectrophotometric method (for manganese 0.1 to 2.5 percent)	Sep 2012	
166	IS 12308(Part 4):1988	Part 4 Determination of total carbon, graphitic carbon and combined carbon by gravimetric method	Nov 2009	
167	IS 12308(Part 5):1991	Part 5 Determination of phosphorus by alkalimetric method (for phosphorus 0.01 to 0.50 percent)	Jan 2012	2
168	IS 12308(Part 6):1991	Part 6 Determination of silicon by gravimetric method (for silicon 0.1 to 6.0 percent)	Jan 2012	1
169	IS 12308(Part 7):1991	Part 7 Determination of nickel by dimethyl glyoxime (gravimetric) method (for nickel 0.5 to 36 percent)	Jan 2012	
170	IS 12308(Part 8):1997	Part 8 Determination of chromium by per sulphate oxidation method (for chromium 0.1 to 28 percent)	Sep 2012	
171	IS 12308(Part 9):1993	Part 9 Determination of molybdenum by thiocyanate (spectrometric) method (for molybdenum 0.01 to 1.0 percent)	Nov 2009	
172	IS 12308(Part 10):1991	Part 10 determination of manganese (upto 7.0 percent) by arsenite(volumetric )method	Jan 2012	3
173	IS 12308(Part 11):1991	Part 11 Determination of total carbon by the direct combustion volumetric method (for carbon 1.50 to 4.50 percent)	Jan 2012	4
174	IS 12308(Part 12):1992	Part 12 Determination of copper by atomic absorption spectrometric method (for copper 0.01 to 0.5 percent)	Sep 2012	

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75	IS 12308(Part 13):1992	Part 13 Determination of magnesium by atomic absorptin spectrometric method (for magnesium upto 0.1 percent)	Sep 2012
176	IS 12308(Part 14):1993	Part 14 Determination of titanium by hydrogen per oxide (spectrophotometric) method (for titanium upto 0.25 percent)	Nov 2009
177	IS 12614(Part 1):1988	Method of chemical analysis of ferro molybdenum Part 1 Determination of molybdenum	Mar 2009
178	IS 12614(Part 2):1988	Part 2 Determination of total carbon	Mar 2009
179	IS 12614(Part 3):1988	Part 3 Determination of silicon	Mar 2009
180	IS 12614(Part 4):1988	Part 4 Determination of sulphur	Mar 2009
181	IS 12614(Part 5):1988	Part 5 Determination of phosphorus	Mar 2009
182	IS 12614(Part 6):1988	Part 6 Determination of copper	Mar 2009
183	IS 12614(Part 7):1988	Part 7 Determination of aluminium	Mar 2009
184	IS 12667(Part 1):1989	Methods of chemical analysis of chromite sand Part 1 Determination of silica	Oct 2011
185	IS 12667(Part 2):1989	Part 2 Determination of iron	Oct 2011
186	IS 12667(Part 3):1989	Part 3 Determination of chromium	Oct 2011
187	IS 12667(Part 4):1989	Part 4 Determination of calcium oxide	Oct 2011
188	* IS 13452(Part 1):1992	Methods of chemical analysis of ferrochromium Part 1 Determination of silicon in high carbon ferrochromium by gravimetric method	Sep 2012
189	* IS 13452(Part 2):1992	Part 2 Determination of silicon in low carbon ferrochromium by gravimetric method	Sep 2012
190	* IS 13452(Part 3):1992	Part 3 Determination of phosphorus in low carbon ferrochromium by spectrometric method	Sep 2012
191	* IS 13452(Part 4):1992	Part 4 Determination of total sulphur in low carbon and high carbon ferrochromium by direct combustion method	Sep 2012
192	* IS 13452(Part 5):1992	Part 5 Determination of chromium in high carbon ferrochromium chargechrome by dichromate titration (first revision)	Sep 2012
193	* IS 13452(Part 6):1997	Part 6 Determination of chromium in low carbon ferrochromium	Sep 2012
194	* IS 13452(Part 7):2003	Chemical analysis of ferrochromium Part 7 Determination of phosphorus in ferrochromium/chargechrome by alkalimetric method	Mar 2009

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195	* IS 13840(Part 1):1993	Chemical analysis of ferro titanium Part 1 Determination of carbon by direct combustion gravimetric method	Mar 2009
196	* IS 13840(Part 2):1993	Part 2 Determination of silicon by gravimetric method	Mar 2009
197	* IS 13840(Part 3):1993	Part 3 Determination of titanium by cupferron (gravimetric) method	Mar 2009
198	* IS 13840(Part 4):1998	Part 4 Determination of aluminium by phosphate method	Mar 2009
199	* IS 13840(Part 5):1998	Part 5 Determinations of sulphur by direct combustion method	Mar 2009
200	* IS 13840(Part 6):1998	Part 6 Determination of titanium by x-ray fluorescence technique	Mar 2009
201	IS 13938(Part 1):1994	Chemical analysis of ferromanganese Part 1 Determination of silicon by gravimetric method	Mar 2009
202	IS 13938(Part 3):1993	Chemical analysis of ferromanganese Part 3 Determination of phosphorous by volumetric (alkalimetric) method	Mar 2009
203	IS 13938(Part 4):1994	Chemical Analysis of Ferromanganese, Part-4 Determination of Total Sulpher by direct Combustion Method	Mar 2009
204	IS 13963(Part 1):1994	Chemical analysis of cadmium metal - Part 1 Determination of copper, zinc, lead and iron	May 2008
205	IS 13963(Part 2):1994	Chemical analysis of cadmium metal Part 2 Determination of nickel, arsenic, antimony and thallium by spectrometric methods	May 2008
206	IS 14529:2004	Chemical analysis of ferro silicon magnesium alloy (first revision)	Mar 2011
207	IS 14644(Part 1):1998 / ISO 7530-1-1:1990	Nikel alloys - Flame atomic absorption spectrometric analysis method - Part 1 General requirements and sample dissolution	Jul 2010
208	IS 14644(Part 2):1998 / ISO 7530-2:1990	Part 2 Determination of cobalt content	Jul 2010
209	IS 14644(Part 3):1998 / ISO 7530-3:1990	Part 3 Determination of chromium content	Jul 2010
210	IS 14644(Part 4):1998 / ISO 7530-4:1990	Part 4 Determination of copper content	Jul 2010
211	IS 14644(Part 5):1998 / ISO 7530-5:1990	Part 5 Determination of iron content	Jul 2010
212	IS 14644(Part 6):1998 / ISO 7530-6:1990	Part 6 Determination of manganese content	Jul 2010
213	IS 14644(Part 7):2000 / ISO 7530 -7:1992	Part 7 Determination of aluminium content	Jul 2010
214	IS 14644(Part 8):2000 / ISO 7530-8:1992	Part 8 Determination of silicon content	Jul 2010

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215	IS 14644(Part 9):2000 / ISO 7530-9:1993	Part 9 Determination of vanadium content	July 2010
216	IS 15396:2003	Chemical analysis of ferro silicon zirconium alloy	Mar 2011
217	IS 15403:2003	Method for determination of sulphur present in sponge iron after separation of non magnetic materials	Mar 2011

**DRAFT STANDARDS ISSUED IN WIDE CIRCULATION**

1	DOC.MTD 34(5023)	Chemical analysis of ferro chromium (first revision of IS 13452)
2	DOC.MTD 34(5024)	Chemical analysis of ferrotitanium (revision of IS 13840)
3	DOC.MTD 34(4850)	Method for chemical analysis of steels, Part 20 Determination of carbon and sulphur by infra-steel absorption method (for carbon 0.005 to 2.1% and sulphur 0.0005 to 0.35%) (third revision of IS 228(Part 20))
4	DOC.MTD 34(5182)	Methods of chemical analysis of zinc and zinc base alloys for die castings Part 5: Analysis by inductively coupled plasma optical emission spectrometry (revision of IS 2600 (Part 5))
5	DOC.MTD 34(5183)	Methods of chemical analysis of zinc and zinc base alloys for die castings Part 6: Determination of magnesium by atomic absorption spectrometric method (Revision of IS 2600 (Part 6))
6	DOC.MTD 34(5184)	Methods of chemical analysis of zinc and zinc base alloys for die castings Part 7: Determination of aluminium by tirimetric method(Revision of IS 2600 (Part 7))

