





#### **NABCB**

hereby confirms that

#### Apave TIV India Pvt. Ltd.

Lakhani's Centrium, 6<sup>th</sup> Floor,
Plot No. 27, Sector 15, CBD Belapur,
Navi Mumbai – 400614, Maharashtra, India

complies with

#### **NABCB Accreditation Criteria for Inspection Bodies**

(ISO/IEC 17020:2012) as Type 'A' Inspection Body

to carry out

#### Inspection

as per accompanying

Schedule I: Scope of Accreditation

Schedule II: Office(s) under Accreditation

Accreditation Certificate No.: IB 017

Date of Initial Accreditation : September 30, 2013

Date of Last Renewal : March 27, 2025

Validity of Accreditation : September 29, 2028

March 27, 2025

**Issue Date** 

(Rajesh Maheshwari)
Chief Executive Officer

(Please refer http://nabcb.qci.org.in for validity of the certificate or contact NABCB for any related queries)

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## Schedule I

(Scope of Accreditation)

#### Apave TIV India Pvt. Ltd.

#### Type 'A' Inspection Body

	IAF Scope / Field of Inspection	Stage and Range of Inspection(s)	Standards / Regula	on Requirement(s) tions / Methods / Procedures
5	and Specific Item(s)		Number identification with year of publication	Title
	IAF Scope 17 Basic Metals Structural Shapes – Plates, Coils, Bars, Rods, Sections, Wires Ferrous Alloys, structural Steels, Precious metals, Ferrous & Non- Ferrous & Alloy	Stagewise / Final Inspection	BS EN 10083-1:2006	Steels for quenching and tempering
	Metals		BS EN 10250-4:2000	Open steel die forgings for general engineering purposes. Stainless steels
			BS EN 10085:2001	Nitriding steels, Steels, Case- hardening steels – Semi-finished products, Billets, Blooms, Slabs, Bars (materials), Flats (shapes), Rolled products, Forgings
			BS/PD 970:2005	Wrought steels for mechanical and allied engineering purposes.
			BS EN 10087:1999	Free cutting steels - semi-finished products, hot rolled bars and rods
			BS EN 10095:1999	Heat resisting steels and nickel alloys
			BS EN 10084:2008	Case hardening steels



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Field of Inspection	Inspection(s)		tions / Methods / Procedures
and Specific Item(s)		Number identification	Title
		with year of	
		publication	-
		EN 10028:2009	Flat products made of steels for pressure purposes
		IS 2002:2009	Steel plate for pressure vessel for intermediate and high temperature service including boilers
		IS 1030:1998 (Fifth Revision)	Carbon steel castings for general engineering purposes
		IS 7452:2013	Hot trolled steel sections for doors, windows and ventilators
-		BIS IS 801:1975 (RA 2001)	Practice For Use Of Cold Formed Light Gauge Steel; Structural Members In General Building Construction
		IS 2102-2: 1993 (RA 2014)	General Tolerances
		IS 1239-1:2004: IS 1239-2:2011	Steel Tubes, Pipes and Fittings
-		BIS IS 1875:1992 (RA 2004)	Carbon steel billets, blooms, slabs and bars for forgings
		IS 4163:2014	Determination of Content Of Non- metallic Inclusions
		IS 1570:1987	Schedules for Wrought Steels, Part 2: Carbon Steels - (Unalloyed Steels), Section 2: Carbon Steel Wires with Related Properties
		IS 4923:1997	Hollow steel sections for structural use
		IS 800:2007	Indian Code of Practice for Construction in Steel

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and Specific Item(s)		Number identification	Title
		with year of	
		publication	Charles round and aguara for
		IS 1732:1989	Steel bars, round and square for
-			structural and general engineering
		10.0000.0011	purposes
	y	IS 2062:2011	Hot Rolled Medium and High Tensile, Structural Steel
		IS 7887:1992	Mild steel wire rod for general engineering purposes
		IS 10748 :2004	Specification of Hot Rolled Carbon
		10 10 10 .2001	Steel Skelp & Strips for
			manufacture of steel tubes & pipes
,		EN 47: 2012	Alloy Steel Round Bar
		EN 10025-1,2,3	Hot Rolled product of structural
		:2011/SANS50025	Steel
	·	ASME SEC II Part A &	Ferrous & Nonferrous Material
		B-2015 & 2017	
		ASTM (A,B,C,D,E F,G)-	American Society for Testing and
		2012, 2013, 2014,	Materials
		2015, 2016	
		ASTM A 516:2015	Pressure Vessel Plates, Carbon
		The second of the second secon	Steel for Moderate and Low
,			Temperature Service
		ASTM A 578:2012	Straight-Beam Ultrasonic
		The control of the co	Examination of Rolled Steel Plates
			for Special Applications
		ASTM E 381:2012	Macro-etch Testing Steel Bars,
		w consequence on constitution of the constitut	Billets, Blooms, and Forgings
		ASTM E 709:2015	Magnetic Particle Testing
		ASTM E 1444:2016	Magnetic Particle Testing



