

Draft Order

New Delhi, the ----July, 2020

S.O. (E).- In exercise of the powers conferred by section 25 and sub-section (1) and (2) of section 16 read with section 17 of the Bureau of Indian Standards Act, 2016 (11 of 2016), the Central Government hereby notifies this Order in public interest for the safety of the users of the machines and equipment and to reduce risks and safeguard the environment.

1. Objective, short title, commencement and application

(1) This Order establishes requirements for safety of machinery and electrical equipment and their parts in the process of designing, manufacturing, installation, commissioning, operation, storage, transportation, marketing and disposal for the purposes of taking protective measures for safety and the well-being of users, protection of the environment, life and health of animals.

(2) This Order may be called the **Machinery and Electrical Equipment Safety Order, 2020**.

(3) It extends to the whole of India.

(4) This Order unless specified otherwise shall come into force **from the date as notified in the schedule for each machinery and electrical equipment**.

(5) Nothing in this Order shall apply to any machinery and electrical equipment already notified by the Central Government under any other technical regulation(s). This Order extends to machines and (or) electrical equipment which are listed in the Schedule attached to this Order.

(6) Nothing in this Order shall apply in relation to machinery and electrical equipment as specified in the Schedule which are meant for export.

2. Definitions

In this Order, unless otherwise specified:

(1) **Machinery (as defined in IS 16819:2018/ISO 12100:2010)** means any assembly, fitted with or intended to be fitted with a drive system consisting of linked parts or components, at least one of which moves, and which are joined together for a specific application. For the purposes of this Order, the term “machine” means and includes “machinery”.

Explanation 1: The term “machinery” also covers assembly of machines which, in order to achieve the same end, are arranged and controlled so that they function as an integral whole.

(2) **Assembly {as defined in ISO/TS 21619:2018 (en)}** means a set of one or more sub-assemblies or components constituting a single end-use product.

(3) **Sub-assembly {as defined in ISO/TS 21619:2018(en)}** means set of more than one component intended to be assembled together with other such sets or components.

(4) **Component {as defined in ISO/TS 21619:2018(en)}** means constituent part of equipment that cannot be physically divided into smaller parts without losing its character.

(5) **Part (as defined in ISO 13584-1:2001)** means material or functional element that is intended to constitute a component of different products.

(6) **Electrical Equipment** means equipment which is dependent ~~up~~ on electric currents or electromagnetic fields in order to work properly and equipment for generation, conversion, transmission, control, distribution or utilisation of electric energy such as electric machines, transformers, switchgear and control gear and their parts.

(7) **“Safety”** (as defined in ISO/TS 37151:2015(en) means freedom from unacceptable risk.

(8) **“Risk”** (as defined in IS 16819:2018/ISO 12100:2010) means combination of the probability of occurrence of harm and the severity of that harm.

(9) **Residual Risk** (as defined in IS 16819:2018/ISO 12100:2010) means risk remaining after protective measures implemented.

(10) **“Risk Assessment”** (as defined in IS 16819:2018/ISO 12100:2010) means overall process comprising a risk analysis and a risk evaluation.

3. Conformity to Standards and essential requirements: (1) Each machine and (or) electrical equipment specified or described under the Schedule of this Order shall conform with the corresponding Indian Standards, as applicable as given below:

(a) Type A standards as given below:

(i) IS 16819:2018/ISO 12100:2010 (Safety of Machinery General Principles for Design-Risk Assessment and Risk Reduction) and

(ii) IS 16504 (Part-1):2019/IEC 60204-1:2016 (Safety of Machinery- Electrical Equipment of Machines Part 1 General Requirements) and

(iii) IS/IEC 61508 : PART 1 : 2010 (Functional Safety of Electrical — Electronic — Programmable Electronic Safety-Related Systems Part 1— General Requirements).

(b) Type B Standards – Generic Safety Standards dealing with one safety aspect or more than one type of safeguard that can be used across a wide range of machinery and /(or) electrical equipment as per Annexure I and

(c) Type C Standards – Machine Safety Standards dealing with detailed safety requirements for a particular machine or group of machines and /(or) electrical equipment as per Annexure II

Note: When a Type C standard deviates from one or more technical provisions dealt with by Type A or Type B standard, Type C standard takes precedence.

