### **BUREAU OF INDIAN STANDARDS**

### **Program of Work**

### **ETD 15: Rotating Machinery**

Scope: To prepare standards on rotating electrical machines like induction, synchronous, motors,

generators, dc machines and turbines including carbon brushes for electrical machines (with the exception of traction machines and rotating machinery coming under the purview of other

Committees)

Liaison: **IEC TC-116 (O):** Safety of motor-operated electric tools **IEC TC-2 (P):** Rotating machinery

### **Published Standards**

S.No	IS No.	TITLE	Reaffirm M-Y	No. of Amds	Eqv.
1	IS 11537 : 1985	Specification for centrifugal switch	TOMITIM IVI I	-	Indigenous
		for single - Phase induction motors			2220-80220
2	IS 12065 : 1987	Permissible limits of noise levels	March, 2019	1	Modified/Technically
	IEC 60034-9	for rotating electrical machines			Equivalent
	Reviewed In: 2019	-			
3	IS 12075 : 2008	Mechanical vibration of rotating	July, 2018	-	Modified/Technically
	Reviewed In: 2018	electrical machines with shaft			Equivalent
	IEC 60034-14	heights 56 mm and higher -			
	(1982)	Measurement, evaluation and limits			
		of vibration severity (First			
		Revision)			
4	IS 1231 : 2019	Dimensions and Output Series of	-	-	Modified/Technically
		Foot Mounted Induction Motors —			Equivalent
	IEC 60072	Frame Numbers 56 to 315 L (			
		Fourth Revision )			
5	IS 12615 : 2018	Line operated three phase AC	-	1	Modified/Technically
		motors (IE Code) "Efficiency			Equivalent
	IEC 60034-30-1:	classes and performance			
	2014	specification" (Third Revision)			
6		Brush - Holders for slip rings group	March, 2019	-	Modified/Technically
	IEC 60778	R, type RA - Specification			Equivalent
	Reviewed In: 2019				
	Reaffirmed but not				
	taken up for revision				
	IEC Report 778 (				
<u> </u>	198-I )				X1 2 1 1 1 1
7	IS 12998 : 2024	Acoustics Test Code for the		-	Identical under dual
	1680	Measurement of Airborne Noise			numbering
	1680	Emitted by Rotating Electrical			
8	IC 12264 (Dont 1)	Machines			Modified/Technically
8	IS 13364 (Part 1): 1992	Ac generators driven by		-	
	1992 IEC 60034-1	reciprocating internal combustion engines - Specification: Part 1			Equivalent
	Reviewed In : 2018				
9	IS 13364 (Part 2):	alternators rated up to 20 kVa		1	Modified/Technically
9	15 15504 (Pait 2):	Ac generators driven by		1	wiodified/fecilifically
I				1	

	1				•
	1992	reciprocating internal combustion			Equivalent
	IEC 60341	engines - Specification: Part 2			
		alternators rated above 20 kVa and			
	IEC : Pub 34-1- 1983	up to 1250 kVa			
	IS 4722 : 1968 BS				
	5000 Part 99-1974 (				
	1981 ) ANSI C50.				
	IO- 1977. NEMA				
	MG 1.22-1				
10	IS 13466 : 1992	Brushes for electrical machines -		-	Modified/Technically
	IEC 60136, 467, 773	Specification			Equivalent
	Reviewed In: 2019				
	Reaffirmed but not				
	taken up for revision				
	iec Pub 136 ( 1986				
	Pub 467 ( 1974 )				
	IEC Pub 773 ( 1983				
	)				
11	IS 13525 : 1992	Flexible conductors for carbon		-	Modified/Technically
	Reviewed In: 2019	brushes - Specification			Equivalent
	JIS C 2802 : 1970				
12	IS 13529 : 2021	ROTATING ELECTRICAL		-	Modified/Technically
	IEC 60034-26 : 2006	MACHINES PART 26 EFFECTS			Equivalent
	60034-26:2006	OF UNBALANCED VOLTAGES			
		ON THE PERFORMANCE OF			
		THREE-PHASE CAGE			
		INDUCTION MOTORS			
13	IS 13555 : 1993	Guide for selection and appltcation	March, 2019	-	Indigenous
	Reviewed In: 2019	of 3 - Phase AC induction motors			
		for different types of driven			
		equipment			
14	IS 13584 : 1993	Brush materials for electrical	March, 2019	-	Modified/Technically
	IEC 413	machinery - Specification			Equivalent
	Reviewed In: 2019				
	IEC -Pub 413: 1972				
	, IEC Pub 773: 1983				
15	IS 13586 : 2023	Carbon Brushes Brush Holders		-	Identical under dual
	60276: 2018	Commutators and Slip-Rings			numbering
	60276: 2018	Definitions and Nomenclature			
16	IS 13937 (Part 1):	Statistical methods of determining	November, 2022	-	Identical under dual
	1994	and verifying stated noise emission			numbering
	ISO 7574-1	values of machinery and			
	Reviewed In: 2022	equipment: Part 1 general			
	ISO 7574/1	considerations and definitions			
17	IS 13937 (Part 2):	Statistical methods of determining		-	Identical under dual
	1994	and verifying stated noise emission			numbering
	ISO 7574-2	values of machinery and			
	Reviewed In: 2017	equipment: Part 2 methods for			
	ISO 7574/2	stated values for individual			
		machines			
18	IS 13937 (Part 3):	Statistical methods for determining	November, 2022	-	Identical under dual
		and verifying stated noise emission			numbering
	ISO 7574-3	values of machinery and			
	Reviewed In: 2022	equipment: Part 3 simple			
	ISO 7574/3	(Transition) method for stated			
		values for batches of machines			
19	IS 13937 (Part 4):	Statistical methods of determining	November, 2022	-	Identical under dual
	1994	and verifying stated noise emission			numbering
I	I	l		1	