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## Schedule II

(Office(s) under Accreditation)

#### Apave TIV India Pvt. Ltd.

Location	Address	Key activities performed
Mumbai (Main Office)	Lakhani's Centrium, 6 <sup>th</sup> Floor, Plot No. 27, Sector 15, CBD Belapur, Navi Mumbai – 400614, Maharashtra, India	Top Management functions, Quality Management System functions, administration & accounts, other key activities.  Inspection contract review, Inspection planning & execution, Inspection personnel authorization & assignment, Issue of inspection reports / certificates.



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Field of Inspection	Inspection(s)		tions / Methods / Procedures
and Specific Item(s)		Number identification	Title
		with year of	
		publication	
		ASTM A 388:2010	Ultrasonic Examination of Steel Forgings
		ASTM A 829:2014 (SAE 4140 / SAE 4142)	Alloy Structural Steel Plates
		ASTM E 317:2016	Performance Characteristics of Ultrasonic Pulse-Echo Testing Instruments and Systems without the Use of Electronic Measurement Instruments
		NACE MR 0175:2015 / ISO15156:2002 & 2015	Sulfide Stress Corrosion Cracking Resistant Metallic Material for oil field equipment
*.		ASTM E 10:2015	Brinell Hardness of Metallic Materials
6		ASTM E 18:2016	Rockwell Hardness of Metallic Materials
		ASTM E 110:2014	Rockwell and Brinell Hardness of Metallic Materials by Portable Hardness Testers
		ASTM E 23:2016	Notched Bar Impact Testing of Metallic Materials
		ASTM E 112:2013	Determining Average Grain Size
		ASTM B476 - 01(2012)	Wrought Precious Metal Electrical Contact Materials
		ASTM B844 - 98(2016)	Silver-Tin Oxide Contact Material
		ASTM Volume 02.04-2014, 2015 & 2016	Non-ferrous Metals - Nickel, Titanium, Lead, Tin, Zinc, Zirconium, Precious, Reactive, Refractory Metals and Alloys:

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	IAF Scope / Field of Inspection and Specific Item(s)	Stage and Range of Inspection(s)		on Requirement(s) tions / Methods / Procedures Title
			publication	
				Materials for Thermostats, Electrical Heating and Resistance Contact, and Connectors
'			API 16A:2018	Drill Through Equipment
			API 6A, 6D, 16A:2022	Wellhead & Christmas Tree Equipment
			ASME V:2023	Non-Destructive Examination
	2		ASME VIII:2023	Rules for construction of pressure vessels
			ASME IX-2023/PD 190	Welding, Brazing, and Fusing Qualifications.
The second secon			DIN 17200:19787 (C 45) / ASTM A29:2020	Stainless steel round rods, AISI 1045 / C45 steels High-strength Steel Plate, Wear Resistant Steel, Silicon Steel, Cold Heading Steel, Free Cutting Steel, Mold Steel, SAE4320H steels
Control of the Contro			ASTM-E140:2019 ASTM-E112:2013	Hardness Conversion Tables for Metals Relationship Among Brinell Hardness, Vickers Hardness, Rockwell Hardness, Superficial Hardness, Knoop Hardness, Scleroscope Hardness, and Leeb Hardness; Grain Sizing Disc - Root 2
	Pipe Fittings	Stagewise / Final Inspection	ASTM A 234:2015	Piping Fittings of Wrought Carbon Steel and Alloy Steel for Moderate and High Temperature Service