(2) Each machine and (or) electrical equipment specified or described under the Schedule of this Order shall also conform with the following essential requirements:

(a) Requirement of Marking on the Machinery or Electrical Equipment: Each machine and (or) electrical equipment placed on the market shall be provided with a label, firmly affixed to the machinery and (or) electrical equipment which shall contain the following information:

(i) The Type / Make / Model of the machinery and (or) electrical equipment that was registered or Type examined and certified;

(ii) The name and address of the manufacturer;

(iii) Brand name or Trade Mark under which the machinery and (or) electrical equipment is marketed, if applicable;

(iv) The Serial number or Batch number of the machinery and (or) electrical equipment;

(v) Safety instructions or symbols, if any required to be labelled or marked on the

machinery or electrical equipment;

(vi) Any other information required under any other law in force.

(b) Requirement of Technical File:

(1) Each manufacturer shall be required to prepare a technical file to demonstrate that the machinery and (or) electrical equipment complies with the requirements of this Order. It must cover the design, manufacture and operation of the machinery and (or) electrical equipment to the extent necessary for this assessment.

(2) A technical file shall include:

- (i) A general description of the machinery and (or) electrical equipment.
- (ii) The overall drawing of the machinery and (or) electrical equipment and drawings of the control circuits, as well as self-explanatory description for understanding the operation of the machines and/or electrical equipment.
- (iii) Fully detailed drawings, accompanied by calculations, test results and certificates required to substantiate the conformity of the machinery and (or) electrical equipment with the requirements of the applicable Indian standards mentioned in Para 3 (1) of this Order.
- (iv) The documentation on risk assessment demonstrating the procedure followed, including;
 - a) List of the health and safety requirements as per the applicable Indian standards mentioned in mentioned in Para 3 (1) of this Order which apply to the machinery and (or) electrical equipment,
 - b) The description of the protective measures implemented to eliminate identified hazards or to reduce risks and, when appropriate, the indication of the residual risks associated with the machinery and (or) electrical equipment covered by the standards.
- (v) The standards and other technical specifications used indicating the essential health and safety requirements.
- (vi) The report of compliance of the machinery or electrical equipment including test reports, as applicable indicating the results of the tests carried out either by the manufacturer or by a laboratory as per the provisions of Scheme-IX of BIS (Conformity Assessment) Regulations, 2018.
- (vii) A copy of the instructions for installation, safe operation and maintenance of the machinery and/or electrical equipment in English, Hindi and other Indian languages.

- (viii) The copies of the licence of machinery and (or) electrical equipment or other parts incorporated into the machinery and (or) electrical equipment.
- (ix) Documentation for the risk reduction and residual risk as prescribed in applicable standards mentioned in **Para 3 (I) of this Order**.
- (x) **Where the manufacturer intends to manufacture the same machine model in continuous production, the technical file shall include a monitoring and control plan that will demonstrate how the relevant safety requirements shall be ensured and verified through inspections and tests that will be carried out before, during and after manufacture, and the frequency with which they will be carried out. The manufacturer shall also maintain quality records, such as inspection reports and test data, calibration data, and reports on the qualifications of the personnel concerned in respect of the machinery produced.**

4. Compulsory Certification

Each machine and (or) electrical equipment **specified or described in the enclosed Schedule** to this Order **shall bear the standard mark under a licence from the Bureau of Indian Standards as applicable as per Scheme-IX** of Schedule II of BIS (Conformity Assessment) Regulations, 2018. Machines and (or) electrical equipment shall be added in the Schedule as and when required.

5. Certification and Enforcement Authority

The Bureau of Indian Standard (BIS) shall be the certifying and enforcement authority in respect of the machines and electrical equipment as specified under this Order.

6. For compliance with this Order and Market Surveillance

(1) Market surveillance is an essential instrument in as much as it ensures the proper and uniform application of this Order. The Bureau of Indian Standard (BIS) shall carry out market surveillance in respect of the machines and electrical equipment as specified under this Order. BIS may appoint a Market Surveillance Agency that shall be responsible for efficient implementation of the Machinery and Electrical Equipment Safety Order, 2020 including assessment of compliance with this Order of the various business operators in machinery supply chain – manufacturer, importer, trader, downstream users.

(2) The purpose of Market surveillance is to ensure that products covered by this Order

conform to the relevant specified standards and have followed the due process of conformity assessment as specified in this Order.

(3) Market surveillance shall also aim to prohibit placement or withdraw products from the market which, are liable to compromise the health or safety of users, or which otherwise do not conform to applicable requirements.

(4) Market Surveillance shall also follow up for compliance through issue of Notices, and Orders.