ı	150 7574 4			I	1
	ISO 7574-4 Reviewed In : 2022	values of machinery and equipment: Part 4 methods for			
	ISO 7574/4	stated values for batches of			
	150 /5/4/4	machines			
20	IS 14195 : 1994	Brush - Holders for electrical		_	Identical under dual
	IEC 61015	machines - Guide to the			numbering
	Reviewed In: 2017	measurement of the static thurst			
	IECPub 1015: 1990	applied to brushes			
	Z				
21	IS 14196 : 1994	Definitions and terminology of	March, 2023	-	Identical under dual
IEC 560 brush holders for electrical Reviewed In: 2023 machines		numbering			
		machines			
	IEC Pub 560 : 1977				
22	IS 14197 : 2023	Hydraulic Turbines Storage Pumps		-	Identical under dual
	60193: 2019	and Pump-Turbines - Model			numbering
23	60193: 2019 IS 14376 : 1996	Acceptance Tests Brush holders for electrical			Modified/Technically
23	IEC 136	machines - Specification		-	Equivalent
	Reviewed In: 2017	machines - Specification			Equivalent
	Reaffirmed but not				
	taken up for revision				
	IEC Pub 136 (IY86)				
24	IS 14377 : 1996	Specification for three - Phase		-	Modified/Technically
	Reviewed In: 2017	induction motors for fans used in			Equivalent
	IEEMA 8:1987	air - Conditioning and ventilation			-
25	IS 14568 (Part 2):	Dimensions and output series for	November, 2022	-	Identical under dual
	1998	rotating electrical machines: Part 2			numbering
	IEC 72-2	frame numbers 355 to 1000 and			
	Reviewed In: 2022	flange numbers 1180 to 2360			
26	IEC 72-2 ( 1990 )				Y 11
26	IS 14569 : 1999	Commutators for electrical		=	Indigenous
	Reviewed In: 2019 Reaffirmed but not	machines - Specification			
	taken up for revision				
	laken up for fevision				
27	IS 14578 : 1999	Three - Phase induction motors for	March, 2019	1	Indigenous
	Reviewed In: 2019	use in nuclear power plants -	,		
	Reaffirmed but not				
	taken up for revision	_			
28	IS 14582 : 2021	Single-phase small ac electric		-	Indigenous
		motors for centrifugal pumps for			
		agricultural applications			
29	IS 14889 : 2000	Copper tamping powder for carbon	December, 2015	-	Indigenous
20	Reviewed In : 2015	brushes - Specification Storage, installation and			Indianassa
30	IS 15429 : 2004 Reviewed In : 2019	maintenance of DC motors - Code		-	Indigenous
	Keviewed III: 2019	of practice			
31	IS 15880 : 2009	Three phase cage induction motors		_	Identical under dual
	Reviewed In: 2019	when fed from IGBT converters -			numbering
	IEC 60034-17	Application guide			
32	IS 15881 : 2009	Three phase cage induction motors	June, 2019	-	Indigenous
	Reviewed In: 2019	specifically designed for IGBT	•		
		converter supply - Specification			<u> </u>
33	IS 15999 (Part 7):	ROTATING ELECTRICAL		-	Identical under dual
	2024	MACHINES Part 7: Classification			numbering
	IEC 60034-7:2020	of types of construction mounting			
	60034-7	arrangements and terminal box			
		position (IM Code) (Second			
		•			·