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Field of Inspection and Specific Item(s)	Inspection(s)	Number identification	Title
and Specific item(s)		with year of	
		publication	
		ASTM A 182:2015	Forged or Rolled Alloy-Steel Pipe Flanges, Forged Fittings, and Valves and Parts for High- Temperature Service
		EN 877:1999	Cast Iron Pipes and fittings
		ASTM A 420:2015	Piping Fittings of Wrought Carbon Steel and Alloy Steel for Low- Temperature Service
		ASTM A 403:2015	Wrought Austenitic Stainless Steel Piping Fittings
		ASTM A 758:2015	Wrought-Carbon Steel Butt- Welding Piping Fittings with Improved Notch Toughness
		ASTM A 774:2015	As-Welded Wrought Austenitic Stainless Steel Fittings for General Corrosive Service at Low and Moderate Temperatures
Tubes	Stagewise / Final Inspection	IS 1161:2014	Steel Tubes for Structural Purposes
		IS 3601:2006	Steel Tubes for Mechanical and General API 16A-2016 Engineering Purposes
		ASTM A 178:2019	Electric-Resistance-Welded Carbon Steel and Carbon-
			Manganese Steel Boiler and Super heater Tubes
		ASTM A 179:2024	Seamless Cold-Drawn Low- Carbon Steel Heat-Exchanger and Condenser Tubes



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Field of Inspection	Inspection(s)	Standards / Regula	tions / Methods / Procedures
and Specific Item(s)		with year of	Tiue
		publication	
	1	ASTM A 192:2024	Seamless Carbon Steel Boiler Tubes for High-Pressure Service
-		ASTM A 209:2021	Seamless Carbon-Molybdenum Alloy-Steel Boiler and Super heater Tubes
		ASTM A 213:2022	Seamless Ferritic and Austenitic Alloy-Steel Boiler, Super heater, and Heat-Exchanger Tubes
		ASTM A 214:2019	Electric-Resistance-Welded Carbon Steel Heat-Exchanger and Condenser Tubes
		ASTM A 249:2023	Welded Austenitic Steel Boiler, Super heater, Heat-Exchanger, and Condenser Tubes
	(4	API 5CT:2023	Casing and Tubing
		EN 10255:2004	Non-alloy steel tubes suitable for welding and threading
Pressurized and	Stagewise / Final		
Unpressurised	Inspection		
Vessels & Piping		ASME Sec VIII:2023	Rules for construction of pressure vessels
		IS 2825:1969	Code for Unfired pressure vessels
		EN 13445:2014	Unfired Pressure Vessels
		ASME B 31.3:2016	Process Piping & Piping Skids
		ASME B 31.1:2016	Power Piping & Piping Skids
		AWS D1.1:2015	Structural Welding code



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Г	IAF Scope /	Stage and Range of		on Requirement(s)
	Field of Inspection	Inspection(s)		tions / Methods / Procedures
	and Specific Item(s)		Number identification	Title
			with year of	
L			publication BS EN 545:2010	Ductile iron pipes, fittings,
			B3 EN 343.2010	accessories and their joints for water pipelines
			BS EN 598:	Ductile iron pipes, fittings,
			2007+A1:2009	accessories and their joints for sewerage applications
			IS 3589:2001	Steel Pipes for Water and Sewage
			IS 803:1976	Code of Practice for Design
			(RA 2005)	Fabrication and. Erection of
				Vertical Mild Steel Cylindrical Welded Oil. Storage Tanks
			API 5L: 2024	Specification for line pipe - Seamless / Welded / ERW pipes
			API 650:2007	Welded Tanks for Oil Storage,
			API 620:2013	Design and Construction of Large, Welded, Low-Pressure Storage Tanks
			IS 2825:1969 (RA 2002)	Code For Unfired Pressure Vessels
			AS 1210:2010	Pressure vessels
			EN 13445-3:2014	Unfired pressure vessels
			EN13458:2002	Cryogenic vessels – Static vacuum insulated vessels -
				Design, fabrication, inspection and testing
			PD 5500:2006 + SMPV Rule & PD 5500:2018; AD Merkblatter:2014	Unfired, fusion welded pressure vessels



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			with year of publication	
	Boilers	Stagewise / Final Inspection	ASME Sec I:2015	Power Boilers
)			EN 12952:2012 & 12953:2012 IBR:1950	Water Tube Boiler standards & Shell Boiler Indian Boiler Regulations
			EN 12952:2015	Water-tube boilers, Steam boilers, Boilers, Auxiliary, Heating equipment, Heaters, Fired pressure vessels
			EN 12953:2012	Design, construction, testing, inspection and operation of electrically heated and directly fired shell boilers
	Tanks	Stagewise / Final Inspection	IS 803:1976	Code of Practice for Design Fabrication and Erection of Vertical Mild Steel Cylindrical Welded Oil Storage Tanks
			ASME -Sec. VIII:2023; IS 2825:1969(R2017); PD 5500:2006; API 510:2022; API 572:2023; IS 804:1967 (R2003); ASME Sec IX:2023, ASME Sec V: 2023,	Rules for the construction of pressure vessels; Indian Standard for unfired pressure vessels; British standard specification for unfired fusion welded pressure vessel
			IS 10987:1992	Code of fabrication, Practice for design, testing and installation, of under-ground/above-ground horizontal cylindrical steel