(5) BIS may require any person engaged in the manufacture, import, distribute, sell, hire, lease, or store of machinery or party completed machinery to give such information as he deems necessary relating to the manufacture, import, distribute, sell, hire, lease, or store of any machinery or party completed machinery for the implementation of this Order or require any such person to furnish to him samples of any such machinery or party completed machinery.

(6) BIS may inspect or cause to be inspected any books or other documents relating to machinery or party completed machinery kept by or belonging to or in the possession or under the control of any person engaged in the manufacture, import, distribute, sell, hire, lease, or store of any such machinery or party completed machinery;

(7) Market Surveillance would include verifying that any machinery or partly completed machinery placed on market is Type Examined and Certified.

(8) BIS shall draw a surveillance plan to verify compliances through a series of measures, including but not limited to:

- a) Visits to the manufacturing sites for verifying the availability and technical correctness of Technical file in compliance with the Standards, compliance of the manufactured machinery with the provisions of the technical file, marking and labelling in accordance with this Order, spot tests of the machines where relevant and taking of samples from the manufacturing site for testing in independent and accredited laboratory, where feasible.
- b) Visit to sites of installed machinery to verify conformance of machinery as well as installation arrangement.
- c) Where the market surveillance authority find that a product presents a serious risk, they shall take measures to prohibit that product from being placed on the market and shall require the authorities in charge of external border controls (Customs) to prohibit their entry into India.

7. Penalty for Contravention

Save as is otherwise expressly provided in this Order, if in, or in respect of, any establishment, there is any contravention of the provisions of this Order made thereunder or of any order in writing given under this Order, any person who contravenes the provisions of this Order shall be punishable under the provisions of the Bureau of Indian Standards Act, 2016.

8. Power to remove difficulties

If any difficulty arises in giving effect to the provisions of this Order, the Central Government may, by an Order published in the Official Gazette, make such provisions not inconsistent with the provisions of this Order, as appears to be necessary or expedient for removing the difficulty.

9. Date of effect of amendment or revision in Indian standards

This Order shall apply to any amendment or revision made by the Bureau of Indian Standard in consultation with the Department of Heavy Industry, Government of India to any Indian standards.

File No. 9/28/2019-HE&MT

(Sukriti Likhi)
Joint Secretary

Schedule

List of Machinery and Electrical Equipment covered under this Order

S No	Description of Machinery and Electrical Equipment	HS Code
1	All types of Pumps for handling liquids, liquid elevators and their assemblies /subassemblies /components / parts	841340, 841350, 841360, 841370, 841381, 841382 and 841391.
2	All types of compressors and their assemblies /subassemblies /components / parts	841430, 841440, 84148011, 84148090, 84149011, 84149019 and 84149090.
3	All types of machinery for treatment of material by a process involving a change of temperature and their assemblies /subassemblies /components /parts.	841932, 841939, 841940, 841950, 841960, 841981, 841989 and 84199090.
4	All types of centrifuges, filtering or purifying machinery for liquid and gas and their assemblies /subassemblies /components / parts	842111, 842112, 842119, 84212110, 84212190, 842122, 842129, 842131, 842139, 842191 and 842199.
5	All types of machinery for filling, closing, sealing, labelling bottles, packing or wrapping and their assemblies /subassemblies /components /parts	842220, 842230, 842240 and 842290.
6	All types of cranes and their assemblies /subassemblies /components /parts	842611, 842612, 842619, 842620, 842630, 842641, 842649, 842691 and 84269990,
7	All types of machinery for construction, earthmoving, mining and their assemblies /subassemblies /components /parts	8429, 843010, 843020, 843031, 843039, 843041, 843049, 843050, 843141, 843142, 843143 and 843149.
8	Lithographic plates	84425020
9	All types of weaving machines (looms) and their assemblies /subassemblies /components /parts.	8446, 844811, 844819, 844842 and 844849,
10	All types of machinery for making embroidery and their assemblies /subassemblies /components /parts.	84479020 and 844859.
11	All types of metal cutting machines tools covered under the heading 8456 to 8461 and their assemblies /subassemblies /components /parts	8456, 8457, 8458, 8459, 8460, 8461 and 846693
12	All types of machine tools for working stone, ceramics, concrete, asbestos cement or like mineral glass and their assemblies /subassemblies /components /parts	8464
13	All types of machinery for working rubber and plastics and their assemblies /subassemblies /components /parts	8477
14	All types of Machines including the machines for public works & building and the machinery & mechanical appliances having individual functions, not specified or	84791000, 84798999 and 84799090