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**ANNEX I**  
**STANDARD PREPARED UNDER DUAL NUMBERING SYSTEM**

<b>SI.No</b>	<b>IS/ISO</b>	<b>TITLE</b>
1.	1403(Pt 1):1993 (ISO 7759:1985)	Mechanical testing of metals – Reverse bend test Part 1 Sheet and Strip ( <i>second revision</i> )
2.	1493(Pt 5):1990 (ISO 4693:1986)	Method of chemical analysis of iron ores Part 5 Determination of copper content by atomic absorption spectrometric method
3.	1493(Pt 6):1990 (ISO 6831:1986)	Part 6 Determination of sodium and/or potassium contents – Flame atomic absorption spectrometric method
4.	1493(Pt 7):1973 (ISO 8753:1989)	Part 7 Determination of lead or zinc content flame atomic absorption spectrophotometric method ( <i>first revision</i> )
5.	1493(Pt 8):1993 (ISO 7834:1987)	Part 8 Determination of arsenic content – Molybdenum blue spectrophotometric method ( <i>first revision</i> )
6.	1500:2005 (ISO 6506-1:1999)	Method for brinell hardness test for metallic materials ( <i>third revision</i> )
7.	1501:2002 (ISO 6507-1:1987)	Method for Vickers hardness test for metallic materials ( <i>third revision</i> )
8.	1528(Pt 5):2007 (ISO 5014:1997)	Methods of sampling and physical tests for refractory materials, Part 5 Method for determination of modulus of rupture at ambient temperature of dense and insulating shaped refractory products ( <i>third revision</i> )
9.	1528(Pt 9):2007 ISO 5018:1983	Part 9 Determination of true density ( <i>fourth revision</i> )
10.	1528(Pt 12):2007 (ISO 5016:1997)	Methods of sampling and physical tests for refractory materials Part 12 Method for determination of bulk density and true porosity of shaped insulating refractory products ( <i>second revision</i> )
11.	1528(Pt 13):2007 ISO 12676:2000	Part 13 Determination of resistance to carbon monoxide ( <i>second revision</i> )
12.	1528(Pt 15):2007 (ISO 5017:1998)	Methods of sampling and physical tests for refractory materials Part 15 Method for determination of bulk density, apparent porosity and true porosity of dense shaped refractory products ( <i>first revision</i> )
13.	1528(Pt 16):2007 ISO 8894-2:1990	Methods of sampling and physical tests for refractory materials Part 16 Determination of thermal conductivity according to hot-wire method (parallel) ( <i>first revision</i> )
14.	1528(Pt 17):1993 (ISO 8895:1986)	Part 17 Determination of cold crushing strength of shaped insulating refractory products
15.	1528(Pt 18):1993 (ISO 3187:1989)	Part 18 Determination of creep in compression
16.	1528(Pt 20):1993 (ISO 5013:1985)	Part 20 Determination of modulus of rupture at elevated temperature
17.	1528(Pt 21):2007 ISO 8894-1:1987	Part 21 Determination of thermal conductivity according to hot-wire method (cross-array)
18.	1528(Pt 22):2007 ISO 8841:1991	Part 22 Methods for determination of permeability to gases of dense shaped refractory products

19.	1528(Part 23):2011 (ISO16282:2007)	Method of test for dense shaped refractory product – Part 23 Determination of resistance to abrasion at ambient temperature
20.	1586(Part 1):2012 (ISO 6508-1:2005)	Metallic materials- Rockwell hardness test Part 1 Test method (Scales A, B, C, D, E, F, G, H, K, N,T (fourth revision)
21.	1586(Part 2):2012 (ISO 6508-2:2005)	Metallic materials- Rockwell hardness test Part 2 Verification and calibration of testing machines (Scales A, B, C, D, E, F, H, K, N,T) (fourth revision)
22.	1586(Part 3):2012 (ISO 6508-3:2005)	Metallic materials- Rockwell hardness test Part 3 Calibration of reference blocks (Scales A, B, C, D, E, F, G, H, K, N,T) (fourth revision)
23.	1599:2012 (ISO 7438:20050)	Metallic materials – Bend test (third revision)
24.	1608:2005 (ISO 6892:1998)	Metallic materials – Tensile testing at ambient temperature ( <i>third revision</i> )
25.	1717:2012 (ISO 7800:2003)	Metallic materials – Wire – Simple torsion test ( <i>third revision</i> )
26.	1754:2002 /ISO 6507-2:1997	Method for verification of Vickers hardness testing machines (third revision)
27.	1828(Pt 1):2005 (ISO 7500-1:1999)	Metallic materials – verification of static uniaxial testing machines Part 1 Tension/Compression testing machines – Verification and calibration of the force-measuring system ( <i>third revision</i> )
28.	1828(Pt 2):2002 (ISO 7500-2:1996)	Part 2 Tension creep testing machines – verification of applied load
29.	1993:2006 (ISO 11949:2009)	Single cold-reduced tinplate and single cold reduced black plate – electrolytic and hot dipped tinplate sheets and black plate sheet ( <i>third revision</i> )
30.	2281:2005 (ISO 6506-2:1999)	Method for verification of brinell hardness testing machines ( <i>third revision</i> )
31.	2328:2005 (ISO 8492:1998)	Metallic materials – Tube flattening test ( <i>second revision</i> )
32.	2329:2005 (ISO 8491:1986)	Metallic materials – Tube (in full section) – Bend test ( <i>second revision</i> )
33.	2330:2011 (ISO 8494:1998)	Metallic materials – Tube – Flanging test (second revision)
34.	2335:2005 (ISO 8493:1998)	Metallic materials – Tube drift expanding test ( <i>second revision</i> )
35.	3600(Pt 3):2009 (ISO 4136):2001	Methods of testing of non-welding joints and weld metal in steel Part 3 Transverse tensile test on butt welds
36.	3600(Pt 5):1983 (ISO 5173:1981)	Methods of testing of non-welding joints and weld metal in steel Part 5 Transverse root and bend test on butt weld ( <i>second revision</i> )
37.	3600(Pt 6):1993 (ISO 5177:1981)	Part 6 Transverse side and bend test on butt weld ( <i>second revision</i> )

38.	3711:2012 (ISO 377:1997)	Steel and steel products – Location and preparation of samples and test pieces for mechanical testing (second revision)
39.	3803(Pt 1):1989 (ISO 2566-1:1984)	Steel – conversion of elongation value Part 1 Carbon and Low alloy steels ( <i>second revision</i> )
40.	3803(Pt 2):1989 (ISO 2566-2:1984)	Steel – conversion of elongation values Part 2 Austenitic steels ( <i>second revision</i> )
41.	4041:2006 (ISO 836:2001)	Terminology for refractories ( <i>first revision</i> )
42.	4132:2005 (ISO 6506-3:1999)	Method for calibration of standardized blocks to be used for brinell hardness testing machines ( <i>second revision</i> )
43.	4133:2002 (ISO 6507-3:1997)	Method for calibration of standardized blocks to be used for Vickers hardness testing machines ( <i>second revision</i> )
44.	4163:2004 (ISO 4967:1998)	Steel – Determination of content of nonmetallic inclusions – Micrographic method using standard diagrams ( <i>third revision</i> )
45.	4258:2011 (ISO 18265:2003)	Metallic materials – Conversion of hardness values (second revision)
46.	4748:2009 (ISO 643:2003)	Steel – Micrographic determination of the apparent grain size (second revision)
47.	4840:2006 (ISO 4490:2001)	Metallic powders – Determination of flow time by means of a calibrated funnel (Hall flow meter) (second revision)
48.	4857:2005 (ISO 3927:2001)	Metallic powders, excluding powders for hard metals – Determination of compactibility (compressibility) in uniaxial compression ( <i>fourth revision</i> )
49.	5642:1991 (ISO 2738:1987)	Permeable sintered metal materials – Determination of density, oil content, and open porosity ( <i>second revision</i> )
50.	5644(Pt 1):1993 (ISO 4491-1:1997)	Metallic powders – Determination of oxygen content by reduction methods, Part 1 General guidelines ( <i>third revision</i> )
51.	5644(Pt 2):2005 (ISO 4491-2:1997)	Part 2 Loss of mass on hydrogen reduction (hydrogen loss) ( <i>fourth revision</i> )
52.	5644(Pt 3):2005 (ISO 4491-4:1997)	Part 3 Hydrogen reducible oxygen ( <i>fourth revision</i> )
53.	5644(Pt 4):1993 (ISO 4491-4:1989)	Part 4 Total oxygen by reduction extraction ( <i>third revision</i> )
54.	5652(Pt 1):1993 (ISO 3728-1:1982)	Hard metals- Rockwell hardness test (Scale A) Part 1 Test method ( <i>second revision</i> )
55.	6016:2009 (ISO 3253:1998)	Gas welding equipment – Hose connections for equipment, welding, cutting and allied processes (second revision)
56.	6885(Part 1):2011 (ISO 4545-1:2005)	Metallic materials – knoop hardness test Part 1 Test method ( <i>first revision</i> )
57.	6885(Pt 2):2011	Metallic materials – Knoop hardness test Part 2: Verification and calibration of testing machines ( <i>first revision</i> )