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	*	with year of publication	
		API 620:2013	storage tanks for petroleum products Design and Construction of Large, Welded, Low-Pressure Storage Tanks
Gas Cylinders	Stagewise / Final Inspection	API 650:2020	Welded tanks for oil storage
	in openion	IS 8196:2004	Steel cylinders for compressed gases (atmospheric gases, hydrogen, high pressure liquefiable gases and dissolved acetylene gases)
		IS 15490:2004	Cylinders for on-board storage of compressed natural gas as a fuel for automotive vehicles
	*	ISO 11119-3:2013	Gas cylinders – Refillable composite gas cylinders and tubes – Design, construction and testing – Part 3: Fully wrapped fibre reinforced composite gas cylinders and tubes up to 450L with non-load-sharing metallic or non-metallic liners
	,	ISO 9809:2010	Refillable seamless steel gas cylinders Design, construction and testing
		ISO11439:2013	High pressure cylinders for the on- board storage of natural gas as a fuel for automotive vehicles



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Field of Inspection	Inspection(s)		tions / Methods / Procedures Title
and Specific Item(s)		Number identification with vear of	Title
A		with year of publication	
		ISO4706:2008	Gas cylinders – Refillable welded steel cylinders
		NZS-5454:1989	Standard requirements for lightweight steel automotive compressed natural gas cylinders
		BS EN 13322- 1:2003+A1:2006	Transportable gas cylinders. Refillable welded steel gas cylinders. Design and construction. Carbon steel
		ISO11120:2015	Refillable seamless steel tubes of water capacity between 150 I and 3000 I Design, construction and testing
		BS EN 1442:2006 + A1:2008	LPG equipment and accessories. Transportable refillable welded steel cylinders for LPG. Design and construction
-		DOT39:2017 + Gas Cylinder Rules:2020	non reusable - non refillable cylinder
		DOT 4BW:1995; DOT4BA:2003	Code of Federal Regulations Welded steel cylinders made of definitely prescribed steels with electric-are welded longitudinal seam. Including DOT 4BA
Pipes [Ductile, Cast Iron, Carbon Steel, Ferrous, Non-Ferrous, Alloy	Stagewise / Final Inspection	IS 8329:2000	Centrifugally cast (spun) ductile iron pressure pipes for water, gas and sewage
Steel, Seamless & Welded (without or			

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2	IAF Scope / Field of Inspection	Stage and Range of Inspection(s)		on Requirement(s) tions / Methods / Procedures
5	and Specific Item(s)	mspection(s)	Number identification	Title
2	,		with year of	
Co	with addition of filler		publication	
Ď	wire)]		- N	
	-71		IS 3589:2001 ASTM A 53:2015	Steel pipes for water and sewage Seamless and Welded Standard Steel Pipe
S			ISO 2531:2009	Ductile iron pipes, fittings, accessories and their joints for water applications
S			ASTM A 746:2018 (R:2022)	Ductile Iron Gravity Sewer Pipe
(			ASTM A 716:2015	Ductile Iron Culvert Pipe
6			ASTM A 74:2015	Cast Iron Soil Pipe and Fittings
		s.	API 5L, 46 <sup>th</sup> Edition :2024	Specification for line pipe
S		-	IS 1239-1:2004; IS 1239-2:2011, ASTM A 106:2019; ASTM A 333:2018	Seamless, Welded Pipes
3	Distillation Columns	Stagewise / Final Inspection	IS 11556:2005	Distillation column
5		•	ASME SEC VIII:2023	Rules for construction of pressure vessels
S				Applicable national & international codes and standards, Client requirements, QAP/ITP
2	Heat Exchangers	Stagewise / Final Inspection	IS 4503:1967	Specification for shell and tube type heat exchangers
3			TEMA:2023	The Tubular Exchanger Manufacturers Association