	included elsewhere in Chapter 84 and their assemblies /subassemblies /components /parts	
15	All types of gears and gearing, toothed wheels, chain sprocket, transmission elements ball or roller screws, gear boxes and speed changers, including torque converters and their assemblies /subassemblies /components /parts	84834000 and 84839000
16	All types of Rotary electrical machines such as Generator, etc. and their assemblies /subassemblies /components /parts	8501 and 8503
17	All types of Diesel Generator and their assemblies /subassemblies /components /parts	8502 and 8503
18	All types of Transformer and their assemblies /subassemblies /components /parts	850421, 850422, 850423, 850431, 850432, 850433, 850434 and 850490.
19	All types of Power Semiconductor Converter and their assemblies /subassemblies /components /parts	850440
20	All types of switch gear and control gear equipment operating at voltages not exceeding 1000 volts and their assemblies /subassemblies /components /parts	8535, 8537 and 8538
21	All types of switch gear and control gear equipment operating at voltages exceeding 1000 volts and their assemblies /subassemblies /components /parts	8535, 8537 and 8538

Annexure-I

TYPE B (Generic Safety Standards – dealing with one safety aspect or more than one type of safeguard that can be used across a wide range of machinery)		
Sl. No.	IS Number	Title
1.	IS 16501 : 2017/ IEC 62061 : 2005	Safety of Machinery-Functional Safety of Safety-Related Electrical Electronic and Programmable Electronic Control Systems
2.	IS 16502 (Part 2) : 2017/ IEC 61496-2 : 2013	Safety of Machinery - Electro-Sensitive Protective Equipment Part 2 Particular Requirements for Equipment Using Active Opto-Electronic Protective Devices AOPDs
3.	IS 16503 (Part 3) : 2017/ IEC 61310-3 : 2007	Safety of Machinery- Indication Marking and Actuation Part 3 Requirements for the Location and Operation of Actuators
4.	IS 16504 (Part 32) : 2017/ IEC 60204-32 : 2008	Safety of Machinery-Electrical Equipment of Machines Part 32 Requirements for Hoisting Machines
5.	IS 16503 (Part 1) : 2017/ IEC 61310-1 : 2007	Safety of Machinery- Indication Marking and Actuation Part 1 Requirements for Visual Acoustic and Tactile Signals
6.	IS 16594 (Part 1) : 2017/ IEC 61496-1 : 2012	Safety of Machinery - Electro-Sensitive Protective Equipment Part 1 General Requirements and Tests
7.	IS 16936 : 2018/ IEC TR 62513 : 2008	Safety of Machinery Guidelines for the Use of Communication Systems in Safety Related Applications
8.	IS 16503 (Part 2) : 2017/ IEC 61310-2 : 2007	Safety of Machinery - Indication Marking and Actuation Part 2 Requirements for Marking
9.	IS 16807 : 2018/ ISO 19353 : 2015	Safety of Machinery Fire Prevention and Fire Protection
10.	IS 16808 : 2018/ ISO 14159 : 2002	Safety of Machinery Hygiene Requirements for the Design of Machinery
11.	IS 16809 (Part 1) : 2018/ ISO 14122-1 : 2016	Safety of Machinery Permanent Means of Access to Machinery Part 1 Choice of Fixed Means and General Requirements of Access
12.	IS 16809 (Part 2) : 2018/ ISO 14122-2 : 2016	Safety of Machinery Permanent Means of Access to Machinery Part 2 Working Platforms and Walkways
13.	IS 16809 (Part 3) : 2018/ ISO 14122-3 : 2016	Safety of Machinery Permanent Means of Access to Machinery Part 3 Stairs Stepladders and Guard-Rails
14.	IS 16809 (Part 4) : 2018/ ISO 14122-4 : 2016	Safety of Machinery Permanent Means of Access to Machinery Part 4 Fixed Ladders
15.	IS 16810 (Part 1) : 2018/ ISO 13849-1 : 2015	Safety of Machinery Safety Related Parts of Control Systems Part 1 General Principles for Design
16.	IS 16810 (Part 2) : 2018/ ISO 13849-2 : 2012	Safety of Machinery Safety Related Parts of Control Systems Part 2 Validation
17.	IS 16811 : 2018/ 14210 : 2015	Safety of Machinery Guards General Requirements for the Design and Construction of Fixed and Movable Guards