I	<b> </b>	Revision)	]	 	
34	IS 15999 (Part 1):	Rotating electrical machines - Part		-	Identical under dual
-	2021	1 : Rating and performance			numbering
	IEC 60034-1: 2017	8			
	IEC 60034-1: 2017				
35		Rotating Electrical Machines Part		-	Identical under dual
	1): 2023	2-1: Standard Methods for			numbering
	60034-2-1	Determining Losses and Efficiency			
	60034-2-1	from Tests Excluding Machines for			
		Traction Vehicles			
36	IS 15999 (Part 3):	ROTATING ELECTRICAL		-	Identical under dual
	2023	MACHINES Part 3: Specific			numbering
	60034-3	requirements for synchronous			
	60034-3	generators driven by steam turbines			
		or combustion gas turbines and for			
		synchronous compensators first			
		revision			
37	IS 15999 (Part 4/Sec			-	Identical under dual
	1):2023	MACHINES Part 4 Electrically			numbering
	60034-4-1	excited synchronous machine			
	60034-4-1	quantities Section 1 Test methods			
20	IC 15000 (D. + 15)	first revision			Tdam#1:-11 1 1 1
38	IS 15999 (Part 15): 2017	Rotating Electrical Machines Part		-	Identical under dual
		15 Impulse Voltage Withstand			numbering
	IEC 60034-15 : 2009				
	IEC 60034-15 : 2009	Coils for Rotating ac Machines			
39	IS 15999 (Part	Rotating electrical machines: Part			Identical under dual
39	18/Sec 41) : 2018	18 partial discharge free electrical		-	numbering
	· ·	insulation systems (Type I) used in			numbering
	2014	rotating electrical machines fed			
	IEC 60034-18-41:	from voltage converters Sec 41			
	201	qualification and quality control			
	201	tests			
40	IS 15999 (Part	Rotating Electrical Machines Part		-	Identical under dual
	18/Sec 42): 2018	18 Partial Discharge Free			numbering
	,	Electrical Insulation Systems (Type			C
	2014	I) Used in Rotating Electrical			
	IEc 60034-18-42:	Machines Fed From Voltage			
	20	Converters Section 41			
		Qualification and quality control			
		tests			
41	IS 15999 (Part	Rotating Electrical Machines Part		-	Identical under dual
	20/Sec 1): 2023	20-1: Control Motors Stepping			numbering
	60034-20-1: 2002	Motors			
	60034-20-1: 2002				
42	IS 15999 (Part 26):	Rotating Electrical Machines Part		-	Identical under dual
	2016	26 Effects of Unbalanced Voltages			numbering
	IEC 60034-26 : 2006				
	IEC 60034-26 :	Phase Cage Induction Motors			
42	2006	Dimensions of flance asserted A.C.		2	Modified/Taskerias11-
43	IS 2223 : 1983	Dimensions of flange mounted AC		2	Modified/Technically
	IEC 60072 Reviewed In: 2017	induction motors			Equivalent
	IEC Pub 72 (1971)				
44	IS 2253 : 1974	Designations for types of			Identical under dual
44	IS 2253: 1974 IEC 34-7	construction and mounting		-	numbering
	Reviewed In: 2017	arrangements of rotating electrical			numbering
	60034-7	machines (First Revision)			
$\vdash$	500517	indennies (1 iist itevision)			