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	Field of Inspection	inspection(s)	Number identification	Title
	and Specific Item(s)		with year of	
			publication	
1			TEMA IS10000:1980	Tubular Exchanger Manufactures
			[all parts]	Association- Standard for Design
			ASME Sec IX:2023,	and construction of Heat
			ASME Sec V: 2023	Exchangers
			, NOME 333 1. 2323	BPVC Section IX-Welding,
				Brazing, and Fusing Qualifications
				Non-destructive Examination
			ASME Sec VIII: 2023	Rules for construction of pressure
			7.6.11.2.555 7.11.1.2525	vessels
)			Client Requirements in th	e form of QAP mentioning required
			specification and scope n	nentioned in this scope. However,
			the applicable National &	International Codes and Standards
)			shall be among those whi	ich are either referred in the scope
1				ivalent to the standards described
5		14	above for the relevant sco	ope category
)	IAF Scope 18			
	Machinery and			
0	Equipment			
)	Valves	Stagewise / Final	API 614, April:2022	Lube Oil System Lubrication,
)		Inspection		Shaft-sealing and Oil-control
0		•		Systems and Auxiliaries
			API 598-2023 11 <sup>th</sup>	Valve Inspection and Testing
			Edition	
0			IS 9890:1981	General purpose ball valves
)			IS 778:1984	Copper alloy Gate, Globe and
				Check Valves for water works
5				purposes.
)			API 594:2022	Check Valves: Flanged, lug, wafer
)				and butt welding.
0			API 6FA:2020	Fire Test Specification for valves

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0	Field of Inspection	Inspection(s)		tions / Methods / Procedures
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2			with year of	
)			publication API 607:2022	Fire Test for quarter turn valve and
)			AFT 007.2022	valve equipped with non-metallic seat.
			API 608:2025	Metal ball valves
			API 609:2021	Butterfly valves
0			BS EN12266-1:2012	Testing of metallic valves.
000			API 600:2021	Bolted bonnet steel gate valves for petroleum and natural gas industries
000			API 602:2022	Compact Steel Gate Valves— Flanged, Threaded, Welding, and Extended-Body Ends
)			ASME B16.34:2013	Valves—Flanged, Threaded, and Welding End
		,	EN 12516:2014	Industrial valves. Shell design strength. Calculation method for steel valve shells
	Pumps	Stagewise / Final Inspection	API 674:2016	Positive Displacement Pumps - Reciprocating
		The second second	API 610:2021	Centrifugal Pumps for Petroleum, Petrochemical and Natural Gas
000			API 675-July:2021	Positive Displacement Pumps- Controlled Volume for Petroleum, Chemical, and Gas Industry Services
			BIS IS 5120:1977	Technical Requirements For Roto- dynamic Special Purpose Pumps
)			API 6D:25 <sup>th</sup> Edition	Specification for Pipeline Valves

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	Field of Inspection	Inspection(s)		tions / Methods / Procedures
	and Specific Item(s)		Number identification	Title
)			with year of	
	11/04		publication IS 6595:2002	Horizontal centrifugal pumps for
)			13 0095.2002	clear, cold water
,			IS8034:2018	Submersible Pump sets
)			IS 9137:2019	Centrifugal, Mixed Flow, & Axial Pumps
)			IS 11745:1986	Positive displacement pumps reciprocating
)		1	IS 5120:1977	Roto dynamic special purpose pumps
)	Bearings	Stagewise / Final Inspection	IS 13962:1999	Rolling bearings – metric tapered roller bearings
0			API 670:2014	Machinery Protection Systems
)	Gaskets	Stagewise / Final Inspection	IS 11149:2004	Rubber gaskets
)			IS 2712:1998	Gaskets and packings - compressed asbestos fiber jointing
			ASTM F 104-11:2015	Standard Classification System for Nonmetallic Gasket Materials
)			ASTM C-564-1:2015	Rubber Gaskets for Cast Iron Soil Pipe and Fittings
			ASTM D5926 - 15: 2015	PVC Gaskets for Drain, Waste, and Vent, Sewer, Sanitary, and Storm Plumbing System
)	Axial Fans, Blowers, Dryers	Stagewise / Final Inspection	IS 4894:1987	Specification for –centrifugal fans
10)	Diyele		IS 1710:1989	Specification for pumps — vertical turbine mixed and axial flow, for clear cold water