58.	6885(Pt 3):2011 (ISO 4545-3:260.005)	Metallic materials- Knoop hardness test Part 3: Calibration of reference blocks ( <i>first revision</i> )
59.	6885(Part 4):2011 (ISO 4545-4:2005)	Metallic materials – Knoop hardness test Part4 Table of hardness values( <i>first revision</i> )
60.	IS 6901:2009 (ISO 2503:1998)	Specification for pressure regulators for gas cylinders used in welding, cutting and related processes ( <i>first revision</i> )
61.	8871:2004 (ISO 3953:1993)	Metallic powders – Determination of tap density ( <i>second revision</i> )
62.	8910:2010 (ISO 404:1992)	General technical delivery requirements for steel and steel products ( <i>first revision</i> )
63.	9025:1993 (ISO 1111-2:1983)	Single cold-reduced tinplate and single cold-reduced black plate – electrolytic tinplate coil and black plate coil for subsequent cutting into sheet form ( <i>first revision</i> )
64.	10175:2012 (ISO 20482:2003)	Metallic materials – Sheet and strip – Erichsen cupping test ( <i>second revision</i> )
65.	10793:1983 (ISO 6520:1982)	Classification of imperfection in metallic fusion welds with explanations
66.	11506:2004 (ISO 13944:1996)	Method for determination of lubricant content of lubricated metallic powder by soxhlet extraction ( <i>first revision</i> )
67.	11999:2007 (ISO 10113:1991)	Method for determination of plastic strain ration `r' for sheet metals ( <i>first revision</i> )
68.	12228:1987 (ISO 4746:1977)	Scale adhesion test for oxygen free copper
69.	12260:1987 (ISO 8495:1986)	Ring expanding test on metallic tubes
70.	12278:2011 (ISO 8496:1998)	Metallic materials – Tube – Ring tensile test ( <i>first revision</i> )
71.	12279:2005 (ISO 3325:1996)	Sintered metal materials (excluding hardmetals) – Determination of transverse strength ( <i>first revision</i> )
72.	12591:2006 (ISO 11950:1995)	Cold-reduced electrolytic chromium/chromium oxide coated steel ( <i>first revision</i> )
73.	12871:2011 ISO 12743:2006)	Copper, lead, zinc and nickel concentrates – Sampling procedure for determination of metal and moisture content
74.	12872:2011 (ISO 9513:1999)	Metallic materials – verification of extensometers used in uniaxial testing
75.	12893:2006 (ISO 1146:1998)	Pyrometric reference cones for laboratory use – Specification ( <i>first revision</i> )
76.	13007:1991 (ISO 6848:1984)	Tungsten electrodes for inert gas shielded arc welding and for plasma cutting and welding
77.	13043:1991 (ISO 2401:1972)	Covered manual metal arc welding electrodes – Determination of efficiency, metal recovery and deposition co-efficient

78.	13691:1993 (ISO 4970:1979)	Steel – Determination of total or effective thickness of thin surface hard metals layers
79.	13780:1993 (ISO 4506:1979)	Hard metals – Compression test
80.	13781:1993 (ISO 4003:1977)	Permeable sintered metal materials – Determination of bubble test pore size
81.	13782:1993 (ISO 4022:1987)	Permeable sintered metal materials – Determination of fluid permeability
82.	13803:1993 (ISO 3312:1987)	Sintered metal materials and hard metals – Determination of young modulus
83.	13954:1994 (ISO 4977-1:1988)	Double cold-reduced electrolytic tin plate sheet
84.	13955:1994 (ISO 4977-2:1988)	Double cold-reduced electrolytic tin plate sheet for subsequent cutting into sheets
85.	14126:1994 (ISO 2177:1985)	Metallic coatings – measurement of thickness coluometric method
86.	14149:1994 (ISO 3543:1981)	Metallic and non-metallic coating – measurement of thickness – Beta backscatter method
87.	14644(Pt 1):1998 (ISO 7530-1:1990)	Nickel alloys – Flames atomic absorption spectrometric analysis Part 1 General requirements and sample dissolution
88.	14644(Pt 2):1998 (ISO 7530-2:1990)	Part 2 Determination of cobalt content
89.	14644(Pt 3):1998 (ISO 7530-3:1990)	Part 3 Determination of chromium content
90.	14644(Pt 4):1998 (ISO 7530-4:1990)	Part 4 Determination of copper content
91.	14644(Pt 5):1998 (ISO 7530-5:1990)	Part 5 Determination iron content
92.	14644(Pt 6):1998 (ISO 7530-6:1990)	Part 6 Determination of manganese content
93.	14644(Pt 7):2000 (ISO 7530-7:1990)	Part 7 Determination of aluminium content
94.	14644(Pt 8):2000 (ISO 7530-8:1990)	Part 8 Determination of silicon content
95.	14644(Pt 9):2000 (ISO 7530-9:1990)	Part 9 Determination of vanadium content
96.	14741:1998 (ISO 8654:1987)	Colours of gold alloys – Definition, range of colours and designation
97.	15326(Pt 1):2003 (ISO 3834-1:1994)	Quality requirements for welding – Fusion welding of metallic materials Part 1 Guidelines for selection and use

98.	15326(Pt 2):2003 (ISO 3834-2:1994)	Part 2 Comprehensive quality requirements
99.	15326(Pt 3):2003 (ISO 3834-3:1994)	Part 3 Standards quality requirements
100.	15326(Pt 4):2003 (ISO 3834-4:1994)	Part 4 Elementary quality requirements
101.	15327:2003 (ISO 14731:1997)	Welding coordination – Tasks and responsibility
102.	15387:2003 (ISO 5830:1984)	Resistance spot welding – male electrode caps
103.	15426:2004 (ISO 14250:2000)	Steel – Metallographic characterization of duplex grain size and distributions
104.	15554:2004 (ISO 2740:1999)	Sintered metal materials, excluding hard metals – Tensile test piece
105.	15567:2005 (ISO 3928:1999)	Sintered metal material, excluding hard metal – Fatigue test piece
106.	15574:2005 (ISO 5754:1978)	Sintered metal materials excluding hardmetals – Unnotched impact test piece
107.	15585:2005 (ISO 5755:2001)	Sintered metal materials - Specification
108.	15728:2006 (ISO 15620:2000)	Welding friction welding of metallic materials
109.	IS 15703:2006 (ISO 4498:2005)	Sintered metal materials, excluding hardmetals – Determinaiton of apparent hardness and microhardness
110.	IS 15756:2007 (ISO 10275:1993)	Metallic Materials- Sheet and Strip – Determination of Tensile Strain Hardening Exponent
111.	IS 15839:2009 (ISO 13520:2002)	Determination of ferrite content in Austenitic stainless steel castings
112.	IS 15892:2011 (ISO 8653:1986)	Jewellery – Ring sizes – Definition Measurement and Designation
113.	IS 15893:2010 (ISO 10713:1992)	Jewellery – Gold alloy coating
114.	IS 16002(Pt 1):2012 (ISO 7652-1:2003)	Welding – Test for shop primers in relation to welding and allied processes Part 1 General requirements
115.	IS 16002 (Pt 2):2012 (ISO 17652-2:2003)	Welding – Test for shop primers in relation to welding and allied processes Part 2 Welding properties of shop primers
116.	IS 16002 (Pt 3):2012 (ISO 17652-3:2003)	Welding – Test for shop primers in relation to welding and allied processes Part 3 Thermal cutting
117.	IS 16002 (Pt	Welding – Test for shop primers in relation to welding and allied



	4):2012 (ISO 17652-4:2003)	processes Part 4 Emission of fumes and gases
118.	IS 16003:2012 (ISO15607:2003)	Specification and qualification of welding procedures for metallic materials – General rules
119.	IS 16051(Pt 1):2013 (ISO 12678-1:1996)	Refractory products – Measurement of dimensions and external defects of refractory bricks – Part 1 Dimensions and conformity to drawings
120.	IS 16051(Pt 2):2013 (ISO 12678-2:1996)	Refractory products – Measurement of dimensions and external defects of refractory bricks – Part 2 Corner and edge defects and other surface imperfections
121.	IS 16052(Pt 1):2013 (ISO 13765-1:2004)	Refractory mortars Part 1 Determination of consistency using the penetrating cone method
122.	IS 16052(Pt 2):2013 (ISO 13765-2:2004)	Refractory mortars Part 2 Determination of consistency using the reciprocating flow table method
123.	IS 16052(Pt 3):2013 (ISO 13765-3:2004)	Refractory mortars Part 3 Determination of joint stability
124.	IS 16052(Pt 4):2013 (ISO 13765-4:2004)	Refractory mortars part 4 Determination of flexural bonding strength
125.	IS 16052(Pt 5):2013 (ISO 13765-5:2004)	Refractory mortars Part 5 Determination of grain size distribution (sieve analysis)
126.	IS 16052(Pt 6):2013 (ISO 13765-6:2004)	Refractory mortars Part 6 Determination of moisture content of ready-mixed mortars
127.	IS/ISO 3057:1998	Non-Destructive testing – Metallographic replica technique of surface examination
128.	IS/ISO 3183:2007	Petroleum and natural gas industries – Steel pipe for pipeline transportation system (Amalgamation of IS 1978 & IS 1979)
129.	IS/ISO 4507:2000	Sintered ferrous materials, carburized or carbonitrided – Determination and verification of case-hardening depth by a micro-hardness test
130.	IS/ISO 5580:2010	Non-destructive testing radiographic illuminators – minimum requirements
131.	IS/ISO 7452:2002	Hot rolled structural steel plates- Tolerance on dimensions and shape
132.	IS/ISO 10474:1991	Steel & Steel products – Inspection document
133.	IS/ISO 11951:1995	Cold reduced blackplate in coil form the production of tinsplate or electrolytic chromium/chromium oxide-coated steel
134.	IS/ISO 14284:1996	Steel and iron sampling and preparation of samples for the determination of chemical composition
135.	IS/ISO 16124:2004	Steel wire rod – Dimensions and tolerances
136.	IS/ISO 16160:2005	Continuous hot rolled steel sheet products – Dimensional and shape tolerance
137.	IS/ISO 16162:2005	Continuous cold-rolled steel sheet products – Dimensional and shape tolerance
138.	IS/ISO 16163:2005	Continuous hot dipped coated steel products dimensional & shape tolerances

