



**AN ELECTRO-TECHNICAL &
CHEMICAL TESTING
LABORATORY**
**Accredited as per
ISO/IEC 17025:2017**
(Serving Since 2008)



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ACCREDITATIONS, CERTIFICATIONS & RECOGNITION



FDAS
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With ILAC MRA (International Testing Laboratory) Vide Certificate Number TL-101



BSI
Approved

British Standards Institution (BSI) Approved Laboratory BSI Code No.: 256779



BIS
Recognized

Laboratory OSL Code-9177406



ISO 9001:2015
Certified

Quality Management System



ISO 14001:2015
Certified

Environmental Management System



ISO 45001:2018
Certified

Occupational Health and Safety Management System

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Dubai Electricity & Water Authority



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MAIN ELECTRO TECHNICAL AND CHEMICAL TESTING FACILITIES

- 3091 Accredited Tests
- Accredited Test Reports are issued with ILAC-MRA & FDAS logo Signifying International Acceptability of our Test Reports
- 25 Indian Product Standards Recognized by BIS
- Cables up to 66 kVE Including Solar Cables (BIS approved)
- EV Cables
- Transformers up to 33 kVE (BIS Approved)
- New Insulating Oils (BIS Approved) Transformer Oils, Mineral Insulating Oils
- Textile
- Leather
- Toys and Children Products
- Polymer and Electronic Metals
- Specific Migration of Heavy Metals in Food Contact Material
- REACH
- ROHS and Heavy Metals
- Metal Purity and Metal Composition
- Surface Water, Ground Water & Waste Water
- Cordycepin & Adenosine
- ACLT (Accelerated Cable Life Test) & AWTT (Accelerated Water Treeing Test)
- CPR (Construction Product Regulation)



LOCA (Loss of Coolant Accident) Test – Approved by Nuclear Power Corporation of India Limited (NPCIL)



UNIQUE TESTING FACILITIES

S.No.	PRODUCT	SPECIFICATION
1.	ACLT (Accelerated Cable Life Test) AWTT (Accelerated Water Treeing Test)	IEEE 1407
2.	CPR (Construction Product Regulation)	BS EN 50575, BS EN 50399, BS EN 13501-6, BS EN 60754-2 & BS EN 61034-2
3.	66 kVE Cable	IEC 60840 & IS 7098 (Part-3)
4.	Elastomeric Insulated Cables for working voltages upto and including 1100V	IS 9968-1 & IEC 60502-1
5.	Elastomeric Insulated Cables for working voltages from 3.3 kV to 33 KVE	IS 9968-2 & IEC 60502-2
6.	Elastomeric Insulated Flexible Cables For Use In Mines	IS 14494
7.	Oxidation Induction Time (Differential Scanning calorimeter)	ASTM D 3895
8.	Electrical Cables for photovoltaic system (Solar Cables) - Complete type tests	BS EN 50618, IEC 62930 & IS 17293
9.	Thermal Endurance (Cable Service life)	IEC 60216-1 & 2
10.	Covered Conductors for Overhead Lines- Complete type tests including Tracking Index , Slippage, Leakage Current	BS EN 50397-1
11.	Bundled assembled cores for overhead system of rated voltages 0.6/1.0 kV- Complete type tests	NFC 33-209, SANS 6100 & BS 7870-5
12.	Endurance test under Thermal & Mechanical stress	NFC 33-209 & SANS 6100





UNIQUE TESTING FACILITIES

S.No.	PRODUCT	SPECIFICATION
13.	Anti Rodent and Anti Termite test	NPCIL specification I28.KK34.0.0.ET.PM.PR 072/RDSO/SPN/TC/45
14.	Anti Rodent & Anti Termite test	AAI Specification
15.	UV resistance test -XENON	BS EN ISO 4892-2, ASTM G 155, UL 1581 & BS EN 50618
16.	UV resistance test -Fluorescent	BS EN ISO 4892-3 & ASTM G 154
17.	UV Resistance test - XENON - Procedure A & B	IEC 60068-2-5
18.	Toxicity Index Test	NES 713
19.	Dielectric strength retention test	NEMA WC5
20.	Accelerated water absorption test (Electrical)	NEMA WC 70
21.	Toxicity Index test : Qualitative and Quantitative	BS EN 50305
22.	Fluorine content test	IS 17048, IEC 60840 & BS EN 50525-1
23.	Gel content test	ASTM D 2765
24.	Colour Fastness to day light	IS 10810-18
25.	Thermosetting Insulated Fire Survival Cables for Fixed Installation having Low Emission of Smoke and Corrosive Gases when Affected by Fire for Working Voltages upto and including 1100 Vac and 1500 Vdc	IS 17505-1
26.	Elastomeric Insulated Cables with limited circuit integrity when affected by fire.	IS 16246
27.	Water Penetration Test	IEC 60502-2
28.	Ozone Resistance Test	IEC 60811-403
29.	Measurement of Low Level of Helogen Content (Chlorine/Bromine/Fluorine/Iodine)	IEC 60754-3