45	IS 2254 : 1985	Dimensions of vertical shaft		I	Identical under dual
43	Reviewed In : 2017	motors for pumps (Second		_	numbering
	Reviewed III . 2017	Revision)			numbering
46	IS 2968 : 1964	Dimensions of slide rails for		1	Identical under dual
40	Reviewed In : 2017	electric motors		1	numbering
	Reaffirmed but not	electric motors			numbering
	taken up for revision				
47	DIN 42923			<del> </del>	T 1'
47	IS 2972 (Part 1):	Specification for textile motors:		2	Indigenous
		Part 1 loom motors (First Revision)			
	Reviewed In: 2017				
	Reaffirmed but not				
	taken up for revision				
	70.000.00	a 101 1 0 H		<del> </del>	
48	IS 2972 (Part 2):	Specification for textile motors:		1	Indigenous
		Part 2 card motors (First Revision)			
	Reviewed In: 2017				
	Reaffirmed but not				
	taken up for revision				
49	IS 4029 : 2010	Guide for testing three phase	March, 2016	-	Indigenous
	Reviewed In: 2016	induction motors (First Revision)			
50	IS 4665 (Part 1):	Hand-Held Motor-Operated		-	Identical under dual
	2023	Electric Tools Safety Part 1:			numbering
	60745-1: 2006	General requirements Second			
	60745-1: 2006	Revision			
51	IS 4665 (Part 2/Sec	Hand-Held Motor-Operated		-	Identical under dual
	1): 2023	Electric Tools Safety Part 2			numbering
	60745-2-1	Particular requirements Section 1			numeting.
	60745-2-1	drills and impact drills			
52	IS 4665 (Part 2/Sec	Hand-held motor-operated electric		<del>-</del>	Identical under dual
32	2): 2023	tools - Safety - Part 2 Particular			numbering
	60745-2-2	requirements Section 2			numbering
	60745-2-2	screwdrivers and impact wrenches			
53		Hand-held motor-operated electric		+	Identical under dual
33	3): 2023	-		_	
	60745-2-3	tools - Safety Part 2 Particular requirements Section 3 grinders			numbering
		1			
<i>7</i> 1	60745-2-3	polishers and disk-type sanders		<del> </del>	X1 2 1 1 1 1
54	IS 4665 (Part 2/Sec	Hand-Held Motor-Operated		-	Identical under dual
	5): 2023	Electric Tools Safety Part 2			numbering
	60745-2-5	Particular Requirements Section 5			
	60745-2-5	Circular Saws		<del>                                     </del>	
55	IS 4665 (Part 2/Sec	Hand-Held Motor-Operated		-	Identical under dual
	6): 2023	Electric Tools - Safety Part 2			numbering
	60745-2-6	Particular Requirements Section 6			
	60745-2-6	Hammers		<del> </del>	
56	IS 4665 (Part 2/Sec	Safety of Hand-Held Motor-		-	Identical under dual
	7): 2023	Operated Electric Tools Part 2			numbering
	60745-2-7	Particular Requirements Section 7			
	60745-2-7	Spray Guns for Non-Flammable			
		Liquids		<u> </u>	
57	IS 4758 : 1968	Methods of measurement of noise		-	Modified/Technically
	ISO/R 495	emitted by machines			Equivalent
	Reviewed In: 2017	·			1
	ISO				
	Recommendation				
	495				
58	IS 5422 : 1996	Turbine type generators -		-	Modified/Technically
2.0					
	IEC 60034-3	Specification (First Revision)			Equivalent