ANNEX II  
STANDARDS WITHDRAWN / SUPERSEDED

Sl. No.	Committee No.	IS No./ DOC Number	Title
1	4	SP 2 : 1982	Comparison of Indian and overseas basic sizes for sheet and Wire (first revision)
2	15	IS 7:1980	Moderate heat duty fireclay refractories group B (Withdrawn)
3	7	IS 20:1977	Superseded by IS 617:1994
4	7	IS 22:1950	98 percent aluminium notched bars and ingots for remelting Purposes (tentative)(Withdrawn) (see IS 2590)
5	11	IS 24:1956	Brazing solder (revised) (Superseded by IS 2927:1950)
6	7	IS 29:1950	Aluminium sheet and coils for aircraft purpose (Withdrawn)
7	7	IS 30:1953	Aluminium coated high-tensile aluminium alloy sheets and coils for aircraft purposes (Withdrawn)
8	7	IS 31:1950	Aluminium manganese alloy sheets and coils (Withdrawn) (see IS 737:1986)
9	11	IS 192:1956	Silver solder (revised) (Superseded by IS 2927:1975)
10	15	IS 194:1950	Recommendations for refractories for railways (Withdrawn)
11	3	IS 223:1950	Tensile testing of metals (ferrous) (Withdrawn)
12	6	IS 224:1979	Foundry pig iron for general purposes (see IS 13502:1992)
13	6	IS 225:1969	Pig iron (charcoal) (second revision) (Withdrawn)
14	4	IS 226:1975	Structural steel (standard quality) (fifth revision) (Superseded by IS 2062:1992)
15	6	IS 227:1954	Malleable iron castings (Withdrawn) (see IS 2107 and 2108)
16	13	IS 372:1962	Manganese ore-battery grade (tentative) (Withdrawn) (see IS 1449 & 1473)
17	13	IS 373:1952	Manganese ore metallurgical grade (tentative) (Withdrawn)-(see IS 4763 and 1473)
18	24	IS 429:1954	Methods for testing weight and uniformity of coatings on Galvanized iron and steel wires and steel sheets (Superseded by IS 2633) (Withdrawn)
19	9	IS 441:1955	Methods for chemical analysis of brasses and bronzes(Withdrawn)
20	32	IS 442:1954	Drums for paints (Superseded by IS 2552:1989)
21	15	IS 485:1954	Methods of sampling and testing of refractory materials (Tentative)(Withdrawn)(see IS 1527, IS 1528 Part I to 14)
22	3	IS 497:1953	Tensile testing of metals (non-ferrous) (Withdrawn)
23	14	IS 503:1963	Alloy austenitic manganese steel castings (Withdrawn) (see IS 276)
24	4	IS 597:1978	Pack-rolled tinplate and pack rolled black plate (second revision) (see IS 1993:2006)
25	32	IS 618:1956	Kegs (open top drums) for paints (Superseded by IS 2552:1989)
26	4	IS 727:1964	Hard drawn carbon steel wire for springs for general engineering purposes (revised) (Withdrawn) (see IS 4454(Pt 1):2001)

27	24	IS 728:1956	Methods for determining of weight, thickness and uniformity of Coating on galvanised articles other than wires and sheets (Superseded by IS 2633)
28	7	IS 735:1956	Wrought aluminium and aluminium alloys forging stock (for General engineering purposes ) (Superseded by IS 734:1975)
29	11	IS 815:1974	Classification coding of covered electrodes for metal arc welding Of structural steels (second revision) (Superseded by IS 814:1991)
30	11	IS 823:1964	Code of procedure for manual metal arc welding of mild steel (Withdrawn)
31	4	IS 961:1975	Structural steel (high tensile) (second revision) (Superseded by IS 8500)
32	9	IS 998:1959	Methods of chemical analysis of soft solder (Withdrawn)
33	5	IS 1111:1964	Spiegeleisen (revised) (Withdrawn)
34	8	IS 1138:1958	Sizes of metal strip, sheet brass (round square) flats and plate For structural and general engineering purpose (Withdrawn)
35	4	IS 1149:1982	High tensile steel rivet bars for structural purposes (third revision)
36	11	IS 1181:1967	Qualifying tests for metal arc welders (engaged in welding structures other than pipes ) (first revision) [(Superseded by IS 7318(Part 1):1974]
37	9	IS 1279:1958	Electrically welded mild steel boilers and superheater tubes for Design steam temperatures not exceeding 155 degree centigrade or 850 degree centigrade (Superseded by IS 1914)
38	2	IS 1338:1959	Specification for certified samples for metallurgical analysis (withdrawn)
39	9	IS 1339:1992	Lead and lead alloys for sheathing of electric cables (third revision)
40	9	IS 1345:1960	Methods of chemical analysis of printing metal
41	9	IS 1357:1984	Printing type metal ingots (third revision)
42	8	IS 1385:1968	Phosphor bronze rods and bars, sheet and strip and wire (first revision) (Superseded by IS 7608:1987, IS 7811:1985 and IS 7814:1985)
43	32	IS 1413:1970	Round vanaspati tins (first revision ) (Superseded by IS 10339:1988)
44	11	IS 1442:1964	Covered electrodes for metal arc welding of high tensile Structural steel (revised) (Superseded by IS 814)
45	3	IS 1501(Part 1):1984	Part 1 HV 5 to HV 100 (second revision) (Superseding IS 1810:1961, IS 2866:1968 and IS 9258:1979) (third revision)
46	3	IS 1501(Part 2):2005	Part 2 HV 0.2 to less than HV 5 (second revision)
47	3	IS 1501(Part 3):1987	Part 3 Less than HV 0.2 (second revision)
48	3	IS 1521:1972	Method for tensile testing of steel wire (first revision) (Superseded by IS 1608:1995)
49	6	IS 1538(Part 1):1976	General requirements (superseded by IS 1538:1993)
50	6	IS 1538(Part 2):1976	Specific requirements for sockets and spigots of pipes (superseded by IS 1538:1993)

51	6	IS 1538(Part 3):1976	Specific requirements for sockets of fittings (superseded by IS 1538:1993)
52	6	IS 1538(Part 4):1976	Specific requirements for flanges of pipes and fittings (superseded by IS 1538:1993)
53	6	IS 1538(Part 5):1976	Specific requirements for raised flanges (Superseded by IS 1538:1993)
54	6	IS 1538(Part 6):1976	Specific requirements for standard flange drilling of flanged Pipes and fittings (Superseded by IS 1538:1993)
55	6	IS 1538(Part 7):1976	Specific requirements for flanged sockets (superseded by IS 1538:1993)
56	6	IS 1538(Part 8):1976	Specific requirements for flanged spigots (superseded by IS 1538:1993)
57	6	IS 1538(Part 9):1976	Specific requirements for collars (superseded by IS 1538:1993)
58	6	IS 1538(Part 10):1976	Specific requirements for double socket bends (superseded by IS 1538:1993)
59	6	IS 1538(Part 11):1976	Specific requirements for tees,all sockets (superseded by IS 1538:1993)
60	6	IS 1538(Part 12):1976	Specific requirements for double socket tee with flanged branch (superseded by IS 1538:1993)
61	6	IS 1538(Part 13):1976	Specific requirements for crosses, all sockets (superseded by IS 1538:1993)
62	6	IS 1538(Part 14):1984	Specific requirements for double socket tapers (third revision) (superseded by IS 1538:1993)
63	6	IS 1538(Part 15):1976	Specific requirements for caps (superseded by IS 1538:1993)
64	6	IS 1538(Part 16):1976	Specific requirements for plugs (superseded by IS 1593:1993)
65	6	IS 1538(Part 17):1976	Specific requirements for bell mouth pieces (superseded by IS 1538:1993)
66	6	IS 1538(Part 18):1976	Specific requirements for double flanged bends (superseded by IS 1538:1993)
67	6	IS 1538(Part 19):1976	Specific requirements for all flanged tees (superseded by IS 1538:1993)
68	6	IS 1538(Part 20):1976	Specific requirements for all flanged crosses (superseded by IS 1538:1993)
69	6	IS 1538(Part 21):1976	Specific requirements for double flanged tapers (superseded by IS 1538:1993)
70	6	IS 1538(Part 22):1976	Specific requirements for split puddle or body flanges (superseded by IS 1538:1993)
71	6	IS 1538(Part 23):1976	Specific requirements for blank flanges (superseded by IS 1538:1993)
72	6	IS 1538(Part 24):1984	Specific requirements for all flanged radial tees (second revision) (superseded by IS 1538:1993)
73	2	IS 1546:1960	Method for determination of arsenic in iron and steel (Withdrawn) (see IS 228(Part 13):1982)
74	32	IS 1549:1960	Steel drums and kegs (galvanized and ungalvanized) (Withdrawn) (see IS 2552 :1989)