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Field of Inspection and Specific Item(s)	Inspection(s)	Number identification	Title
and Specific item(s)		with year of	
		publication	
		İS 6680, IS 3588,	Railway Carriage Fans; Axial Flow Fans
		AMCA 205:2012	Standard for fan testing
Gear Boxes	Stagewise / Final Inspection	IS 7403:1974	Standard worm and helical gear boxes
	·	API 613:2022	Special purpose gear units for petroleum, chemical, and gas industry services
		AIS 037:2004	Procedure for Type approval and Establishing Conformity of Production for Safety Critical Components
Centrifuges	Stagewise / Final Inspection	IS 4092-1:2003	Centrifuges of the basket and bowl and vibrating type for use in industrial and commercial application
		ASME Sec VIII:2023 Div-1	Rules for construction of pressure vessels
Turbines	Stagewise / Final Inspection	IS 1710:2009	Specification for pumps — vertical turbine mixed and axial flow, for clear cold water
		IS 15663 (Part-1): 2006	Design and installation of natural gas pipelines — code of practice
		API 612:2020	Petroleum, Petrochemical and Natural Gas Industries-Steam Turbines-Special-purpose Applications
Turbine Generating Sets - Hydro/ Steam	Stagewise / Final Inspection	BS 5514:1996 [all parts]	Reciprocating Internal Combustion Engines

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	and Specific Item(s)	inspection(s)	Number identification with year of publication	Title
	20MW to 500 MW			
2	capacity		ISO 3408-1: 2006	Ball Screws
			specification and scope n the applicable National & shall be among those whi	e form of QAP mentioning required nentioned in this scope. However, International Codes and Standards ich are either referred in the scope ivalent to the standards described ope category
7	IAF Scope 19			,
3	Electrical Equipment			
	Motors	Stagewise / Final Inspection	IS 12615:2011	Energy efficient Induction Motors
		·	BS 5000:2006	Specification for rotating electrical machines of particular types or particular applications
			BS 2613:1957	Electrical performance of rotating electrical machinery
)			IEC 60034-1:2022	Rotating electric machines – Part- 1: Rotating and Performance
			IS 4029:2010	Guide for Testing Three Phase Induction Motors
3	Transformers	Stagewise / Final Inspection	60034-1:2022	Rotating electrical machines
000		mspection	IS11171:1985 IS 2026 Part 1 to 4:2011	Dry type transformer Power transformers

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Field of Inspection	Inspection(s)	Standards / Regula	tions / Methods / Procedures
and Specific Item(s)	( )	Number identification	Title
		with year of	
		publication	
		IS 12021:2015	Control transformers or switchgear
			and control gear for voltages not
			exceeding 1000
		10 0705 Dort 1 to 1:	v a.c Specification Current transformers -
		IS 2705 Part 1 to 4:	Specifications
		IS 3156: Part 1 to 4:	
		1992	Voltage transformers
		IEC 60076-1:2011	Power transformers
		IEC 60044-1:2003	Instrument transformers
Alternators	Stagewise / Final	IS 60034:2022	Rotating electrical machines
	Inspection		
Energy Meters	Stagewise / Final	IS 15707:2006; IS	Electricity metering equipment,
	Inspection	13779:2020: IEC-TC-13	energy meters – testing,
		/ IEC/TS 60514:1975; IEC/TR 60736:1982;	calibration, etc
		IEC/1R 60/36, 1962, IEC 61358:1996;	
		IEC/TR 62051: 1999;	
		IEC/TR 62051: 2004;	
		IEC 62052: 2003; IEC	
		62052: 2004; IEC	
		62053: 2003; IEC	
)		62054: 2004; IEC	
		62055: 2005; IEC	
		62056: 2014; IEC 62058: 2008; IEC	
		62059:2002	
MCC, Junction	Stagewise / Final	IS 13947:2004	Low voltage switch gear and
Boxes, Control	Inspection	IS 2147:1982	control gear
Panels, Switch	The second secon		
Gears, Manufacture			

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(0)	Field of Inspection	Inspection(s)		tions / Methods / Procedures
	and Specific Item(s)	mapeonon(o)	Number identification	Title
9	and Specific item(s)		with year of	0.00000
6			publication	
2)	of electricity			
Š	distribution and		74	
6	control apparatus			
0	e.g. Switchgear			
3	(HT/LT), Panels,			
6	PCC, MCC, APFC	S27		
0	VFD, CT, PT,			
5	Flameproof &			
%	Weather proof			
0	equipments, Junction			
5	Boxes, Insulated			
%	Wire and Cables,			
0	Lighting, equipments,			
5	Push Button Stations			
%	and Electrical lamps,			
0	Outdoor units and			
5	IPMS for Telecom			
%	sector, Pressure			=
do	Gauges, earthing,			
5	electrical resistance, Flameproof			
%	enclosure, luminaires			
0	and electrical			
3	installation			
0	classification etc.			
いいできるできるできるできる	Gladofffoddorf oto.		IS 2147:1982	Degree of protection provided by
2				enclosure for low voltage switch
//				gear and control gear.
10			IS 8623-1:1993	Low-Voltage Switchgear and
2				Control Gear Assemblies, Part 1:

