

## BUREAU OF INDIAN STANDARDS

### Program of Work

#### MTD 13 : Ores and Feed Stock for Iron and Steel Industry Sectional Committee

**Scope:** Standardization in the field of Ferrous ores, Ferro Alloys, Sponge Iron/Direct Reduced Iron and other Metallic additions/Feed Stock used in the Iron and Steel making Industry.

**Liaison:** **ISO TC-102 (P): Iron ore and direct reduced iron ISO TC-102 SC-1 (P): Sampling ISO TC-102 SC-3 (P): Physical testing ISO TC-102 (P): Iron ore and direct reduced iron ISO TC-102 SC-1 (P): Sampling ISO TC-102 SC-3 (P): Physical testing**

### Published Standards

S.No	IS No.	TITLE	Reaffirm M-Y	No. of Amds	Eqv.
1	IS 10345:2004	Flux grade limestone for use in iron and steel making - Specification (Second Revision)	October, 2023	-	Indigenous
2	IS 10346:2004	Dolomite for metallurgical and refractory use - Specification (Second Revision)	October, 2023	-	Indigenous
3	IS 10818:2024	CHROMITE FOR METALLURGICAL INDUSTRY - SPECIFICATION ( First Revision )		-	Indigenous
4	IS 10823:2018	Methods for determination of thermal degradation index (TDI) and reduction degradation index (RDI) of iron oxides: lump ores, sinter and pellets (Second Revision)	December, 2023	-	Indigenous
5	IS/ISO 10835:2007 <span style="color: green;">ISO 10835:2007</span>	Direct reduced iron and hot briquetted iron - Sampling and sample preparation	February, 2024	-	Identical under single numbering
6	IS 10852:2012	Storage and transportation of sponge iron, direct reduced (DRI) and hot briquetted iron (HBI) - Guidelines (First Revision)	February, 2022	-	Indigenous
7	IS 11092:2001	Iron ore pellets for direct reduction processes - Specification (Second Revision)	November, 2023	1	Indigenous
8	IS 11093:2001	Iron ore lumps for direct reduction processes - Specification (Second Revision)	March, 2025	2	Indigenous
9	IS 11211:1984	Methods of sampling rock phosphate	March, 2024	-	Indigenous
10	IS 11281:2005	Manganese ore for use in iron and steel making (First Revision)	March, 2021	-	Indigenous
11	IS 11282:2000	Guidelines for laboratory Pot - Grate sintering tests for iron ore	January, 2024	-	Indigenous

		finer (First Revision)			
12	IS 11282:2026	LABORATORY POT-GRATE SINTERING TESTS FOR IRON ORE FINES - GUIDELINES		-	Indigenous
13	IS 11284:1985	Rotary tube test for iron bearing materials for the manufacture of sponge iron/direct reduced iron(DRI)	March, 2021	1	Indigenous
14	IS 11285:2002	Various tests on raw material to be used for coal based rotary kiln direct reduction (First Revision)	March, 2025	-	Indigenous
15	IS 11292:1985	Method for determination of relative reducibility of iron oxides: lump ores, sinter and pellets	March, 2024	-	Indigenous
16	IS 11336:1985	Guidelines for heat hardened iron ore pellets for iron making in blast furnaces	March, 2024	-	Indigenous
17	IS 11348:1989	Iron ore pellets - Apparent specific gravity, true specific gravity and apparent porosity - Methods for determination (First Revision)	March, 2024	-	Indigenous
18	IS 11373:1985	Guideline for laboratory disc pelletisation of iron ore fines	February, 2022	-	Indigenous
19	IS 11607:1986	Methods of sampling iron ore sinters	March, 2024	-	Indigenous
20	IS 11795:1996	Guidelines for ash softening studies on solid reductants for direct reduction (First Revision)	February, 2022	2	Indigenous
21	IS 11860:1998	Guidelines for non - coking coals for solid reductant based direct reduction in rotary kilns(And Other Reactors) (First Revision)	March, 2024	2	Indigenous
22	IS 11894:1986	Classification of magnetite iron ore	March, 2024	-	Indigenous
23	IS 11895:2006	Classification of manganese ore, ferruginous manganese ore, siliceous manganese ore, dioxide manganese ore and manganiferrous iron (First Revision)	October, 2023	-	Indigenous
24	IS 11896:1986	Method for determination of apparent specific gravity, true specific gravity and apparent porosity of iron ore lumps and sinters	March, 2024	-	Indigenous
25	IS 11897:1986	Guidelines for methods to be adopted for identifying the mineralogy of iron oxides; lump ores, sinters and pellets	March, 2024	-	Indigenous
26	IS 12052:2007	Method of 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)	March, 2022	-	Indigenous
27	IS 12263:1987	Method for determination of rigidity of sponge iron/DRI during transportation and handling	March, 2024	1	Indigenous
28	IS 12381:1994	Coal (Char) reactivity for direct reduction process - Method of determination (First Revision)	March, 2022	1	Indigenous