18.	IS 16812 : 2018/ ISO 14119 : 2013	Safety of Machinery Interlocking Devices Associated with Guards Principles for Design and Selection
19.	IS 16813 : 2019/ ISO 14118 : 2017	Safety of Machinery Prevention of Unexpected Start-Up
20.	IS 16814 : 2018/ ISO 13857 : 2008	Safety of Machinery Safety Distances to Prevent Hazard Zones Being Reached by Upper and Lower Limbs
21.	IS 16815 : 2019/ ISO 13855 : 2010	Safety of Machinery Positioning of Safeguards with Respect to the Approach Speeds of Parts of the Human Body
22.	IS 16816 : 2019/ ISO 13854 : 2017	Safety of Machinery Minimum Gaps to Avoid Crushing of Parts of the Human Body
23.	IS 16817 : 2018/ ISO 13851 : 2002	Safety of Machinery Two-Hand Control Devices Functional Aspects and Design Principles
24.	IS 16818 : 2018/ ISO 13850 : 2015	Safety of Machinery Emergency Stop Function Principles for Design
25.	IS 16912 : 2018/ ISO 21469 : 2006	Safety of Machinery Lubricants with Incidental Product Contact Hygiene Requirements
26.	IS 16834 (Part 1) : 2018/ ISO 14123-1 : 2015	Safety of machinery - Reduction of risks to health resulting from hazardous substances emitted by machinery - Part 1: Principles and specifications for machinery manufacturers
27.	IS 16834 (Part 2) : 2018/ ISO 14123-2 : 2015	Safety of machinery - Reduction of risks to health resulting from hazardous substances emitted by machinery - Part 2: Methodology leading to verification procedures
28.	IS 16835 (Part 1) : 2018/ ISO 13856-1 : 2013	Safety of machinery - Pressure-sensitive protective devices - Part 1: General principles for design and testing of pressure-sensitive mats and pressure-sensitive floors
29.	IS 16835 (Part 2) : 2018/ ISO 13856-2 : 2013	Safety of machinery - Pressure-sensitive protective devices - Part 2: General principles for design and testing of pressure-sensitive edges and pressure-sensitive bars
30.	IS 16835 (Part 3) : 2018/ ISO 13856-3 : 2013	Safety of machinery - Pressure-sensitive protective devices - Part 3: General principles for design and testing of pressure-sensitive bumpers, plates, wires and similar devices.
31.	IS 16569: 2018/ ISO 11429	Ergonomics- System of Auditory and Visual Danger and Information Signals
32.	IS 16563 (Part 2) : 2017/ ISO 9355-2	Ergonomic Requirements for the Design of Displays and Control Actuators Part 2 Displays
33.	IS 16563 (Part 3) 2017 / ISO 9355-3	Ergonomic Requirements for the Design of Displays and Control Actuators Part 3 Control Actuators
34.	IS 16572 : 2017/ ISO 14738 : 2002	Safety of Machinery - Anthropometric Requirements for the Design of Workstations at Machinery
35.	IS 16562 (Part 1) : 2017/ ISO 15536-1 : 2005	Ergonomics - Computer Manikins and Body Templates Part 1 General Requirements