ĺ	Reviewed In: 2017				
	IEC Pub 34-3 (1988)				
59		Rotating electrical machines: Part 5	May, 2018	-	Identical under single
	2000	degrees of protection provided by			numbering
	Reviewed In: 2018	the integral design of rotating			
	IEC 60034 : PART 5	electrical machines (IP Code) - Classification			
60	IS/IEC 60034-8:	Rotating Electrical Machines Part 8	August, 2018	-	Identical under single
	2014	Terminal Markings and Direction			numbering
	IEC 60034-8 : 2014	of Rotation (Third Revision)			
	Reviewed In: 2018				
(1	IEC 60034-8: 2014	Deci El el IX II De			T1 (1 1 1 1 1
61	IS/IEC 60034-27-4) : 2018	C		-	Identical under single
	EC 60034-27-4 :	27 Winding Insulation of Rotating Electrical Machines Section 4			numbering
	2018	Measurement of insulation			
	IEC 60034-27-4	resistance and polarization index			
62	IS 6362 : 1995	Designation of methods of cooling	November, 2022	_	Identical under dual
02	IEC 34-6	of rotating electrical machines	11010111001, 2022		numbering
	Reviewed In: 2022	C			
	IEC Pub 34-6: 1991				
	zy				
63	IS 7538 : 1996	Three - Phase squirrel cage		3	Indigenous
	Reviewed In: 2017	induction motors for centrifugal			
		pumps for agricultural application -			
		Specification (First Revision)			
64	IS 7572 : 1974	Guide for testing single - Phase AC		-	Modified/Technically
	Reviewed In : 2017	and universal motors			Equivalent
	IS: 4029-1967 AIEE Publication IEEE	1			
	No 114-19.58				
	NEMA Standard				
	M.G. 1				
65	IS 8151 : 1976	Specification for single - Speed		2	Modified/Technically
	Reviewed In: 2017	three - Phase induction motors for			Equivalent
	BS 2655 : Part 2.	driving lifts			
	1959				
66	IS 8223 : 1999	Dimensions and output series for	November, 2022	-	Identical under dual
	IEC 60072 -2	rotating electrical machines (First			numbering
	Reviewed In : 2022	Revision)			
67	IEC 60072-2 (1990)				Indiannous
0/	IS 8789 : 2021	Values of performance characteristics for three-phase		-	Indigenous
		induction motors with degree of			
		protection 2X			
68	IS 900 : 2019	Code of Practice for Storage,		-	Indigenous
		Installation and Maintenance of			
		Induction Motors (Third Revision			
		)			
69	IS 9283 : 2013	Motors for submersible pumpsets -	May, 2018	-	Indigenous
<u></u>	Reviewed In: 2018	Specification (Second Revision)			No. 1101 1777 1 1 1 1 1
70	IS 9320 : 1979	Guide for testing direct - Current	March, 2017	1	Modified/Technically
	Reviewed In: 2017 GOST: 183-1966	(DC) machines			Equivalent
	Electric machinery				
	general technical				
	requirements. Union				
	of Soviet Socialist				
	Republi				
	· · ·	1		i	1

71	IS 9582 (Part 1): 1980 Reviewed In: 2018	Specification for single - Phase electric motors for definite purposes: Part 1 domestic laundry machine motors	March, 2018	1	Indigenous
72	IS 9670 : 1980 Reviewed In : 2019	Specification for direct current micromotor for cassette tape recorders and other applications	March, 2019	-	Indigenous
73	IS 9919: 1999 Reviewed In: 2018 Reaffirmed but not taken up for revision	rotating machines (First Revision)	February, 2018	-	Indigenous
74	IS 996 : 2009 Reviewed In : 2019 IEC 34-1 (1969 BS 170: 1962 JIS 4203-1973 BS 1608 : 1966	Single phase a.c. induction motors for general purpose (Third Revision)		2	Identical under dual numbering

# **Standards under Development**

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

	Preliminary Draft Standards	
SI. No.	Doc No.	Title
1	ETD 15 (26175) Revision	Guide for testing direct - Current DC machines
	of: IS 9320:1979	

	Drafts Standards in WC Stage		
SI. No.	Doc No.	Title	
1	ETD 15 (25587) Revision	Rotating Electrical Machines Part 9 Noise Limits	
	of: IS 12065:1987		
2	ETD 15 (25598) Revision	SINGLE PHASE ac INDUCTION MOTORS FOR GENERAL PURPOSE	
	of: IS 996:2009		
3	ETD 15 (25628)	Rotating electrical machines - Part 23 Repair overhaul and reclamation	
4	ETD 15 (25631) Revision	Rotating electrical machines - Part 1 Rating and performance	
	of: IS 15999:2021		
5	ETD 15 (25633) Revision	Rotating electrical machines - Part 2-1 Standard methods for determining losses and efficiency	
	of: IS 15999:2023	from tests excluding machines for traction vehicles	
6	ETD 15 (25634) Revision	Rotating electrical machines - Part 5 Degrees of protection provided by the integral design of	
	of: IS/IEC 60034:2000	rotating electrical machines IP code - Classification	
7	ETD 15 (25957)	Line operated three phase AC motors IE Code 34 Efficiency classes and performance	
		specification 34 Third Revision Amendment - 2	

	Draft Standards Completed WC Stage		
SI. No.	Doc No.	Title	
1	ETD 15 (17922)	LINE OPERATED A C MOTORS FOR SUBMERSIBLE PUMPSETS-SPECIFICATION	
		THIRD REVISION	

		Finalized Draft Indian Standard
Γ		

SI. No.	Doc No.	Title	
	No Records Found		

Finalized Draft Indian Standards under Print		
SI. No.	Doc No.	Title
1	ETD 15 (21497) Revision	Single-Speed Three-Phase Induction Motors for Driving Lifts Specification Second Revision
	of: IS 8151:1976	
2	ETD 15 (23815) Revision	Mechanical Vibration of Rotating Electrical Machines with Shaft Heights 56 Mm and Higher -
	of: IS 12075:2008	Measurement Evaluation and Limits of Vibration Severity Second Revision