CIRCUIT INTEGRITY TEST FACILITIES

S.No.	PRODUCT	SPECIFICATION
1	Fire Resistance, Screened, Fixed installation multicore cables	BS 7629 -1
2	Resistance to fire alone (Protocol C), Resistance to fire to with water (Protocol W), Resistance to fire with mechanical shock (Protocol Z)	BS 7846, BS 6387
3	Resistance to Fire with Mechanical Shock and Water Spray	BS 8491
4	Assessment of fire integrity of large diameter power cables with mechanical shock and water (Category F30, F60, FI20)	BS 8491
5	Assessment of fire circuit integrity mechanical shock	IEC 60331-1 (More than 20 mm diameter)
6	Resistance to Fire with Mechanical Shock	IEC 60331-2 (Less than 20 mm diameter)
7	Circuit Integrity Test under Fire with shock at a temperature of at least 830 °C	IEC 60331-3
8	Resistance to Fire Alone at a Flame Temperature of at least 750 °C	IEC 60331-11
9	Circuit integrity test under fire condition	IEC 60331-21
10	Test for electric cables under fire conditions - Circuit Integrity on Electric data Cables	IEC 60331-23
11	Test for electric cables under fire conditions - Circuit Integrity on OFC Cables	IEC 60331-25
12	Resistance to fire alone (Symbol F)	IS 17505-1
13	Resistance to fire and water (Symbol W)	IS 17505-1
14	Resistance to fire and mechanical shock (Symbol S)	IS 17505-1
15	Resistance to fire with direct mechanical impact and water jet assessed in combination FWVS (F -30)	IS 17505-1
16	Resistance to fire with direct mechanical impact and water jet assessed in combination FWVS (F -60)	IS 17505-1
17	Resistance to fire with direct mechanical impact and water jet assessed in combination FWVS (F -120)	IS 17505-1
18	Elastomeric Insulated Cables with limited circuit integrity when affected by fire.	IS 16246





COMPLETE PRODUCT TESTING FACILITIES AS PER INDIAN STANDARDS FOR CABLES AND CONDUCTORS

S.No.	PRODUCT	SPECIFICATION
1	Aluminium Conductors for Overhead Transmission Purposes.	IS 398 (Part 1)
2	Aluminium Conductors for Overhead Transmission Purposes - Aluminium Conductors, galvanized steel-reinforced	IS 398 (Part 2)
3	Aluminium Conductors for overhead transmission purpose (Aluminium Conductors, Aluminized Steel Reinforced)	IS 398 (Part 3)
4	Aluminium Conductors for overhead transmission purpose (Aluminium Alloy Stranded Conductors) [Al.- Magnesium — Silicon Type]	IS 398 (Part 4)
5	Aluminium Conductors — Galvanized Steel — Reinforced for extra high voltage (400 kV & above)	IS 398 (Part 5)
6	Polyvinyl Chloride Insulated unsheathed and sheathed cables/cords with rigid and exible conductor for rated voltages upto and including 1100 V	IS 694
7	PVC Insulated (Heavy Duty) Electric cables for working voltages upto 1100V	IS 1554 (Part 1)
8	PVC Insulated (Heavy Duty) Electric cables for working voltages from 3.3 kV upto and including 11 kV	IS 1554 (Part 2)
9	Flexible Cables for Lifts and other exible Connection (Part 1 Elastomer Insulated Cable)	IS 4289 (Part 1)
10	Paper Covered Aluminium Conductors -Round conductors	IS 6162 (Part 1)
11	Paper Covered Aluminium Conductors -Shaped conductors	IS 6162 (Part 2)
12	Cross Linked Polyethylene Insulated Thermoplastic Sheathed cables for working voltages upto and including 1100V	IS 7098 (Part 1)
13	Cross Linked Polyethylene Insulated Thermoplastic Sheathed cables for working voltages from 3.3 kV upto and including 33 kV	IS 7098 (Part 2)





COMPLETE PRODUCT TESTING FACILITIES AS PER INDIAN STANDARDS FOR CABLES AND CONDUCTORS

S.No.	PRODUCT	SPECIFICATION
14	Cross Linked Polyethylene Insulated Thermoplastic Sheathed cables for working voltages upto 66 kV	IS 7098 (Part 3)
15	Winding Wires for Submersible Motors — Part 4 - Specification for Individual Wires Section 1 - HR PVC Insulated Wires	IS 8783 (Part 4 Sec I)
16	Winding Wires for submersible motors — Part 4 - Specification for individual wires Section 2 - Cross linked Polyethylene Insulated and Polyamide Jacketed Wires	IS 8783 (Part 4 Sec 2)
17	Winding Wires for Submersible Motors — Part 4 - Specification for Individual Wires Section 3 - Polyester and Polypropylene Insulated Winding Wires	IS 8783 (Part 4 Sec 3)
18	Welding Cables	IS 9857
19	Elastomer Insulated Cables for working voltages upto and including 1100V	IS 9968 (Part I)
20	Elastomer Insulated Cables for working voltages from 3.3 kV to 33 kV	IS 9968 (Part 2)
21	Aerial Bunched Cables for working voltages upto and including 1100V	IS 14255
22	Elastomer Insulated Flexible Cables used in Mines	IS 14494
23	Elastomer Insulated Cables with limited circuit integrity when affected by fire.	IS 16246
24	Halogen Free Flame Retardant (HFFR) cables for working voltages upto and including 1100 Volts	IS 17048
25	Electric Cables for Photovoltaic Systems for Rated Voltage 1500V d.c.	IS 17293
26	Specification for Thermosetting Insulated Fire Survival Cables for Fixed Installation having Low Emission of Smoke and Corrosive Gases when Affected by Fire for Working Voltages upto and including 1100Vac and 1500Vdc	IS 17505:Part I