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	and Specific Item(s)		with year of	,,,,,
0			publication	
				Requirements for Type-Tested and Partially Type
			IS 12729:2004	Common High-Voltage Switchgear and Control gear Standards
)			IEC 61439:2023	Low-voltage switchgear and control gear assemblies
)	,		IS 732:2019	Code of Practice for Electrical Wiring Installations
)			IS 3072:1975	Code of practice for installation and maintenance of switchgear
			IEC 61439:2023	Low-voltage switchgear and control gear assemblies - Part 1: General rules
			IS 13947-5:2004	Low-Voltage Switchgear and Control gear, Part 5: Control Circuit Devices and Switching Elements, Section 2: Proximity Switches
)		n	IEC 60056:1987	Specification for alternating- current circuit-breakers.
)			IS 9921:2012	Alternating Current Disconnectors (isolators) and Earthing Switches for Voltages
		-	IEC 62271:2011	High-voltage switchgear and control gear
			IS 8623-1:1993	Low-Voltage Switchgear and Control gear Assemblies, Part 1: Requirements for Type-Tested



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and opening nom(c)		with year of	
		publication	
			and Partially Type-Tested Assemblies
		BIS IS 13947-1:1993 (RA 2004)	Specification For Low-Voltage Switchgear And Control gear
		IEC 62271-100,200 :2021	High-voltage switchgear and control gear - Part 100: High voltage alternating-current circuit-breakers.
		IEC60947-1:2020	Low-voltage switchgear and Control gear - Part 1: General rules
		IEC 62271-100:2017; IEC-60427:2000; EN 50152-1:2012 + A1:2013	Circuit Breakers
		BIS IS 2071-2:1974 (RA 2006)	Methods of High Voltage Testing - Part II : Test Procedures
		IS2148:2004	Electrical Apparatus For Explosive Gas Atmospheres - Flameproof Enclosures "d".
		EN 837:1998	Stainless steel diaphragm pressure gauges
		IS 10322:2014	Luminaires Part 1 General Requirements and Tests
		IEC60079:2015	Electrical resistance trace heating General and testing requirements
		IS 3043:1987	Code of practice for earthing
		IS 5572:2009	Classification of hazardous areas (other than mines) having

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0000000	Manufacture of accumulators, primary cells and primary batteries like (UPS, Battery, Battery chargers	Stagewise / Final Inspection	publication  IEC 60529:1989 +A1:1999+A2:2013  IS1651:2013	flammable gases and vapours for electrical installation.  Applies to the classification of degrees of protection provided by enclosures for electrical equipment Stationary cells and batteries, lead - Acid type (With Tubular Positive Plates) - Specification
000	etc.)		IS1652:2013	Stationary cells and batteries, lead-acid type with plante positive plates - Specification
			IS6303(Part 4):2023	General requirements and methods of tests for dry cells and batteries
			IEC60896:2011	Stationary lead-acid batteries – Part 21: Valve regulated types – Methods of test
000			IS13514:2018 IEC61982-4:2015	Secondary Batteries (Except Lithium) for the Propulsion of Electric Road Vehicles Part 4 Safety Requirements of Nickel- Metal Hydride Cells and Modules
000			IS 16242: Part 1 : 2014	Uninterruptible Power Systems (UPS) Part 1 General and Safety Requirements for UPS