#### Total Published Standards:71 Total Standards Under development:11

### **Aspect Wise Report**

Product: 34
Code of Practices: 9
Methods of Test: 14
Terminology: 9
Dimensions: 5
System Standard: 0
Safety Standard: 1
Others: 0

Service Specification: 0 Process Specification: 0 Unclassified: 0

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

SI. No.	IS No. & Year	Title
1	IS 10534 : 1983	Method of measurement of airborne noise emitted by gas turbine installations
	ISO/DIS 6190	
	Reviewed In:	
	2017 ISO/DIS 6190	
2	IS 12066 : 1987	Specification for three - Phase induction motors for machine tools
	Reviewed In: 2019 IEMA:	
	1-1978 IEMA	
3	IS 12615 : 2011	Energy Efficient Induction Motors - Three Phase Squirrel Cage
	Identical	
4	IS 12802 : 1989	Temperature-rise Measurements Of Rotating Electrical Machines
	IEC 34-1	
	Reviewed In: 2009	
5	IS 12824 : 1989	Prelaminated particle boards from wood and other lignocellulosic material - Specification First
	IEC 34-1	Revision
	Reviewed In: 2009	
6	IS 12998 (Part 1): 1991	Methods of measurement of airborne noise emitted by rotating electrical machinery Part 1
	ISO 1680-1	engineering method for free - Field conditions over a reflecting plane
	Reviewed In: 2022 ISO	
	1680/1 :1986	
7	IS 12998 (Part 2): 1991	Methods of measurement of airborne noise emitted by rotating electrical machinery Part 2 survey
	ISO 1680-2	method
	Reviewed In: 2018 ISO	
	1680/2 :1987	
8	IS 13079 : 1991	Stepping motors - Specification
	Reviewed In: 2017 BS	
	5000 : Part 60 : 1982	
9	IS 13107 : 1991	Guide for measurement of winding resistance of an ac machine during operation at alternating
	IEC 279	voltage

1	Reviewed In: 2013	
10	IS 14222 : 1995	Impulse voltage withstand levels of rotating a c machines with form - Wound stator coils
	IEC 3415	
	Reviewed In: 2017 IEC	
1.1	Pub 34-15 : 1990	
11	IS 15999 (Part 4): 2017	Rotating electrical machines Part 4 methods for determining synchronous machine quantities from
	IEC 60034-4 : 2008 IEC 60034-4 : 2008	tests
12	IS 15999 (Part 9) : 2016	Rotating Electrical Machines Part 9 Noise Limits
12	IEC 60034-9 : 2003	Rotating Electrical Machines Fart / Noise Elimits
	IEC 60034-9 : 2007	
13	IS 15999 (Part 14) : 2016	Rotating Electrical Machines Part 14 Mechanical Vibration of Certain Machines with Shaft
	IEC 60034-14:2007	Heights 56 mm and Higher- Measurement Evaluation and Limits of Vibration Severity
14	IS 2972 (Part 3): 1979	Specification for textile motors Part 3 spinning frame motors First Revision
	Reviewed In: 2017	
15	IS 3003 (Part 1): 1977	Carbon brushes for electrical machines Part 1 Definitions and nomenclature
	Reviewed In: 1991	
16	IS 3003 (Part 2): 1977	Carbon brushes for electrical machines Part 2 Test methods for brush materials
17	IS 3003 (Part 3): 1978	Carbon brushes for electrical machines Part 3 Dimensions and requirements
18	IS 3003 (Part 4): 1978	Carbon brushes for electrical machines Part 4 Dimensions of chamfers bevels and terminations
19	IS 325 : 1996	Three-phase Induction Motors
	IEC 60034-1	
	Reviewed In: 2012	
20	IS 3682 : 1966	Flameproof ac motors for use in mines
	Reviewed In: 2017	
21	IS 4665 (Part 2): 1984	Specification for portable electric motor - Operated tools Part 2 specific requirements for tools
	Reviewed In: 2017 CEE	
	Pub 20 II-1975 BS 2769:	
22	1964 IS 4691 : 1985	Rotating electrical Machines Part 5 Degrees of protection provided by enclosure for rotating
22	Reviewed In : 2009	electrical machinery
23	IS 4722 : 2001	Rotating Electrical Machines
	IEC 60034-03	Routing Liberted: Machines
	Reviewed In: 2007	
24	IS 4728 : 1975	Specification for wooden boxes for packaging of apples
	Reviewed In: 2007	
25	IS 4729 : 1975	Measurement and evaluation of vibration of rotating electrical machines
26	IS 4889 : 1968	Methods of determination of efficiency of rotating electrical machines
	IEC 2 D	
	Reviewed In : 2017 IEC	
	document 2D (United	
	Kingdom) 5 Comments	
	from the British Committee	
	on Document 2D	
	(Secretariat)	
27	IS/IEC 60034-1 : 2004	Rotating electrical machines Part 1 Rating and performance
	Reviewed In : 2012 IEC	
28	60034-1 : 2004 IS 7132 : 1973	Guide for testing synchronous machines
28	IEC 60034-1	Guide for testing synchronous machines
	Reviewed In : 2017 IEC	
	Pub 34-1 ( 1969 ) IEC Pub	
	344 ( 1967 ) IEEE	
	115-1965	
	1	