COMPLETE TESTING FACILITIES FOR WASTE WATER

Sr. No.	Specific Test Performed	Test method	Sr. No.	Specific Test Performed	Test method
1	Selenium (as Se)	IS 3025 (Part 56) : 2003: RA 2019 by AAS Method	18	Ammonia (NH ₃)	IS 3025 (Part 34)1988: RA : 2019
2	Aresenic (as As)	IS 3025 (Part 37):2022 by AAS Method	19	Nitrite (AS NO ₂)	APHA 23rd Edition:2017 Method 4500-NO2-B Colorimetric Method
3	Cadmium	IS 3025 (Part 41): RA 2019 by AAS Method	20	Nitrite (AS NO ₃)	IS 3025 (Part 34/Sec 1) : 1988 RA : 2019
4	Chromium (As Cr)	IS 3025 (Part 52) : 2003 RA : 2019 by AAS Method	21	Phosphate (As PO ₄)	IS 3025 (Part 31) : 1988 RA : 2021
5	Copper(Cu)	IS 3025 (Part 42) : 1992 RA : 2019 by AAS Method	22	Oil & Grease	IS 3025 (Part 39)Liquid Liquid partition Gravimetric Method:2021
6	Fluoride (As F)	APHA 23rd Edition:2017 Method 4500-F D (SPANDS Method)	23	pH Value at 25°C	IS 3025 (Part 11) Electrometric Method:2022
7	Iron (As F)	IS 3025 (Part 53) : 2003 (Phenanthroline Method) RA : 2019	24	Specific conductance at 25°C	IS 3025 (Part 14)2013: RA : 2019
8	Lead (As Pb)	IS 3025 (Part 47) : 1994 RA 2019 by AAS Method	25	Phenolic Compounds (as C ₆ H ₅ OH)	IS 3025 (Part 43/Sec 1)1992: RA : 2019
9	Zinc	IS 3025 (Part 49) : 1994 RA : 2019 by AAS Method	26	Residual Chlorine	IS 3025 (Part 26): 2021
10	Manganese (as Mn)	APHA 23rd Edition:2017 Air Acetylene Flame Method 3111 C	27	Sulphate	IS 3025 (Part 24/Sec 1)1986: RA : 2019
11	Mercury (as Hg)	IS 3025 (Part 48) : 1994 RA : 2019 by AAS Method	28	Sulphide (As H ₂ S)	IS 3025 (Part 29)1986: RA : 2019
12	Nickel	IS 3025 (Part 54) : 2003RA : 2019 by AAS Method	29	Total Hardness	IS 3025 (Part 21)2009: RA : 2019
13	Silver (as Ag)	APHA 23rd Edition:2017 Air Acetylene Flame Method 3111 C	30	Total Alkalinity as Calcium Carbonate	IS 3025 (Part 23)1986: RA : 2019
14	Dissolved Oxygen (DO)	IS 3025 (Part 38):1989 : RA 2019	31	Total Dissolved Solids	IS 3025 (Part 16)1984: RA : 2017
15	Biological Oxygen Demand (BOD), 3 days at 27°C	IS 3025 (Part 44):1993: RA 2019	32	Total Solids (Total Residue)	IS 3025 (Part 15)1984: RA : 2019
16	Chemical Oxygen Demand (COD)	IS 3025 (Part 58):2006: RA 2017	33	Total suspended solids (Filterable Residue)	IS 3025 (Part 17):2022
17	Chloride (as Cl)	IS 3025 (Part 32) (Argentometric Method):1988 : RA 2019	34	Turbidity	IS 3025 (Part 10)1984