75	8	IS 1550:1967	Copper sheet and strip for utensils and for general purposes (first revision) (Superseded by IS 14811:2000)
76	16	IS 1570:1961	Schedules for wrought steels for general engineering purposes
77	31	IS 1660(Part 2):1972	Cookery colanders [incorporated as IS 1660 (Part 1)]
78	31	IS 1660(Part 3):1972	Pans patty (jelly mould) for baking [incorporated in IS 1660(Part 1)]
79	31	IS 1660(Part 4):1977	General requirements [incorporated in IS 1660(Part 1)]
80	3	IS 1663:1972	Method for tensile testing of steel sheet and strip of thickness 0.5 mm to 3 mm(first revision) (Superseded by IS 1608:1995)
81	3	IS 1692:1974	Method for simple bend testing of steel sheet and strip less than 3 mm thick (first revision) (Superseded by IS 1599:1983)
82	3	IS 1754(Part 1):1986	Part I HV 0.2 to HV 100 (third revision)
83	3	IS 1754(Part 2):1986	Part 2 Less than HV 0.2 (second revision)
84	3	IS 1756:1974	Methods of modified arichsen cupping test for steel sheet and strip(first revision ) (Superseded by IS 10175:1982)
85	29	IS 1760:1962	Methods of chemical analysis of limestone,dolomite and allied materials (withdrawn)
86	32	IS 1783(Part 3):1983	Drums, large, fixed ends, Grade C drums (second revision) (Withdrawn)
87	3	IS 1789:1961	Method for Brinell hardness test for grey cast iron (Superseded by IS 1500:1983)
88	3	IS 1790:1961	Method for brinell hardness test for light metals and their alloys (Superseded by IS 1500:1983)
89	3	IS 1810:1961	Method for Vickers hardness test for light metals and their alloys (superseded by IS 1501:1984)
90	3	IS 1816:1979	Method for tensile test for light metals and their alloys (first revision) (Superseded by IS 1608:1995)
91	7	IS 1841:1978	EC grade aluminium rod produced by rolling (second revision) (Withdrawn)
92	7	IS 1847:1961	99.7 percent primary aluminium notched bars and ingots for remelting for aircraft purposes (Superseded by IS 23:1980)
93	3	IS 1894:1972	Method for tensile testing of steel tubes (first revision) (Superseded by IS 1608:1995)
94	19	IS 1914(Part 1-4):1982	Carbon steel boilers tubes and superheater tubes (second revision)
95	13	IS 1917:1962	Method of chemical analysis of quartzite and high silica sand
96	8	IS 1972:1989	Copper plate, sheet and strip for industrial purposes (second revision) (Superseded by IS 14811:2000)
97	4	IS 1977:1996	Low tensile structural steels (third revision) (Superseded by IS 2062:2006)
98	13	IS 2000:1962	Method of chemical analysis of bauxite
99	4	IS 2040:1962	Steel bars for stays (Withdrawn) (see IS 1990:1973)
100	15	IS 2045:1962	Natural sillimanite blocks for glass melting tanks furnaces (Withdrawn)

101	4	IS 2073:1970	Specification for carbon steel black bars for production of machined parts for general engineering purposes (first revision) (Withdrawn)(see IS 7283:1974)
102	3	IS 2078:1979	Method for tensile testing of grey cast iron (first revision) (Superseded by IS 1608:1995)
103	6	IS 2107:1977	Whiteheart malleable iron castings (Superseded by IS 14329:1995)
104	6	IS 2108:1977	Blackheart malleable iron castings (Superseded by IS 14329:1995)
105	10	IS 2278:1963	Fine gold bar, sheet, wire, granules and token (LAGDI or MOHUR) (Withdrawn)
106	8	IS 2313:1963	Phosphor copper ingot (Withdrawn)
107	3	IS 2348:1963	Method for drift expanding test on copper and copper alloy tubes (Superseded by IS 2335:1985)
108	8	IS 2371:1973	Solid drawn copper alloy tubes for condensers, evaporators, Heaters and cooler tubes using saline hard water (Withdrawn) (Superseded by IS 1545:1982)
109	8	IS 2456:1963	Brass strip for pen nibs (withdrawn)
110	19	IS 2484:1979	Dimensions for steel tubes for bicycle purposes (withdrawn)
111	4	IS 2517:1963	Bright bars for threaded components (Withdrawn)
112	21	IS 2598:1966	Safety code for industrial radiographic practice
113	9	IS 2600:1964	Methods of chemical analysis of high purity zinc and zinc base Alloys for die casting (Withdrawn)
114	6	IS 2640:1977	Pearlitic malleable iron castings (superseded by IS 114329:1995)
115	3	IS 2654:1977	Method for tensile testing of copper and copper alloys (first revision) (Superseded by IS 1608:1995)
116	3	IS 2655:1964	Method for tensile testing of copper and copper alloy tubes (Superseded by IS 1608:1995)
117	3	IS 2656:1964	Method for tensile testing of copper and copper alloy wires (Superseded by IS 1608:1995)
118	3	IS 2657:1964	Method for tensile testing of aluminium and aluminium alloy tube (Superseded by IS 1608:1995)
119	3	IS 2658:1964	Method for tensile testing for aluminium and aluminium alloy wire (Superseded by IS 1608:1995)
120	11	IS 2680:1964	Filler rods and wire for inert gas tungsten arc welding (Withdrawn) (see IS 5856, IS 5897, IS 6419 and IS 6560)
121	22	IS 2756:1965	Method for estimating the average grain size of wrought copper And copper base alloys (Withdrawn) (see IS 4748)
122	6	IS 2841:1978	Pig iron for special purposes (Superseded by IS 13502:1992)
123	6	IS 2842:1980	Basic pig iron for steel making purposes (Superseded by IS 13502:1992)
124	22	IS 2853:1964	Methods of determining austenitic grain size in steel

			(Superseded by IS 4748)
125	3	IS 2866:1968	Method for vickers hardness test for copper and copper alloys (Superseded by IS1501(Pt 1):1984)
126	20	IS 2983:1971	Recommended practice for hot tinning of brassware (first revision) (Withdrawn)
127	14	IS 3021:1975	Bentonite for use in foundries (Withdrawn) (see IS 12446:1988)
128	3	IS 3054:1965	Method for Brinell hardness test for copper and copper alloys (Superseded by IS 1500:1983)
129	8	IS 3057:1965	Copper sheets for photo process engravings
130	29	IS 3200(Part 3):1991	Part 3 Determination of total aluminium by complexometric Method (first revision)
131	29	IS 3200(Part 8):1992	Part 8 Determination of phosphorus pentoxide and silica (first revision)
132	3	IS 3260:1965	Method for bend test for copper and copper alloys (Superseded by IS1599:1975)
133	8	IS 3285:1965	Copper strip for electrical purposes withdrawn or rolled edged (above 150 mm width) (withdrawn) (Superseded by IS 1897:1983)
134	8	IS 3332:1965	Nickel silver strip and foil for telecommunication purposes (Withdrawn) (Superseded by IS 2283:1981)
135	3	IS 3388:1965	Method for wrapping test for copper and copper alloy wire (Superseded by IS 1755:1983)
136	3	IS 3408:1965	Method for non-interrupted creep testing of steel at elevated temperature (Superseded by IS 3407(Part 1):1983)
137	3	IS 3409:1965	Method for creep stress rupture testing of steel of elevated temperature [Superseded by IS 3407 (Part 2):1983]
138	4	IS 3422:1966	Code of practice for packaging of steel and steel products for Export purposes (withdrawn)
139	7	IS 3435:1968	99 Percent secondary aluminium notched bars and ingots for remelting for aircraft purposes (Withdrawn)
140	6	IS 3486:1966	Cast iron spigot and socket drain pipes (Withdrawn)
141	8	IS 3487:1994	Copper-Cold rolled strip and foil for gaskets, washers and Eyelets (first revision) (Superseded by IS 14811 :2000)
142	8	IS 3488:1980	Brass bars, rods and sections suitable for forging (first revision) (Superseded by IS 6912)
143	4	IS 3503:1966	Steel for marine boilers, pressure vessels and welded machinery structures (withdrawn)
144	10	IS 3541:1981	Code of practice for manufacturers of 23.3 and low carat gold alloys (first revision) (Superseded by IS 2740:1999)
145	19	IS 3609:1966	Chrome molybdenum steel, seamless, boiler and superheater tubes
146	14	IS 3666:1966	Tests for foundry core oils (Superseded by IS 9009:1992)
147	6	IS 3684:1966	Metals for casting moveable types (Withdrawn)
148	31	IS 3695:1966	Thick bottom aluminium utensils (Redesignated as IS 1660 Part