Annexure-II

TYPE C (Machine Safety Standards – dealing with detailed safety requirements for a particular machine or group of machines)		
Sl. No.	IS Number	Title
1.	IS 15666 (Part 9) : 2006/ ISO 3977-9	Gas turbines - Procurements Part 9 Reliability availability maintainability and safety
2.	IS/IEC 61558 (Part 1) : 1997	Safety of power transformers power supply units and similar Part 1 General requirements and tests
3.	IS/IEC 61558 (Part 2/Sec 6) : 1997	Safety of Power Transformers Power Supply Units and Similar-Part2ParticularRequirements-Section6Safety Isolating Transformers for General Use
4.	IS/IEC 61558 (Part 2/ Sec 7) : 2007	Safety of power transformers power supplies reactors and similar products Part 2-7 Particular requirements and tests for transformers and power supplies for toys
5.	IS 15561 : 2005	Sugarcane crushers - Safety requirements
6.	IS 16678 (Part 2) : 2018 ISO 5149-2 : 2014	Refrigerating Systems and Heat Pumps - Safety and Environmental Requirements Part 2 Design Construction Testing Marking and Documentation
7.	IS 16678 (Part 3) : 2018 ISO 5149-3 : 2014	Refrigerating Systems and Heat Pumps - Safetyand Environmental Requirements Part 3 Installation Site
8.	IS 16678 (Part 4) : 2018 ISO 5149-4 : 2014	Refrigerating Systems and Heat Pumps - Safety and Environmental Requirements Part 4 Operation Maintenance Repair and Recovery
9.	IS/ISO 13105 (Part 2) : 2014	Building Construction Machinery and Equipment- Machinery for Concrete Surface Floating andFinishing Part 2 Safety Requirements and Verification
10.	IS/ISO 15442 : 2012	Cranes - Safety Requirements for Loader Cranes
11.	IS/ISO 19432 : 2012	Building Construction Machinery and Equipment- PortableHang-heldInternalCombustionEngineDriven Cut-off Machines- Safety Requirements
12.	IS/ISO 21873 (Part 2) : 2009	Building Construction Machinery and Equipment- Mobile Crushers Part 2 Safety Requirements
13.	IS 17055 (Part 1) : 2018	Earth-Moving Machinery Safety Part 1 General Requirements
14.	IS 17055 (Part 2):2019/ISO 20474-2:2017	Earth-Moving Machinery Safety Part 2 Requirements for Dozers
15.	IS 17055 (Part 3) : 2018	Earth-Moving Machinery Safety Part 3 Requirements for Loaders
16.	IS 17055 (Part 2):2019/ISO 20474-2:2017	Earth-moving Machinery safety--Part 4 Requirements For Backhoe Loaders
17.	IS 17055 (Part 5) : 2018	Earth-Moving Machinery Safety Part 5 Requirements for Hydraulic Excavators

18.	IS 17055 (Part 6):2019/ ISO 20474-6:2017	Earth-Moving Machinery Safety Part 6 Requirements for Dumpers
19.	IS 17055 (Part 7):2019/ ISO 20474-7:2017	Earth-Moving Machinery - Safety Part 7 Requirements for Scrapers
20.	IS 17055 (Part 8):2019/ ISO 20474-8:2017	Earth-Moving Machinery - Safety Part 8 Requirements for Graders
21.	IS 17055 (Part 9):2019/ ISO 20474-9:2017	Earth-Moving Machinery - Safety Part 9 Requirements for Pipe layers
22.	IS 17055 (Part 10):2019/ ISO 20474-10:2017	Earth-Moving Machinery - Safety Part 10 Requirements for Trenchers
23.	IS 17055 (Part 11):2019/ ISO 20474-11:2017	Earth-Moving Machinery - Safety Part 11 Requirements for Earth and Landfill Compactors
24.	IS 17055 (Part 12):2019/ ISO 20474-12:2017	Earth-Moving Machinery - Safety Part 12 Requirements for Cable Excavators
25.	IS 10689 : 1993/ ISO 2860:1992	Earth moving machinery - Minimum access dimensions
26.	IS 16191: 2014	Safety for Oil Fired Furnaces
27.	IS 14530 (Part 1) : 2019/ISO 10218-1: 2011	Robots and Robotic Devices — Safety Requirements for Industrial Robots Part 1 Robots
28.	IS 14530 (Part 2) : 2019/ISO 10218-2 : 2011	Robots and Robotic Devices — Safety Requirements for Industrial Robots Part 2 Robot Systems and Integration
29.	IS 16608: 2018/ ISO 13482: 2014	Robots and Robotic Devices — Safety Requirements for Personal Care Robots
30.	IS 17361 (Part 1) : 2020 ISO 11111-1 : 2016	Textile Machinery — Safety Requirements Part 1 Common Requirements
31.	IS 17361 (Part 6) : 2020 ISO 11111-6 : 2005	Textile Machinery — Safety Requirements Part 6 Fabric Manufacturing Machinery
32.	IS 17277 (Part 1) : 2019	Machine Tools Safety — Presses Part 1 General Safety Requirements
33.	IS 17259 : 2020	Machine Tools — Safety — Electro-Discharge Machines
34.	IS 17258 : 2019	Machine Tools — Safety — Turning Machines

35.	IS 17254 : 2019	Machine Tools — Safety — Sawing Machines for Cold Metal
36.	IS 17253 (Part 1) : 2019	Machine Tools Safety — Machining Centres, Milling Machines, Transfer Machines Part 1 Safety Requirements
37.	IS/IEC 61558-2-4 : 2009	Safety of Power transformers, reactors, power supply units and similar products for supply voltages up to 1100 V - Part 2-4 Particular requirements and tests for isolating transformers and power supply units incorporating isolating transformers