ADDITIONAL TESTING FACILITIES FOR METALS & ALLOYS AS PER VARIOUS SPECIFICATION

Sr. No.	Product/Material of test	Specific Test Performed	Test method
1	Wrought Aluminium Alloys	Copper,Magnesium,Silicon,Iron, Manganese,Zinc,Chromium,Titanium	IS 11035:1984
2	Aluminium alloy redraw rods	Silicon ,Magnesium,Iron,Copper,Manganese, Chromium, Zinc, Lead,Tin	IS 504-1:2002
3	Plane Carbon & Low Alloy Steel	Aluminium,Arsenic,Boron,Carbon,Chromium,Cobalt,Copper,Manganese Molybdenum, Nickel, Niobium,Phosphorus, Silicon, Sulphur,Tin,Titanium, Vanadium, Zirconium,Nitrogen,Magnesium, Lead,Tungsten, Calcium	IS 8811:1998
4	Austenitic & Ferric Stainless Steel	Aluminium,Arsenic,Boron,Carbon,Chromium,Cobalt,Copper,Manganese Molybdenum, Nickel, Niobium, Phosphorus, Silicon, Sulphur, Tin, Titanium, Vanadium, Zirconium, Nitrogen, Magnesium, Lead, Tungsten, Calcium	IS 9879:1998
5	Cast Iron	Carbon,Manganese,Phosphorous,Sulphur,Silicon, Copper, Chromium, Nickel, Aluminium, Molybdenum, Vanadium	IS 15338:2003
6	Copper & Copper Alloys	Aluminium,Antimony,Arsenic,Cobalt, Iron,Lead, Manganese, Nickel,Phosphorus,Silicon, Sulphur,Tin,Chromium,Silver, Zinc,Cadmium	BS EN 15079
7	Aluminium & Aluminium Alloys	Antimony,Arsenic,Beryllium,Bismuth, Boron,Calcium, Chromium,Cobalt,Copper,Gallium, Iron,Lead,Lithium, Magnesium, Manganese, Nickel, Phosphorus,Silicon, Sodium,Strontium, Tin,Titanium, Vanadium, Zinc,Zirconium	ASTM E1251-17a
8	Austenitic Stainless Steel	Chromium,Nickel,Molybdenum ,Manganese, Silicon,Copper,Carbon,Phosphorous,Sulphur	ASTM E1086:2022
9	Carbon and Low-Alloy Steel	Aluminium,Arsenic,Boron,Carbon,Chromium, Cobalt,Copper, Manganese, Molybdenum, Nickel, Niobium, Phosphorus, Silicon,Sulphur,Tin,Titanium, Vanadium, Zirconium, Nitrogen,Calcium	ASTM E415:2021
10	Cast Iron	Carbon ,Chromium ,Copper,Manganese, Molybdenum,Nickel, Phosphorous ,Silicon, Sulphur,Tin,Titanium,Vanadium	ASTM E1999-2018
11	Painted & Coated metals	Salt Spray Test	ASTM B117: 2019 JIS Z 2371: 2015



Salt Spray Corrosion Test Assembly



**COMPLETE TESTING FACILITIES FOR NATURAL ESTER FLUIDS IN TRANSFORMERS AS PER IS 16899
AND IEEE Std C57.147TM**

Sr. No.	Specific Test Performed	Test method	Sr. No.	Specific Test Performed	Test method
1	Viscosity	IS:1448(Part 25/sec 1):2018 ISO: 3104:2020	25	PCA Content	IP: 346:2004 IS: 16082:2013 IEC: 61619:1997
2	Pour point	IS:1448(Part 10/sec 2):2021 ISO: 3016:2019 ASTM D97-17b	26	Color	ISO: 2049:1996
3	Water Content	IEC:60814: 1997 IS 13567:2018	27	Dielectric breakdown voltage	ASTM D1816-12
4	Breakdown Voltage	IS 6792:2017 IEC 60156:2018	28	Dielectric breakdown voltage, impulse conditions	ASTM D3300-20
5	Density	IS:1448(Part 16):2019 ISO 3675:1998	29	AC loss characteristics—dissipation factor and relative permittivity	ASTM D924 -15
6	Dielectric dissipation factor (DDF)	IS: 6262:2021, IS 16086:2013(RA 2018) IEC: 61620:1998	30	Kinematic viscosity	ASTM D445-21e2
7	Particle Content	IS 13236:2018 IEC:60970: 2007	31	Flash point and fire point—Cleveland Open Cup Method	ASTM D92-18
8	Acidity	IEC:62021-1:2003	32	Relative density(specific gravity)	ASTM D1298-12b
9	Interfacial Tension (IFT)	ASTM D971:2020	33	Volume resistivity secific resistance)	ASTM D1169-19a
10	Total Sulphur content	ISO: 14596:2007 ASTM D4294:2021 ASTM D129:2018	34	Water content—Karl Fischer Method	ASTM D1533-2020
11	Corrosive Sulphur Test	DIN: 51353:2021 ASTM D1275-15	35	Visual examination field test and color)	ASTM D1500-12 ASTM D1524-2022
12	Potentially corrosive Sulphur	IS: 16310:2017 IEC: 62535:2008	36	Gassing of insulating oils under electrical stress and ionization	ASTM D2300-08 (Reapproved 2017)
13	DBDS	IS:16497(Part 1)2017 IEC:62697-1:2012	37	Polychlorinated biphenyls (PCBs)	ASTM D4059-00 (Reapproved 2018)
14	Inhibitors	IS: 13631:2017 IEC: 60666:2010	38	Dielectric dissipation factor (DDF) and resistivity	IEC: 60247: 2004
15	Metal Passivator additives	IS 13631:2017 IEC: 60666:2010	39	Acid Number (Neutralization Number)	ASTM D664-18
16	2-Furfuryl Alcohol(2- Furfural and related compound content)	IS: 15668:2021 IEC: 61198:1993	40	Acid and Base Number by Color indicator Titration	ASTM D974-2021
17	5-Hydroxymethyl-2-Furfural(2-Furfural and related compound content)	IS: 15668:2021 IEC: 61198:1993	41	Dissolved Gas Analysis (Hydrogen,Oxygen,Nitrogen, Carbon Monooxide,Carbon Dioxide,Methane, Ethane,Ethylene,Acetylene)	ASTM D3612-02 (Reapproved 2017)
18	2-Furfural (2-Furfural and related compound content)	IS: 15668:2021 IEC: 61198:1993	41	Dissolved Gas Analysis (Hydrogen,Oxygen,Nitrogen, Carbon Monooxide,Carbon Dioxide,Methane, Ethane,Ethylene,Acetylene)	ASTM D3612-02 (Reapproved 2017)
19	5-Methyl-2-Furfural (2- Furfural and related compound content)	IS: 15668:2021 IEC: 61198:1993			
20	Total acidity After oxidation stability	IS:12422:2017 IEC: 61125:2018			
21	Sludge After oxidation stability	IS:12422:2017 IEC: 61125:2018			
22	DDF at 90°C After oxidation stability	As per 1.9.6 of IS:12422:2017 ,IEC: 61125:2018			
23	Gassing Tendency	IEC: 60628:1985			
24	Flash Point	IS:1448(Part 21):2019 ISO: 2719:2016			