			VI)
149	4	IS 3747:1982	Hot rolled steel plates and sheets for flanging and pressing (first revision) (Superseded by IS 5986:1992)
150	16	IS 3749:1978	Tool and die steels for cold work (first revision) (Superseded by IS3748:1990)
151	3	IS 3754:1988	Method for calibration of standardized blocks to be used for Rockwell hardness testing machines(Scales A-B-C-D-E-F-G-H-K) (first revision) ( Superseded by IS 1586 :2000)
152	3	IS 3804:1988	Method for calibration of Rockwell hardness testing machines (Scales A-B-C-D-E-F-G-H-K)(first revision) (Superseded by IS 1586 :2000)
153	4	IS 3835:1966	Aluminized steel core wire for aluminium conductors (ACSR) (withdrawn)
154	4	IS 3945:1966	Steel for naval purposes (withdrawn)
155	31	IS 3981:1967	Sigries (Withdrawn)
156	4	IS 4030:1973	Cold rolled carbon steel strip for general engineering purposes (first revision) (Superseded by IS 513:1986)
157	8	IS 4077:1967	Copper-nickel shot (Withdrawn) (Superseded by IS 5743:1970)
158	31	IS 4136:1967	Aluminium Compartmental trays (Superseded by IS 1660(Part 6):1980)
159	14	IS 4140:1978	Limestone for use in foundries (first revision)
160	3	IS 4168:1967	Method for wrapping test of aluminium and aluminium alloy wire (Superseded by IS 1755:1983)
161	3	IS 4176:1967	Method for simple torsion test of aluminium and aluminium alloy Wire (Superseded by IS 1717:1985)
162	3	IS 4177:1967	Method for flattening test of aluminium and aluminium alloy tubes (Superseded by IS 2328:1983)
163	19	IS 4310:1967	Weldable steel pipe fittings for marine purposes
164	14	IS 4331(Part 1):1980	Comparison of Indian and overseas standards for steel castings Part Steel castings for general engineering purposes (first revision)(Withdrawn)
165	18	IS 4369:1967	Steel bars for forgings (Withdrawn) (Superseded by IS 1875:1992)
166	14	IS 4476:1975	Crane-suspended hand-operated geared ladles for steel Foundries (first revision)(Superseded by IS 4475(Pt 1 - 4)
167	19	IS 4516:1968	Elliptical mild steel tubes
168	3	IS 4598:1968	Method for simple bend test for aluminium and aluminium alloy Sheet and strip of thickness between 0.2 mm and 7 mm (Superseded by IS 1599:1985)
169	3	IS 4599:1968	Method for drift expanding test on aluminium and aluminium Alloy tubes (Superseded by IS 2335:1985)
170	3	IS 4713:1968	Method for determination of lower yield stress, proof stress and proving test for steel at elevated temperatures (Superseded by IS 1608:1995)
171	31	IS 4823:1981	Brass table utensils (first revision) (Withdrawn)
172	4	IS 4855:1968	Bright steel bars for machining (Withdrawn) (Superseded by IS



			7270:1974 and IS7271:1974)
173	18	IS 4901:1968	Code of practice forgings (Withdrawn) (Superseded by IS 7743)
174	19	IS 4922:1968	Seamless steel tubes (suitable for welding) for aircraft purposes
175	11	IS 4944:1968	Code of practice for welding at low ambient temperature (withdrawn)
176	6	IS 5020:1969	Hematite pig iron (Withdrawn) (Superseded by IS 13502:1992)
177	6	IS 5021:1969	Acid-resisting high-silica pig iron (withdrawn) (Superseded by IS 13502:1992)
178	3	IS 5071:1969	Method for flattening test for copper and copper alloy tubes of circular section (Superseded by IS 2328:1983)
179	3	IS 5072:1988	Methods for Rockwell superficial hardness test (Scales 15N, 30N, 45N, 15T, 30T and 45T) (first revision) (Superseded by IS 1586 <sup>2000</sup> )
180	3	IS 5073:1988	Method for verification of Rockwell superficial hardness testing machines (Scales 15N,30N,45N, 15T,30T and 45T) (first revision) (Superseded by IS 1586 :2000)
181	3	IS 5076:1988	Method for calibration of standardized blocks to be used for rockwellsuperficial hardness testing machines (Scales 15N,30N,45N,15T,30T and 45T) (first revision) (Superseded by IS 1586 :2000)
182	31	IS 5136:1981	Brass serving utensils (first revision) (Withdrawn)
183	4	IS 5239:1969	Wire rod for the manufacture of aluminized steel core wire for aluminium conductors (withdrawn)
184	24	IS 5243:1969	Tin coated finish for cooking utensils (Withdrawn)
185	4	IS 5272:1969	Carbon steel sheets for integral coaches (Superseded by IS 5986:1992)
186	24	IS 5274:1969	Recommended practice for hot dip tinning of plain carbon steels (Withdrawn)
187	10	IS 5320:1969	Fine silver ingot (Withdrawn) (see IS 2229)
188	24	IS 5358:1969	Hot dip galvanized coatings on fasteners (Superseded by IS 1367(Part 13):1982)
189	11	IS 5462:1969	Colour code for identification of covered electrodes and metal arc welding (Withdrawn)
190	13	IS 5483:1969	Method for determination of specific gravity of iron ores, pellets and sinters (Superseded by IS 11896:1986)
191	8	IS 5494:1969	Leaded brass sheets and strips for use in manufacture of tubewell strainers (withdrawn)
192	3	IS 5619:1970	Recommendations for fatigue testing of metals(withdrawn)
193	31	IS 5765:1970	Box,lunch, aluminium [Redesignated as IS 1660(Part VII)]
194	13	IS 5843:1970	Method of measuring the bulk density of iron ore and iron ore agglomerates including sinters in a large container (applicable for size over 40mm) (Superseded by IS 5842:1986)
195	7	IS 5902:1970	Aluminium and aluminium alloy rivet stock for cold forged rivets

			for aircraft purposes (Withdrawn) (see IS 8513:1977, IS 8514:1977, IS 8515:1977, IS 8936:1978, IS 8937:1978 and IS 8938:1978)
196	7	IS 5909:1970	Aluminium and aluminium manganese alloy sheet and strip for aircraft purposes (Withdrawn) (Superseded IS 7882:1975 and IS 7883:1975)
197	19	IS 5929:1970	Inspection and testing procedure for circular steel tubes for Aircraft purposes
198	4	IS 5993:1970	Aluminized steel wire for telegraph and telephone purposes (withdrawn)
199	2	IS 6010:1971	Recommended practice for photographic processing in spectrochemical analysis (withdrawn)
200	19	IS 6011:1970	Carbon steel tubes for use on board ships for pressure services
201	32	IS 6093:1971	Methods of determining the capacity and dimensions of hermetically sealed metal food containers (superseded by IS 12219-1987)
202	11	IS 6227:1971	Code of practice for use of metal arc welding in tubular structure (Superseded by IS 9595)
203	3	IS 6253:1971	Method for simple torsion testing of copper and copper alloy wire (Superseded by IS 1717:1985)
204	6	IS 6331:1987	Automotive grey iron castings (first revision) (Superseding by IS 210:2009)
205	8	IS 6517(Part 1):1972	Methods of chemical analysis of copper master alloys (Pt 1) - Determination of copper nickel alloy
206	3	IS 6520:1972	Method for the determination of K-values of a tensile testing system_(withdrawn)
207	3	IS 6878:1973	Method of reverse bend testing of copper and copper alloy wire (Superseded by IS 1716:1985)
208	3	IS 6885:1973	Method for Knoop hardness testing of metals (Superseded by IS 6885 (Pt 1):2011)
209	4	IS 6914:1978	Cast billets ingots and continuously cast billets for rolling into structural steel (standard quality) (first revision) (Superseded by IS 2830:1992)
210	4	IS 6915:	Cast billet ingots and continuously cast billets for rolling into structural steel: ordinary quality (first revision) (Superseded by IS 2831)
211	32	IS 7024:1973	Ghee and edible oil tins (round and square) (Superseded by IS 10339:1988)
212	7	IS 7094:1984	Aluminium and aluminium alloy welded tube for general engineering purposes (first revision) (withdrawn)
213	3	IS 7095:1973	Method for verification of Knoop hardness testing machines (Superseded by IS 6885 (Pt 2):2011)
214	3	IS 7097:1973	Method for calibration of standardized blocks for verification of Knoop hardness testing machines (Superseded by IS 6885 (Pt