29	IS 7306: 1974	Methods for determining synchronous machine quantities from tests
	EC 60034-4	
	Reviewed In: 2017 IEC	
	Publication 34-4 (1967)	
	Rotating electrical	
	machines, Part 4: Methods	
	for determining synchrono	
30	IS 7816 : 1975	Guide for testing insulation resistance of rotating machines
	Reviewed In: 2017 IEEE	
	Code No. 43	
31	IS 9628 : 1980	Three-phase induction motors with type of protection n
	Reviewed In: 2019 BS	
	5000 : Part 16 : 1972	

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

SI. No.	IS No. & Year	Title
1	IS 11537 : 1985	Specification for centrifugal switch for single - Phase induction motors
	Reviewed In: 2017	
2	IS 12642 : 1989	Brush - Holders for slip rings group R type RA - Specification
	IEC 60778	
	Reviewed In: 2019	
	Reaffirmed but not taken up	
	for revision IEC Report 778	
	( 198-I )	
3	IS 13364 (Part 1): 1992	Ac generators driven by reciprocating internal combustion engines - Specification Part 1
	IEC 60034-1	alternators rated up to 20 kVa
	Reviewed In: 2018	
4	IS 13364 (Part 2): 1992	Ac generators driven by reciprocating internal combustion engines - Specification Part 2
	IEC 60341	alternators rated above 20 kVa and up to 1250 kVa
	Reviewed In: 2018 IEC:	
	Pub 34-l- 1983 IS 4722 :	
	1968 BS 5000 Part 99-1974	
	( 1981 ) ANSI C50. IO-	
	1977. NEMA MG 1.22-1	
5	IS 13466 : 1992	Brushes for electrical machines - Specification
	IEC 60136, 467, 773	
	Reviewed In: 2019	
	Reaffirmed but not taken up	
	for revision iec Pub 136 (	
	1986 Pub 467 ( 1974 ) IEC	
	Pub 773 ( 1983 )	
6	IS 13525 : 1992	Flexible conductors for carbon brushes - Specification
	Reviewed In: 2019 JIS C	
	2802 : 1970	
7	IS 14195 : 1994	Brush - Holders for electrical machines - Guide to the measurement of the static thurst applied to
	IEC 61015	brushes
	Reviewed In: 2017 IECPub	
	1015: 1990 z	
8	IS 14376 : 1996	Brush holders for electrical machines - Specification
	IEC 136	
	Reviewed In: 2017	
	Reaffirmed but not taken up	
	for revision IEC Pub 136	
0	(lY86)	
9	IS 14377: 1996	Specification for three - Phase induction motors for fans used in air - Conditioning and ventilation
	Reviewed In: 2017 IEEMA	
10	8 : 1987 IS 14569 : 1999	Commutators for alcothical markings. Caracification
10	13 14309 : 1999	Commutators for electrical machines - Specification