ADDITIONAL TESTING FACILITIES IN CABLES & WIRES

Sr. No.	Product/Material of test	Specific Test Performed	Test method
1	Metallic materials — Tensile testing	Elongation after break , Elongation at break	ISO 6892-1
2	Metallic materials	Torsion Test	ISO 7800
3	Metallic materials	Wrapping Test	ISO 7802
4	Steel wire and wire products	Uniformity of zinc and zinc-aluminiumcoating(or dipping test)	ISO 7989-2
5	measurement of resistivity of metallic material	Resistivity	IEC 60468
6	Electric cables with rated voltages up to and including 450/750 V	Electrical resistance of conductors,Voltage test carried out on completed cables,Voltage test on cores in water,Insulation resistance,Insulation resistance at temperature above 90° C ,Long-term resistance of insulation to direct current,Absence of faults in insulation , Absence of faults in insulation , Spark Test, Voltage Test,Surface resistance of sheath ,Checking of the durability of clours and markings , Measurement of thickness of insulation,Measurement of overall dimensions and ovality,Flexing Test,Static flexing Test,Bending Test,Test for Mechanical properties after air oven ageing of insulation consisting of rubber compound,Test of resistance of sheath to water	IEC 63294
7	Overhead distribution cables of rated voltage U0/U(Um): 0,6/1 (1,2) kV	Testing of mechanical strength of conductors,Testing of adherence of insulation,Thermomechanical behavior of messenge,Bending Test,Resistance of the insulation to weather conditions,Test for capillary water rising,Conductor resistance tests,High voltage tests,Insulation resistance test	HD 626 S1 Part-2
8	Voltage from 3.3kv up to and including 33kv	Longitudinal water Penetration Test	IS 7098-2(RA 2021)
9	Insulating and sheathing materials with drilling fluids resistance properties (test for mud resistance)	Tensile strength,Elongation at break,Volume swelling,Weight change	IEC 60092-360
10	Tesile Properties of Plastice	Tensile strength , Ultimate elongation elongation at break	ASTM D 638
11	AC Loss Characteristics and Permittivity	Dielectric constant	ASTM D 150
12	Dielectric Breakdown Voltage and Dielectric Strength of Solid Electrical Insulating Materials at Commercial Power Frequencies	Dielectric Strength	ASTM D 149