29	IS 12394:1988	Method for weathering test on iron ore sinter	March, 2024	-	Indigenous
30	IS 12550:1988 ISO 4701	Methods of determining particle size distribution of iron ore fines	March, 2024	2	Not Equivalent
31	IS 12595:1989	Classification of terminology for exploration of mineral deposits	March, 2024	-	Indigenous
32	IS 12596:1989	Manganese ore sinters for blending for ferromanganese production - Specification	March, 2024	-	Indigenous
33	IS 12668:1989	Melting characteristics of sponge iron/direct reduced iron (DRI)	March, 2021	1	Indigenous
34	IS 12668:2025	MELTING CHARACTERISTICS OF SPONGE IRON/DIRECT REDUCED IRON DRI First Revision		-	Indigenous
35	IS 12929:2007 ISO 11257	Feedstock (Iron Oxides And Natural Gas) for gas - Based direct reduction processes - Guidelines (First Revision)	March, 2022	-	Not Equivalent
36	IS 13344:1992 ISO 3086	Methods for checking the bias of sampling of ores	March, 2021	-	Not Equivalent
37	IS 13676:1993  Decision taken to Reaffirm and Archive	Quartzite for iron making in blast furnaces - Specification	March, 2024	-	Indigenous
38	IS 13885:2001	Non - Magnetic/char in sponge iron (DRI) - Methods of determination (First Revision)	March, 2022	2	Indigenous
39	IS 1405:2010 ISO 3082	Iron ores - Sampling and sample preparation - Manual method (Third Revision)	March, 2021	-	Not Equivalent
40	IS 1449:2010	Methods of sampling of manganese ores (Second Revision)	March, 2021	-	Indigenous
41	IS 14719:1999	Density of hot briquetted iron (HBI) - Method for determination	March, 2021	1	Indigenous
42	IS 14795:2026 ISO 11256	Iron Ore Pellets for Shaft Direct-reduction Feedstocks - Determination of the Clustering Index		-	Not Equivalent
43	IS 14795:2000 ISO 11256	Method for determination of clustering of iron oxide feedstock for direct reduction processes	August, 2023	1	Not Equivalent
44	IS 14796:2000	Guidelines on feedstock for smelting reduction processes	March, 2021	1	Indigenous
45	IS 14797:2000	Classification of smelting reduction (Alternate Iron Making) processes	March, 2021	1	Indigenous
46	IS 14991:2001	Method of determination for coal char strength	March, 2022	-	Indigenous
47	IS 15774:2018	Sponge iron/direct reduced iron (DRI) hot briquette iron (HBI) and cold briquette iron (CBI) for steel making - Specification	March, 2023	-	Indigenous
48	IS 15944:2011 ISO 3086 : 2006 ISO 3086:2006	Iron ores - Experimental methods for checking the bias of sampling	March, 2022	-	Identical under dual numbering
49	IS 16182:2014	Magnetics in char from coal based sponge iron (DRI) - Methods of	September, 2024	-	Indigenous