1	1	
	Reviewed In: 2019	
	Reaffirmed but not taken up	
	for revision	
11	IS 14578 : 1999	Three - Phase induction motors for use in nuclear power plants - Specification
	Reviewed In: 2019	
	Reaffirmed but not taken up	
	for revision	
12	IS 14582 : 2021	Single-phase small ac electric motors for centrifugal pumps for agricultural applications
	ISO/IEC 39794-1:2019	ometo primo omini no otovito motoro ron comini agai pampo ron agricantara approantono
13	IS 14889 : 2000	Copper tamping powder for carbon brushes - Specification
	Reviewed In : 2015	copper tamping powder for carbon brushes - Specification
14	IS 15881 : 2009	Three phase cage induction motors specifically designed for IGBT converter supply -
14		
1.7	Reviewed In : 2019	Specification Details to the Specific S
15	IS 15999 (Part 1): 2021	Rotating electrical machines - Part 1 Rating and performance
	IEC 60034-1: 2017	
	ISO 26262-10:2018	
16	IS 15999 (Part 3): 2023	ROTATING ELECTRICAL MACHINES Part 3 Specific requirements for synchronous
	60034-3	generators driven by steam turbines or combustion gas turbines and for synchronous compensators
		first revision
17	IS 15999 (Part 20/Sec 1):	Rotating Electrical Machines Part 20-1 Control Motors Stepping Motors
1	2023	
	60034-20-1: 2002	
18	IS 2972 (Part 1): 1979	Specification for textile motors Part 1 loom motors First Revision
	Reviewed In: 2017	Specification for texture motors fact from motors in the recytologic
	Reaffirmed but not taken up	
	for revision	
19	IS 2972 (Part 2) : 1979	Specification for taxtile meters Dort 2 could meters First Davision
19		Specification for textile motors Part 2 card motors First Revision
	Reviewed In: 2017	
	Reaffirmed but not taken up	
	for revision	
20	IS 4665 (Part 1): 2023	Hand-Held Motor-Operated Electric Tools Safety Part 1 General requirements Second Revision
	60745-1: 2006	
21	IS 4665 (Part 2/Sec 1):	Hand-Held Motor-Operated Electric Tools Safety Part 2 Particular requirements Section 1 drills
	2023	and impact drills
	60745-2-1	
22	IS 4665 (Part 2/Sec 2):	Hand-held motor-operated electric tools - Safety - Part 2 Particular requirements Section 2
	2023	screwdrivers and impact wrenches
	60745-2-2	1
23	IS 4665 (Part 2/Sec 3):	Hand-held motor-operated electric tools - Safety Part 2 Particular requirements Section 3 grinders
-	2023	polishers and disk-type sanders
	60745-2-3	ponsilers and disk type sanders
	00743-2-3	
24	IC 4665 (Davit 245 - 5)	Hand Hall Makes On and all Places's Table College Day 2 Days's day Days's second Coast's 5
24	IS 4665 (Part 2/Sec 5):	Hand-Held Motor-Operated Electric Tools Safety Part 2 Particular Requirements Section 5
	2023	Circular Saws
1	60745-2-5	
25	IS 4665 (Part 2/Sec 6):	Hand-Held Motor-Operated Electric Tools - Safety Part 2 Particular Requirements Section 6
1	2023	Hammers
1	60745-2-6	
26	IS 4665 (Part 2/Sec 7):	Safety of Hand-Held Motor-Operated Electric Tools Part 2 Particular Requirements Section 7
1	2023	Spray Guns for Non-Flammable Liquids
1	60745-2-7	·
1		
27	IS 5422 : 1996	Turbine type generators - Specification First Revision
l '		71 6

	IEC 60034-3	
	Reviewed In: 2017 IEC	
	Pub 34-3 (1988)	
28	IS 7538 : 1996	Three - Phase squirrel cage induction motors for centrifugal pumps for agricultural application -
	Reviewed In: 2017	Specification First Revision
29	IS 8151 : 1976	Specification for single - Speed three - Phase induction motors for driving lifts
	Reviewed In: 2017 BS	
	2655 : Part 2 . 1959	
30	IS 8789 : 2021	Values of performance characteristics for three-phase induction motors with degree of protection
	ISO/IEC TS 23167 : 2020	2X
31	IS 9283 : 2013	Motors for submersible pumpsets - Specification Second Revision
	Reviewed In: 2018	
32	IS 9582 (Part 1): 1980	Specification for single - Phase electric motors for definite purposes Part 1 domestic laundry
	Reviewed In: 2018	machine motors
33	IS 9670 : 1980	Specification for direct current micromotor for cassette tape recorders and other applications
	Reviewed In: 2019	
34	IS 996 : 2009	Single phase a c induction motors for general purpose Third Revision
	Reviewed In: 2019 IEC	
	34-1 (1969 BS 170: 1962	
	JIS 4203-1973 BS 1608 :	
	1966	