COMPLETE PRODUCT TESTING FACILITIES AS PER BSI AND EUROPEAN STANDARDS FOR CABLES AND CONDUCTORS

S.No.	PRODUCT	SPECIFICATION
1	Thermosetting insulated, armoured cables for voltages of 600/1000V and 1900/3300V for fixed installations	BS 5467
2	PVC Insulated and PVC Sheathed cables for electric power and lighting	BS 6004
3	Rubber or Silicon Rubber insulated exible cables & cords for coils & leads	BS 6195
4	Single core PVC insulated exible cable for switchgear and control gear wiring	BS 6231
5	Armoured Cables with Thermosetting Insulation for rated voltages from 3.8/6.6 kV to 19/33 kV	BS 6622
6	Thermosetting insulated, armoured cables of rated voltages of 600/1000 V and 1900/3300 V for fixed installations, having low emission of smoke and corrosive gases when affected by fire	BS 6724
7	Thermosetting insulated and Thermoplastic Sheathed cables for electric power, lighting and having low emission of smoke and corrosive gases when affected by fire.	BS 7211
8	300/500 V fire resistant screened cables having low emission of smoke and corrosive gases when affected by fire - Part 1: Multicore and multi pair cables	BS 7629-1
9	Insulating and sheathing materials for cables. PVC sheathing compounds	BS 7655-4.2
10	Armoured Cables with Thermosetting Insulation having low emission of smoke and corrosive gases when affected by fire	BS 7835
11	Thermosetting insulated, armoured Fire Resistant cables having low emission of smoke and corrosive gases when affected by fire	BS 7846
12	LV and MV polymeric insulated cables for use by distribution and generation utilities	BS 7870-1
13	LV and MV polymeric insulated cables for use by distribution and generation utilities	BS 7870-2
14	PVC Insulated combined neutral and earth copper wire concentric cables with copper or aluminium conductors	BS 7870-3.10
15	Distribution Cables (Single Core) with extruded insulation of rated voltages of 11 kV to 33 kV	BS 7870-4.10
16	Distribution Cables (Three Core) with extruded insulation of rated voltage of 11 kV to 33 kV	BS 7870-4.20
17	Polymeric insulated aerial bundled conductors (ABC) of rated voltage 0.6/1 kV for overhead distribution	BS 7870-5
18	Single wire armoured and PVC sheathed multicore cable with copper conductors	BS 7870-8.1
19	Single Wire Armoured and PVC Sheathed Multipair Cable with Copper Conductors	BS 7870-8.2
20	Single wire armoured and PVC sheathed multicore cable with copper conductors, having reduced fire propagation performance	BS 7870-8.3
21	Single Wire or double steel tape armoured and PVC Sheathed multipair cable with copper conductors, having reduced fire propagation performance low emission of smoke	BS 7870-8.4
22	Single wire armoured and unarmoured multicore cables with copper conductor and non-halogenated sheath	BS 7870-8.5
23	Single wire or double steel tape armoured and non-halogenated sheathed multipair cable with copper conductors	BS 7870-8.6
24	Thermosetting Insulated, non-armoured cables with a voltage of 600/1100V for fixed installations	BS 7889
25	Method of test for resistance to fire of unprotected small cables for use in emergency circuits — BS EN 50200 with a 930°C Flame and with Water/Mechanical Shock (Classification — 120 Minutes)	BS 8434-2





COMPLETE PRODUCT TESTING FACILITIES AS PER BSI AND EUROPEAN STANDARDS FOR CABLES AND CONDUCTORS

S.No.	PRODUCT	SPECIFICATION
26	Method for assessment of fire integrity of large diameter power cables (Fire with Mechanical Shock & burst of Water Jet) Category-30 Minutes, 60 Minutes, 90 Minutes & 120 Minutes	BS 8491
27	Steel wire and wire products.- Non-ferrous metallic coatings on steel wire. Zinc or zinc alloy coatings	BS EN 10244-1
28	Steel wire and wire products.- Non-ferrous metallic coatings on steel wire. Zinc or zinc alloy coatings	BS EN 10244-2
29	Zinc or zinc alloy coated non-alloy steel wire for armouring either power cables or telecommunication cables or Land cables	BS EN 10257-1
30	Fire classification of construction products and building elements - Classification using data from reaction to fire tests on power, control and communication cables	BS EN 13501-6
31	Conductor for overhead lines - Round wire concentric lay stranded conductors	BS EN-50182
32	Method of test for resistance to fire of unprotected small cables for use in emergency circuits	BS EN 50200
33	Flat Polyvinyl Chloride Sheathed Flexible Cables	BS EN 50214
34	Multi Element Metallic Cables Used in Analogue and Digital Communication and Control	BS EN 50288-7
35	Communication Cables	BS EN 50289
36	Railway rolling stock cables having special fire performance.	BS EN 50305
37	Insulating, sheathing and covering materials for low voltage energy cables	BS EN 50363
38	Electrical test methods for low voltage energy cables	BS EN 50395
39	Non-electrical test methods for low voltage energy cables	BS EN 50396
40	Covered Conductors for overhead lines and related accessories for rated voltage above 1 kV ac and no exceeding 36 kV ac covered conductors	BS EN 50397-1
41	Common test methods for cables under fire conditions-heat release and smoke production measurement on cables during flame spread test.	BS EN 50399
42	Electric Cables. Low voltage energy cables of rated voltages up to and including 450/750 V — General requirements	BS EN 50525-1
43	Low voltage energy cables of rated voltages upto and including 450/750 V — Cables for general applications. Flexible Cables with Thermoplastic PVC Insulation	BS EN 50525-2-11
44	Low voltage energy cables of rated voltages up to and including 450/750 V — Cables for general applications. Flexible Cables with cross-linked elastomeric insulation	BS EN 50525-2-21
45	Low voltage energy cables of rated voltages upto and including 450/750 V — Cables for general applications. Single Core non-sheathed cables with thermoplastic PVC Insulation	BS EN 50525-2-31
46	Low voltage energy cables of rated voltages upto and including 450/750 V — Cables for general applications. Single core cables with crosslinked silicone rubber insulation	BS EN 50525-2-41
47	Low voltage energy cables of rated voltages up to and including 450/750 V — Cables for general applications. Single core non-sheathed cables with crosslinked EVA insulation	BS EN 50525-2-42
48	Low voltage energy cables of rated voltages up to and including 450/750 V — Cables for general applications. Single core non-sheathed cables with crosslinked EVA insulation	BS EN 50525-2-83
49	Low voltage energy cables of rated voltages upto and including 450/750 V — Cables for general applications. Multicore Cables with cross-linked Silicon Rubber insulation	BS EN 50525-2-51
50	Low voltage energy cables of rated voltages up to and including 450/750 V — Cables with special fire performance. Single Core non-sheathed cables with halogen-free cross-linked insulation	BS EN 50525-3-41
51	Railway applications- Railway rolling stock power and control cables having special fire performance	BS EN 50264-3-1
52	Railway applications- Railway rolling stock cables having special fire performance	BS EN 50305
53	Power, control and communication cables. Cables for general applications in construction works subject to reaction to fire requirements	BS EN 50575
54	Electrical Cables for photovoltaic system	BS EN 50618
55	Control and instrumentation cables - Specification for polyethylene insulated cables	PAS 5308 (Part-1)
56	Control and instrumentation cables - Specification for PVC insulated cables	PAS 5308 (Part-2)