		determination			
50	IS 16482:2018	Use of synthesis gas from coal gasifier for production of sponge iron - Guidelines	March, 2023	-	Indigenous
51	IS 16750:2018 ISO 16742 : 2014 ISO 16742:2014	Iron ores - Sampling of slurries	November, 2023	-	Identical under dual numbering
52	IS 18181:2023 ISO 15968:2016 ISO 15968:2016	Direct reduced iron Determination of apparent density and water absorption of hot briquetted iron HBI		-	Identical under dual numbering
53	IS 19580:2026	Iron ore and direct reduced iron - Vocabulary		-	
54	IS 2109:1982	Methods of sampling dolomite, limestone and other allied materials (First Revision)	February, 2024	-	Indigenous
55	IS 2245:1962	Methods of sampling quartzite	August, 2023	1	Indigenous
56	IS 2246:2023 JIS M 8100: 2018	Sampling Fluorspar (Fluorite) $i_c^{1/2}$ Methods ( First Revision )		-	Not Equivalent
57	IS 4156:2023	SAMPLING OF BARYTES $i_c^{1/2}$ METHODS		-	Indigenous
58	IS 4166:1967	Methods for sampling of ilmenite and rutile	January, 2022	-	Indigenous
59	IS 4574:1989	Fluorspar for use in metallurgical industries - Specification (Second Revision)	March, 2024	-	Indigenous
60	IS 4763:2006	Manganese ore for production of ferro manganese - Specification (Second Revision)	January, 2022	-	Indigenous
61	IS 5442:1992	Haematite iron ore - Classification (Second Revision)	March, 2024	-	Indigenous
62	IS 5534:1969	Method for determination of specific surface area of powdered ore samples	March, 2024	-	Indigenous
63	IS 5632:2025	WOLFRAMITE CONCENTRATE - SPECIFICATION (First Revision)		-	Indigenous
64	IS 5633:2023	Vanadium Pentoxide $i_c^{1/2}$ Specification (Second Revision)		-	Indigenous
65	IS 5842:2024 ISO 3852	MEASURING BULK DENSITY OF IRON OXIDES: LUMP ORES SINTER AND PELLETS - METHOD		-	Not Equivalent
66	IS 6495:2019 ISO 3271	Method of tumbler test for iron oxides : lump ores, sinter and pellets (Second Revision)	August, 2023	-	Not Equivalent
67	IS 8167:1989 ISO 4695	Method for determination of reducibility index of iron ore oxides, lumps ore, sinter and pillets (First Revision)	January, 2022	1	Not Equivalent
68	IS 8562:1977	Methods of sampling chrome ore	January, 2022	-	Indigenous
69	IS 8604:1977	Method for determination of compression strength of iron ore pellets after reduction	February, 2024	-	Indigenous
70	IS 8624:1995 ISO 4698	Method for determtnation of swelling index of iron ore pellets (First Revision)	February, 2022	-	Not Equivalent

71	IS 8625:1986 <b>ISO 4700</b>	Determination of crushing strength of iron ore pellets (First Revision)	August, 2023	1	Not Equivalent
72	IS 9101:1979 <b>ISO 3082</b>	Methods of sampling iron ore pellets	August, 2023	1	Not Equivalent
73	IS 9660:2001	Methods for determination of softening - Melting characteristics of iron ore lumps/ pellets/sinter (First Revision)	February, 2022	-	Indigenous
74	IS 9959:2024	IRON ORE SINTERS FOR IRON MAKING IN BLAST FURNACES - GUIDELINES ( First Revision )		-	Indigenous
75	IS 9963:1981	Determination of shatter index of iron ore lumps, sinters and pellets	September, 2024	1	Indigenous

### Standards under Development

#### Projects Approved

SI. No.	Doc No.	Title
<i>No Records Found</i>		

#### Preliminary Draft Standards

SI. No.	Doc No.	Title
<i>No Records Found</i>		

#### Drafts Standards in WC Stage

SI. No.	Doc No.	Title
<i>No Records Found</i>		

#### Draft Standards Completed WC Stage

SI. No.	Doc No.	Title
<i>No Records Found</i>		

#### Finalized Draft Indian Standard

SI. No.	Doc No.	Title
1	MTD 13 (33606)	Determination of Crushing Strength of Iron Ore Pellets Method of Test Second Revision

#### Finalized Draft Indian Standards under Print

SI. No.	Doc No.	Title
1	MTD 13 (10966)	Iron ores - Sampling of slurries
2	MTD 13 (11019) <b>Revision of: IS 6495:2019</b>	METHOD OF TUMBLER TEST FOR IRON OXIDES LUMP ORES SINTER AND PELLETS
3	MTD 13 (11020) <b>Revision of: IS 10823:2018</b>	METHODS FOR DETERMINATION OF THERMAL DEGRADATION INDEX TDI AND REDUCTION DEGRADATION INDEX RDI OF IRON OXIDES LUMP ORES SINTER AND PELLETS
4	MTD 13 (14266)	Ferrosilicon Bi-lingual Amendment - 3
5	MTD 13 (14269)	Ferronickel Amendment - 2
6	MTD 13 (14285)	Nickel Ferronickel and nickel alloys - Determination of carbon content - Infra-red absorption method after induction furnace combustion
7	MTD 13 (17099) <b>Revision of: IS 4409:1973</b>	FERRONICKEL -- SPECIFICATION