			3):2011)
215	4	IS 7270:1974	Bright bars (standard quality) (Withdrawn) (Superseded by IS 9550:1980)
216	4	IS 7271:1974	Bright bars (ordinary/commerical quality) (withdrawn) (Superseded by IS 9550)
217	21	IS 7281:1974	Code of practice for immersed ultrasonic testing by the reflection method using pulse longitudinal waves (Withdrawn) (Superseded by IS 3664)
218	4	IS 8051:1976	Steel ingots and billets for the production of volute, helical and laminated springs for automotive suspension
219	4	IS 8053:1976	Steel ingots and billets for the production of steel wire for the manufacture of wood screws
220	4	IS 8054:1976	Steel ingots and billets for production of laminated springs (railway rolling stock) (superseded by IS 8052:1990)
221	4	IS 8055:1976	Steel ingots and billets for the production of spring washers
222	4	IS 8056:1976	Steel ingots and billets for the production of hard drawn steel wire for upholstery springs
223	4	IS 8057:1976	Steel ingots and billets for the production of wire rod for the manufacture of machine screws (by cold heading process)
224	3	IS 8285:1976	Method for tensile test of copper and copper alloy rolled flat product (thickness less than 2.5 mm) (Superseded by IS 1608:1995)
225	4	IS 8500:1991	Structural steel - microalloyed (medium and high strength qualities)(first revision) (Superseded by IS 2062:2006)
226	10	IS 8844:1978	Guidelines for marking purity of gold on gold articles/ornaments (Superseded by IS 1417:1999)
227	4	IS 9025:1993	Single cold reduced tinplate and single cold reduced black plate electrolytic tinplate coil and blackplate coil for subsequent cutting into sheet form (first revision)
228	3	IS 9258:1979	Method for vickers micro-hardness testing of metals [(Superseded by IS 1501(Part 3:1984)]
229	21	IS 9346:1979	Recommended practice for certification of NDT personnel for ultrasonic examination (Superseded by IS 13805:1993)
230	4	IS 9467:1980	Steel ingots and billets for production of rivet bars for structural purposes
231	4	IS 9468:1980	Steel ingots and billets for production of mild steel rivet bars for Ship building
232	4	IS 9477:1980	Steel ingots and billets for hot rolled bars for the production of bright bars
233	14	IS 9731:1980	Steel castings for general engineering purposes (Withdrawn)
234	2	IS 10113:1982	Recommended practice for calibration of emulsion for Photographic photometry (withdrawn)
235	25	IS 10441:1991	Mettalic powders- Determination of apparent density- oscillating funnel method (first revision) (Withdrawn)
236	3	IS 10588:1983	Tables of Brinell hardness values for use in test made on flat surfaces

237	8	IS 10723:1983	Aluminium silicon bronze rods and bars
238	4	IS 10787:1984	Hot rolled micro alloyed steel plate sheet and strip for Manufacturers of low liquifiable gas cylinders (Superseded by IS 6240:1999)
239	3	IS 10927(Part 1):1984	Tables of Vickers hardness values for use in tests made on flat surface Part 1 HV 5 to HV 100 (Superseded by IS 1501:2002)
240	3	IS 10927(Part 2):1984	Part 2 HV 0.2 to less than 5 (Superseded by IS 1501:2002)
241	3	IS 10927(Part 3):1991	Part 3 Less than HV 0.2 (Superseded by IS 1501:2002)
242	7	IS 11040:1984	Dimensions for wrought aluminium and aluminium alloys,welded tube (withdrawn)
243	32	IS 11258:1985	10- and 20 kg square tins for vanaspati ghee and edible oils (Withdrawn)
244	25	IS 12216:1987	Tantalum carbide powder (withdrawn)
245	25	IS 12217:1987	Niobium carbide powder (withdrawn)
246	4	IS 13954:1994	Double cold-reduced electrolytic tinplate sheet
247	4	IS 13955:1994	Double cold reduced electrolytic tinplate coil for subsequent cutting into sheets
248	9	IS 13982:1994	Zinc Alloy for Hot Dip Coatings- Zinc-5 Percent Aluminium-Mischmetal Alloy- Specification
249	30	IS 14718:1999	Method for determination of impact index of HBI

### ANNEX III

#### LIST OF INDIAN STANDARDS, NUMBERS AND VALID LICENCES COVERED UNDER CERTIFICATION AS ON 1 January 2013 (Product wise Alphabetically )

Sl.No.	IS No.	Title of the Specification	No. incences
<b>Alloy Steels and Forgings Sectional Committee- MTD 16</b>			
1.	1875:1992	Carbon steel billets, blooms, slabs and bars for forgings	6
2.	2004: 1991	Carbon steel forgings for general engineering purposes	1
3.	4432:1988	Case hardening steel	1
4.	5517:1993	Steels for hardening and tempering	1
<b>Corrosion Protection and Finishes – MTD 24</b>			
5.	1337:1993	Electroplated coatings of hard chromium on iron and steel	1
<b>Ferro Alloys</b>			
6.	1171:1996	Ferromanganese	1
7.	1470:1990	Siliconmanganese	1
<b>Cast Iron- MTD 6</b>			
8.	1536:2001	Pressure pipes for water gas and sewage-centrifugally cast (spun) iron pipes	8
9.	1537:1976	Vertically cast iron pressure pipes for water, gas, sewage	2
10.	1538:1993	Cast iron fittings for pressure pipes for water, gas sewage	10
11.	1729:2002	Cast iron/ductile iron drainage pipes and pipe fittings for over ground non pressure pipeline socket and spigot series	23
12.	1879:2010	Pipe fittings – Malleable cast iron	114
13.	3989:2009	Centrifugally cast (spun) iron spigot and socket soil, waste and ventilating pipes, fittings and accessories	11
14.	5531:1988	Cast iron specials for asbestos-cement pressure pipes for water, gas and sewage	4
15.	7181:1986	Cast iron double flanged pipes for water, gas and Sewage – Horizontally	18
16.	8329:2000	Centrifugally cast (spun) ductile iron pressure pipes for water, gas and sewage	19
17.	8794:2002	Pipes (pressure)- cast iron detachable joints for use with asbestos cement	39
18.	9523:2000	Ductile iron fittings for pressure pipes for water, gas and sewage	15

19.	13382:2004	Cast iron specials for mechanical & push on flexible joints for pressure pipes lines for water, gas and sewage	1
20.	13502:1992	Pig iron	1

### **Metal Containers – MTD 32**

21.	916:2000	Tins – 18 litre square	5
22.	1783(Pt. 1) 1993	Drums, large, fixed ends – grade A drums	25
23.	1783(Pt. 2) 1988	Drums, large, fixed ends – grade B drums	33
24.	1784:1998	Closures (screwed) for drums	3
25.	2552:1989	Drums (steel) (galvanized and ungalvanized)	3
26.	3575:1993	Drums – Bitumen	21
27.	9396(Pt. 1) 1987	Open top sanitary cans (round) for processed foods – Tinplate requirements	1
28.	10325:2000	Square tins – 15 kg for ghee, vanaspati, edible oils and bakery shortenings	14
29.	13997:1994	Drums, large open top	14

### **Non Ferrous Metals and Their Alloys:**

#### **Copper and Copper Alloys – MTD 8**

30.	1897:1983	Copper strips for electrical purposes for ETP Grade of (A) thickness 1 mm to 10	1
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#### **Light Metals and their alloys, MTD 7**

31.	21:1992	Wrought Alloys and its alloys – sheets and strip for utensils	1
32.	5484:1997	EC grade aluminium rod produced by continuous Casting and rolling	1
33.	7092(Pt 2):1987	Aluminium alloy tube for irrigation purposes ` Part 2 Extruded tube	8

#### **Precious Metals – MTD 10**

34.	1417:1999	Gold and gold alloys – Jewellery artefacts – fineness and marking	10805
35.	2112:2003	Grades of silver and silver alloys (first revision)	711

#### **Steel Tubes, Pipes and Fittings, MTD 19**

36.	1161:1998	Structural purpose – steel tubes	113
37.	1239(Pt 1): :2004	Mild Steel tubes, tubular and other wrought steel fittings	142
38.	1239(Pt 2): :1992	Mild Steel tubes, tubular and other wrought steel fittings- Mild steel tubular and other wrought steel pipe fittings	19
39.	IS/ISO 3183:2007	Petroleum and natural gas industries `steel pipe for pipe Line transportation systems	7

40.	3589:2001	Water, gas and sewage – steel pipes( 168.3 to 2032mm (OD) seamless or electrically welded	82
41.	3601:2006	Steel tubes for mechanical and General Engineering purposes	51
42.	4270:2001	Steel tubes used for water wells	38
43.	4923:1997	Hollow steel sections for structural use	50
44.	5504:1997	Spiral welded pipes	11
45.	6392:1971	Steel pipe flanges	5
46.	9295:1983	Idlers for belt conveyers – steel tubes	31
47.	10577:1982	Lancing pipes	1
48.	11722: 1986	Thin walled flexible quick coupling pipes	2

#### **Steel Castings, MTD 14**

49.	276:2000	Austenitic Manganese Steel Castings	1
50.	1030:1998	Carbon steel castings for general engineering purposes	1

#### **Welding – MTD 11**

51.	814:2004	Covered electrodes for manual metal arc welding of carbon and carbon manganese steels	158
52.	5206:1983	Covered electrodes for manual metal arc welding of Stainless steel and other similar high alloy steels	1
53.	6901:1988	Pressure regulators for gas cylinders used in welding cutting and related processes	9
54.	7653:1975	Manual blow pipes for welding and cutting	11