COMPLETE PRODUCT TESTING FACILITIES AS PER IEC STANDARDS FOR CABLES AND CONDUCTORS

S.No.	PRODUCT	SPECIFICATION
1	Simulated solar radiation at ground level and guidance for solar radiation testing and weathering	IEC 60068-2-5
2	Power, control and instrumentation cables for shipboard and offshore applications	IEC 60092-350
3	Power cables for rated voltages 1 kV and 3kV	IEC 60092-353
4	Cable for control and instrumentation circuit 150/250V (300V)	IEC 60092-376
5	Electrical insulating materials - Thermal endurance properties	IEC 60216-3
6	Electrical strength of insulating materials	IEC 60243-1
7	Electrical insulating materials - Thermal endurance - Ageing ovens Single chamber ovens	IEC 60216-4-1
8	Polyvinyl Chloride Insulated Cable for rated voltages upto 450/750V	IEC 60227-1
9	Polyvinyl Chloride Insulated Cables for rated voltages upto 450/750V	IEC 60227-2
10	Polyvinyl Chloride Insulated Cables Part 3: Non-sheathed cables for fixed wiring	IEC 60227-3
11	Polyvinyl Chloride Insulated Cables Part 4: Sheathed Cables for Fixed Wiring	IEC 60227-4
12	Polyvinyl Chloride Insulated Cables Part 5: Flexible cables (Cords)	IEC 60227-5
13	Polyvinyl Chloride Insulated Cables Part 6: Lift Cables and cables for flexible connections	IEC 60227-6
14	Conductors of Insulated Cables	IEC 60228
15	Rubber insulated cables - Part 1 — General requirements	IEC 60245-1
16	Rubber insulated cables - Part 2 — Test methods	IEC 60245-2
17	Rubber insulated cables - Part 3 - Heat resistant silicone insulated cables	IEC 60245-3
18	Rubber insulated cables - Part 4 - Cords and Flexible Cables	IEC 60245-4
19	Rubber insulated cables - Part 5 - Lift Cables	IEC 60245-5
20	Power Cables with extruded insulation and their accessories for rated voltages from 1 kV to 3 kV	IEC 60502-1
21	Power Cables with extruded insulation and their accessories for rated voltages from 6 kV to 30 kV	IEC 60502-2
22	Power cables with extruded insulation and their accessories for rated voltages above 30kV (Um = 36 kV) up to 150 kV (Um= 170 kV)	IEC 60840
23	Measurement of smoke density of cables burning under defined conditions	IEC 61034-2
24	Electrical Cables for photovoltaic system	IEC 62930





COMPLETE PRODUCT TESTING FACILITIES AS PER ISO STANDARD FOR CABLES

S.No.	PRODUCT	SPECIFICATION
1.	Road vehicles - 60V and 600V single core cable	ISO 6722

COMPLETE PRODUCT TESTING FACILITIES AS PER SANS AND NFC STANDARD FOR CONDUCTORS

S.No.	PRODUCT	SPECIFICATION
1.	Aerial Bundled Conductors - Performance of Supporting Cores under Mechanical and Thermal Stresses	SANS 6100
2.	Insulated or Protected Cables for Power Systems -Bundle assembled Cores for overhead Systems of rated voltage 0,6/1 kV	NFC-33-209

COMPLETE PRODUCT TESTING FACILITIES AS PER AUSTRALIAN AND NEW ZEALAND STANDARDS FOR CABLES AND CONDUCTORS

S.No.	PRODUCT	SPECIFICATION
1.	Conductors in insulated electric cables and flexible cords	AS/NZS 1125
2.	Electric cable – Polymeric insulated Part I: For working voltages 1.9/3.3 (3.6) kV up to and including 19/33 (36) kV	AS/NZS 1429.1
3.	Electric Flexible Cords	AS/NZS 3191
4.	Electric cables - Cross-linked polyethylene insulated - Aerial bundled	AS/NZS 3560.1
5.	Conductors - Covered overhead for working voltages - 6.35/11 (12) kV up to and including 19/33 (36) kV	AS/NZS 3675
6.	Insulating and sheathing materials for electric cable	AS/NZS 3808
7.	Electric cables- Polymeric insulated Part I : For working voltages up to and including 0.6/1 (1.2) kV	AS/NZS 5000.1