8	MTD 13 (20186) Revision of: IS/ISO 15968:2000	Direct reduced iron Determination of apparent density and water absorption of hot briquetted iron HBI
9	MTD 13 (20569) Revision of: IS 1110:1990	FERROSILICON -- SPECIFICATIONS
10	MTD 13 (20875) Revision of: IS 5632:1970	WOLFRAMITE CONCENTRATE SPECIFICATION First Revision
11	MTD 13 (20888) Revision of: IS 3012:1985	Chrome Manganese Specification Second Revision
12	MTD 13 (21007) Revision of: IS 5633:1973	Vanadium Pentoxide Specification Second Revision
13	MTD 13 (21010) Revision of: IS 7148:1980	Specification for ferro alloys for welding industry First Revision
14	MTD 13 (21018) Revision of: IS 2391:1970	Foundry Nickel Specification Second Revision
15	MTD 13 (21913) Revision of: IS 2246:1963	Sampling Fluorspar Fluorite Methods First Revision
16	MTD 13 (22090) Revision of: IS 4156:1967	SAMPLING OF BARYTES METHODS
17	MTD 13 (22542) Revision of: IS 12668:1989	MELTING CHARACTERISTICS OF SPONGE IRON DIRECT REDUCED IRON DRI First Revision
18	MTD 13 (22548) Revision of: IS 9959:1981	IRON ORE SINTERS FOR IRON MAKING IN BLAST FURNACES - GUIDELINES First Revision
19	MTD 13 (23643) Revision of: IS 10818:1984	CHROMITE FOR METALLURGICAL INDUSTRY - SPECIFICATION First Revision
20	MTD 13 (23648) Revision of: IS 11282:2000	LABORATORY POT-GRATE SINTERING TESTS FOR IRON ORE FINES - GUIDELINES
21	MTD 13 (23672) Revision of: IS 5842:1986	MEASURING BULK DENSITY OF IRON OXIDES LUMP ORES SINTER AND PELLETS - METHOD
22	MTD 13 (28209) Revision of: IS 14795:2000	Iron Ore Pellets for Shaft Direct-reduction Feedstocks - Determination of the Clustering Index
23	MTD 13 (33155)	Iron ore and direct reduced iron - Vocabulary
24	MTD 13 (33253)	Determination of compression strength of iron ore pellets after reduction - Method of test
25	MTD 13 (33909)	Density of hot briquetted iron HBI - Method for determination

**Total Published Standards:72 Total Standards Under development:26**

### Aspect Wise Report

Product : 15  
Code of Practices : 23  
Methods of Test : 29  
Terminology : 1  
Dimensions : 0  
System Standard : 0  
Safety Standard : 0  
Others : 3  
Service Specification : 0  
Process Specification : 0  
Unclassified : 1

### Annexure-I :List of Indian Standards Withdrawn/Superseded

Sl. No.	IS No. & Year	Title
1	IS 11283:1985	Method for determination of softening point of iron oxides In Powder Form lump ore sinter and pellets
2	IS/ISO 15968:2000 ISO 15968:2000	Direct reduced iron - Determination of apparent density and water absorption of hot briquetted iron HBI
3	IS 373:1952	Manganese Ore Metallurgical Grade tentative

4	IS 5483:1969	Method for determination of specific gravity of iron ores pellets and sinters
5	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

**Annexure-II :List of Indian Product Standards**

SI. No.	IS No. & Year	Title
1	IS 10345:2004	Flux grade limestone for use in iron and steel making - Specification Second Revision
2	IS 10346:2004	Dolomite for metallurgical and refractory use - Specification Second Revision
3	IS 10818:2024	CHROMITE FOR METALLURGICAL INDUSTRY - SPECIFICATION First Revision
4	IS 11092:2001	Iron ore pellets for direct reduction processes - Specification Second Revision
5	IS 11093:2001	Iron ore lumps for direct reduction processes - Specification Second Revision
6	IS 11281:2005	Manganese ore for use in iron and steel making First Revision
7	IS 11336:1985	Guidelines for heat hardened iron ore pellets for iron making in blast furnaces
8	IS 12596:1989	Manganese ore sinters for blending for ferromanganese production - Specification
9	IS 13676:1993 Decision taken to Reaffirm and Archive	Quartzite for iron making in blast furnaces - Specification
10	IS 15774:2018	Sponge iron direct reduced iron DRI hot briquette iron HBI and cold briquette iron CBI for steel making - Specification
11	IS 4574:1989	Fluorspar for use in metallurgical industries - Specification Second Revision
12	IS 4763:2006	Manganese ore for production of ferro manganese - Specification Second Revision
13	IS 5632:2025	WOLFRAMITE CONCENTRATE - SPECIFICATION First Revision
14	IS 5633:2023	Vanadium Pentoxide Specification Second Revision
15	IS 9959:2024	IRON ORE SINTERS FOR IRON MAKING IN BLAST FURNACES - GUIDELINES First Revision