#### **Wrought Steel-MTD 4**

55.	277:2003	Galvanized steel sheets (plain and corrugated)	38
56.	280:2006	Mild steel wire for general engineering purposes	31
57.	513:2008	Cold rolled low carbon steel sheets and strips	12
58.	648:2006	Non oriented electrical steel sheets and strips for magnetic circuits	8
59.	1079:2009	Hot rolled carbon steel sheet and strip	11
60.	1835:1976	Round steel wire for ropes	1
61.	1993:1993	Cold reduced electrolytic tinsplate	3
62.	2002:2009	Steel plates for pressure vessels for intermediate and high temperature service including boiler	10
63.	2041:2009	Hot rolled medium and high tensile structural steel	4
64.	2062:2011	Hot rolled medium & high tensile structural steel	287
65.	2830:2012	Carbon steel cast billet ingots, billets, blooms and and slabs for re-rolling into steel for general structural purposes	379
66.	2831:2012	Carbon steel cast billets ingots, billets, blooms and slabs for re-rolling into structural steel (ordinary quality)	68
67.	2879:1998	Mild steel for metal arc welding electrode core wire	12
68.	3024:2006	Grain oriented electrical steel sheets and strips	5
69.	3502:2009	Steel chequered plates	3
70.	3975:1999	Mild steel wires, formed wires and tapes for armoring of cables	21
71.	4454(Part 1) 2001	Steels wires for mechanical springs, Part 1 Cold drawn Steel unalloyed steel wire	1

72.	5872:1990	Cold rolled steel strips (box strapping)	2
73.	5986:2011	Hot rolled steel flat products for structural forming and flanging purposes	9
74.	6240:2008	Hot rolled steel plate (upto 6 mm)sheet and strip for manufacture of low pressure liquifiable gas cylinder	9
75.	7283:1992	Hot rolled bars for production of bright bars and mechanical parts for engineering purposes	1
76.	7887:1992	Mild steel wire rods for general engineering purposes	17
77.	10748:2004	Hot rolled steel strips for welded tubes and pipes	19
78.	11513:2011	Hot rolled carbon steel strip for cold rolling purposes	6
79.	14650:1999	Carbon steel cast billet, ingots, billet, blooms & slabs for re-rolling purpose	23
80.	15391:2003	Cold rolled non-oriented electrical steel and strip Delivered I semi-processed state	3
81.	15647:2006	Hot rolled steel narrow strip for welded tubes & pipes	1



## ANNEX IV

### ISO TECHNICAL COMMITTEES DEALT BY METALLURGICAL ENGINEERING DEPARTMENT

ISO TC	TITLE	INDIA'S MEMBER BODY STATUS
<b>5</b>	<b>FERROUS METAL PIPES AND METALLIC FITTINGS</b>	P
	SC 1 Steel Tubes	P
	SC 2 Cast Iron Pipes, Fittings and Their Joints	P
	SC 10 Metallic flanges and their joints	O
<b>17</b>	<b>STEEL</b>	P
	SC 1 Methods of determination of chemical composition	O
	SC 3 Steel for Structural Purposes	P
	SC 4 Heat Treatable and Alloy Steel	O
	SC 7 Method of Testing (Other than Mechanical Tests And Chemical Analysis)	
	SC 9 Tinplate and blackplate	P
	SC 10 Steel for Pressure Purposes	P
	SC 11 Steel Castings	P
	SC 12 Continuous Mill Flat Products	P
	SC 16 Steels for Reinforcement and Pre Stressing of concrete	O
	SC 17 Steel Wire Rod and Wire Products	P
	SC 19 Technical Delivery Condition for Steel Tubes For Pressure Purposes	P
<b>18</b>	<b>ZINC AND ZINC ALLOYS</b>	O
<b>25</b>	<b>CAST IRON AND PIG IRON</b>	P
	SC 1 Malleable Cast Iron	P
	SC 2 Spheroidal Graphite, ferritic-perlitic and austenitic cast Iron	P
	SC 3 Grey Cast Iron (revision ISO/R 185	P
<b>26</b>	<b>COPPER AND COPPER ALLOYS</b>	O
<b>33</b>	<b>REFRACTORIES</b>	P
<b>44</b>	<b>WELDING AND ALLIED PROCESSES</b>	P
	SC 3 Welding consumables	P
	SC 5 Testing and Inspection of Welds	P
	SC 6 Resistance welding	P
	SC 7 Representation and terms	P
	SC 8 Equipment for gas welding, cutting and allied processes	P
	SC 10 Unification of Requirements in the Field of Metal Welding	P
	SC 12 Soldering and brazing materials	P

<b>52</b>	<b>LIGHT GAUGE METAL CONTAINERS</b>	<b>O</b>
	SC 4 Open top containers	O
	SC 5 General use containters	O
	SC 6 Aerosol containers	O
<b>67</b>	<b>MATERIAL, EQUIPMENT AND OFFSHORE STRUCTURES FOR PETROLEUM, PETROCHEMICAL AND NATURAL GAS INDUSTRIES</b>	<b>P</b>
	SC 2 Pipeline transportation system	P
	SC 5 Casing tubing & drill pipe	P
<b>79</b>	<b>LIGHT METALS AND THEIR ALLOYS</b>	<b>O</b>
	SC 1 Methods of chemical and spectro-chemical analysis	O
	SC 4 Unalloyed (refined) aluminium ingots	O
	SC 5 Magnesium and alloys of cast or wrought magnesium	O
	SC 6 Wrought aluminium and aluminium alloys	P
	SC 7 Aluminium and cast aluminium alloys	O
	SC 9 Symbolization	O
	SC 11 Titanium	O
<b>102</b>	<b>IRON ORES</b>	<b>P</b>
	SC 1 Sampling	P
	SC 2 Chemical Analysis	P
	SC 3 Physical Testing	P
<b>107</b>	<b>METALLIC AND OTHER INORGANIC COATINGS</b>	<b>O</b>
<b>119</b>	<b>POWDER METALLURGY</b>	<b>P</b>
<b>129</b>	<b>ALUMINIUM ORES</b>	<b>O</b>
<b>132</b>	<b>FERRO ALLOYS</b>	<b>P</b>
<b>135</b>	<b>NON-DESTRUCTIVE TESTING</b>	<b>P</b>
	SC 2 Surface method	P
	SC 3 Acoustical method	P
	SC 4 Eddy current methods	P
	SC 5 Radiaton methods	P
	SC 6 Leak detection methods	P
	SC 7 Personnel qualification	P
	SC 8 Infrared thermography for NDT	P
	SC 9 Acoustic emission testing	P

<b>155</b>	<b>NICKEL AND NICKEL ALLOYS</b>	<b>O</b>
<b>156</b>	<b>CORROSION OF METALS AND ALLOYS</b>	<b>O</b>
<b>164</b>	<b>MECHANICAL TESTING OF METALS</b>	<b>O</b>
	SC 1 Uniaxial testing	<b>O</b>
	SC 3 Hardness testing	<b>O</b>
	Sc 4 Toughness testing – Fracture (F), Pendulum (P), Tear (T)	<b>O</b>
<b>174</b>	<b>JEWELLERY</b>	<b>P</b>
<b>175</b>	<b>FLUORSPAR</b>	<b>O</b>
<b>183</b>	<b>COPPER LEAD AND ZINC ORES AND CONCENTRATE</b>	<b>O</b>
<b>196</b>	<b>ORNAMENTAL ROCKS</b>	<b>O</b>
<b>201</b>	<b>SURFEROUS CHEMICAL ANALYSIS</b>	<b>O</b>
<b>202</b>	<b>MICROBEAN ANALYSIS</b>	<b>O</b>
<b>229</b>	<b>NANOTECHNOLOGIES</b>	<b>P</b>

## ANNEX-V

IS 21 :1992	बर्तनों के निर्माण के लिए पिटवाँ ऐल्युमिनियम मिश्रधातुएँ (चौथा पुनरीक्षण)
IS 279 :1981	तार और टेलीफोन कार्यों के लिये जस्तीकृत इस्पात के तार (तीसरा पुनरीक्षण)
IS 1148 :1982	संरचना कार्यों के लिए तप्त बेल्लित इस्पात रिबेट सरिये 40 मिमी तक
IS 1149 :1982	संरचना कार्यों के लिए उच्च तनन इस्पात रिबेट सरिये
IS 1417 :2009	स्वर्ण एवं स्वर्ण मिश्रधातुएँ आभूषण/शिल्पकारी शुद्धता एवं मुहराकंन – विशिष्टि (तीसरा पुनरीक्षण)
IS 4368 :1967	सामान्य इंजीनियरिंग कार्यों की गढाईयों के लिए मिश्र इस्पात विलेट ब्लूम और सिल्लियाँ
IS 4430:1979	सांचा इस्पात (पहला पुनरीक्षण)
IS 4431 :1978	कार्बन और कार्बन- मैगनीज – सुकट्य इस्पात (पहला पुनरीक्षण)
IS 4432 :1988	केरा कठोरता इस्पात (पहला पुनरीक्षण)
IS 4882 :1979	बेयरिंग उधोग में प्रयुक्त रिबेटों के लिये अल्प कार्बन इस्पात तार (पहला पुनरीक्षण)
IS 5489 :1975	बेयरिंग उधोग में प्रयुक्त कार्बन इस्पात (पहला पुनरीक्षण)

### द्विभाषी भारतीय मानक

1110 : 1990	फेरोसिलिकॉन (चौथा पुनरीक्षण)
12908: 1990	फेरोऐल्युमिनियम