COMPLETE PRODUCT TESTING FACILITIES AS PER AMERICAN STANDARDS FOR CABLES AND CONDUCTORS

S.No.	PRODUCT	SPECIFICATION
1.	Test on soft or annealed copper wire	ASTM B 3
2.	Test on concentric-Lay-stranded copper conductors	ASTM B 8
3.	Dielectric Breakdown Voltage and Dielectric Strength of Solid Electrical Insulating Materials at Commercial Power Frequencies	ASTM D 149
4.	Rubber Deterioration—Cracking in an Ozone Controlled Environment	ASTM D 1149
5.	Thermocouple compensating cables	ANSI MC-96.1
6.	Standard Test Methods for Extruded Dielectric Power, Control, Instrumentation & Portable Cables for Test	NEMA WC-53
7.	Standard for control, thermocouple extension and instrumentation cables	NEMA WC-57
8.	Nonshielded Power Cables rated 2000V or less for the distribution of Electrical Energy	NEMA WC-70





COMPLETE TESTING FACILITIES FOR TRANSFORMERS

S.No.	PRODUCT	SPECIFICATION
1.	Outdoor/indoor type oil immersed distribution transformers upto and including 2500 kVA, 33 kVE	IS 1180 (Part-I)
2.	Power transformers	IS 2026 (Part-I)
3.	Dry-type power transformers	IS 11171
4.	Power transformers	IEC 60076-I
5.	Pilot Automatic Transformer (PAT)	IS 1180 (Part-I)



TESTING FACILITIES FOR METALS AND ALLOYS

S.No.	PRODUCT	SPECIFICATION
1.	Determination of Chemical Composition of Copper	IS 191 IS 440
2.	Determination of Chemical Composition of Copper Alloys	ASTM E 478
3.	Determination of Chemical Composition of Aluminium and its Alloys	IS 4026 IS 504
4.	Determination of Chemical Composition of Wrought Aluminium Alloys	IS 11035
5.	Determination of Chemical Composition of Brasses	IS 3685
6.	Determination of Chemical Composition of Stainless Steel	IS 228-4 RTRC Inhouse Metyod
7.	Determination of Chemical Composition of Carbon Steel (low carbon, medium carbon & high carbon steel)	IS 228 IS 228-4 RTR Inhouse Method
8.	Determination of Chemical Composition of Cadmium	IS 13963-I

COMPLETE TESTING FACILITIES FOR INSULATING OILS

S.No.	PRODUCT	SPECIFICATION
1.	New Insulating Oils	IS 335
2.	Mineral Insulating Oils in Electrical Equipment Supervision and Maintenance Guidance	IS 1866
3.	Disolved and free gases	IS 10593, IEC 60599



CHEMICAL TESTING FACILITIES

S.No.	PRODUCT	SPECIFICATION
1	REACH as per substances of very high concern (SVHC) subject to the candidate list by European Chemical Agency (ECHA) according to Regulation (EC) No. 1907/2006 of REACH and its amendments.	RTRC Inhouse Method
2	Determination of RoHS3 in Electrochemical Products As per ROHS3 (EU) DIRECTIVE 2015/683	IEC 62321
3	Determination of Azo dye in Leather & Leather Products	ISO 17234-1, ISO 17234-2
4	Determination of Heavy Metals in Leather & Leather Products	ISO 17072-2
5	Determination of Formaldehyde in Leather & Leather Products	ISO 17226-1
6	Determination of pH in Leather & Leather Products	ISO 4045
7	Determination of Azo dye in Textile and Accessories	ISO 14362-3, ISO 14362-1
8	Determination of Lead content in children's metal products including Children Jewellery	CPSC- CH-EI001-08.3
9	Determination of Lead content in Non-metal Children Products	CPSC-CH-EI003-09.1 CPSC-CH-EI002-08.3
10	Sensorial test on Packaging Materials and Packages For Foodstuffs	DIN 10955
11	Determination of Heavy Metals in Toys and Children's Products	IS 9873-3
12	Waste water & Water testing (COD, BOD, pH, TSS, TDS, Trace Metals, Residuals in water and Inorganic Compound)	APHA 5220 APHA 4500 H APHA 5210 B APHA 2540D
13	Determination of heavy metals in Materials and articles in contact with foodstuffs	BS EN 13130-1
14	Determination of Chromium VI contents Leather & Leather Products	ISO 17075-1
15	Determination of Cadmium content in plastics	BS EN 1122
16	Determination of PAH in Polymer products	AFPS GS 2019:01 PAK
17	Determination of Formaldehyde & pH in textiles	ISO 14184-1, ISO 14184-2, ISO 3071
18	Determination of Overall Migration of Constituents of Plastics Materials and Articles Intended to Come in Contact with Foodstuffs.	IS 9845





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