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Γ	IAF Scope /	Stage and Range of	Inspection / Page le	on Requirement(s) tions / Methods / Procedures
	Field of Inspection	Inspection(s)	Number identification	Title
	and Specific Item(s)		with year of	
			publication	
			IEC 62040-3:2021	Uninterruptible power systems (UPS) - Part 3: Method of specifying the performance and test requirements
			IEC 60335-2-29:2016	Household and similar electrical appliances - Safety - Part 2-29:
				Particular requirements for battery chargers
			IEC 60086-1:2021	Primary batteries - Part 1: General
	_		IS 6848:1979	Lead-acid Batteries for Train Lighting and Air-conditioning Services
			BIS IS 1651:1991 (RA 2018)	Specification for stationary cells and batteries, lead-acid type with tubular positive plates
			BIS IS 10918:1984 (RA 2018)	Specification For Vented Type Nickel Cadmium Batteries
			EN 50091-1-2:1998	Uninterruptible Power Systems (ups) - General And Safety Requirements For Ups Used In Restricted Access Locations
			IS13314:1992	Solid state inverters run from storage Batteries
)	Cathodic Protection	Stagewise / Final Inspection	IS-8062-1:1976 IS-8062-2:2006	Cathodic Protection – Steel Structures; Buried Pipelines/Structures
	Manufacture of Industrial Process Control Equipment e.g. (PLC, DCS,	Stagewise / Final Inspection	NFPA 72-2016	National Fire Alarm and Signaling Code

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0			with year of publication	
7	CCTV, Fire & Gas detection system			
	etc.)		IEC 584:1982	Thermocouple Extension & Compensating Cable
	-		IS11360:1985	Specification for Smoke Detectors for Use in Automatic Electrical Fire Alarm System
	Manufacture of Optical Fibre Cables, Instruments	Stagewise / Final Inspection	IS/IEC 60794-1-1-2023	Fibre Optics, Fibres, Cables and Devices
8	Cables	Stagewise / Final Inspection	IS1554:1988	PVC Insulated (Heavy Duty) Electric Cables
0.0			IS7098 (Part-2):2011	Cross-linked Polyethylene Insulated Thermoplastic Sheathed Cables for working voltages from 3.3KV up to and including 33KV
			IS9968:2002	Specification for elastomer - Insulated cables: Part 2 for working voltages from 3.3 KV up to and including 33 KV
			IS694:2010	Polyvinyl Chloride Insulated Unsheathed And Sheathed Cables/Cords With Rigid And Flexible Conductor For Rated Voltages Up To And Including 1100 V
3			IS 14255:1995 (RA 2020)	Aerial Bunched Cables for working voltagess upto and including 1100 Volts- specification

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	f Inspection	Inspection(s)	Standards / Regulations / Methods / Procedures	
	ecific Item(s)		Number identification	Title
			with year of	
			publication	
			IEC-60099-4, IS-3070 (Part III)	Lightning Arrestors
		6	IS731:1971 (RA 2016)	Porcelain insulators for overhead power lines with a
				nominal voltage greater than 1000 V
Measurii Instrume Ammete		Stagewise / Final Inspection	IEC 60051:2018	Measuring Instruments Ammeter, Voltmeter.
Manufacture electric regenerate transform	motors, ors and	Stagewise / Final Inspection	Other Codes , specifications and standards relevant to category	Applicable national & international codes and standards, such as PESO, DMRI, FM, BASSEFA, BIS, OISD Codes, IE Rules, National Building Code, NEMA, EIL, TEIL, ARAMCO, MOZ Specs, etc., and customer requirements, QAP/ITP
Manufact electricit and contage apparatu	ry distribution trol	Stagewise / Final Inspection	IS 17036 : 2018; IS 1885:1993 IECPub50(25):1965 IS 7118 : 1973	Electricity distribution and control
			Client Requirements in the form of QAP mentioning required specification and scope mentioned in this scope. However, the applicable National & International Codes and Standards shall be among those which are either referred in the scope statement or shall be equivalent to the standards described above for the relevant scope category	

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٨٦			I	an Damiliamant(a)
0	IAF Scope /	Stage and Range of	Inspection (Denvilo	on Requirement(s)
0	Field of Inspection	Inspection(s)	Standards / Regulations / Methods / Procedures	
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2			with year of	
5			publication	
	IAF Scope 26			
2	Gas Supply	o o l Nori	01	DNCDD's CSD 909/E) dated
1	26 A(iii) of NABCB	Gas Supply- NGPL	Stagewise/	PNGRB's GSR 808(E) dated 11.11.2009 along with latest
וע	Sub-sector		In-service	amendments, national/
)	categorization			international standards mentioned
0	document BCB 503			therein and relevant statutes
ע	(O&G)		0.	The second secon
	26 B(iii) of NABCB	Gas Supply- CGD	Stagewise/	PNGRB's GSR 612(E) dated 27.08.2008 along with latest
0	Sub-sector		In-service	amendments, national/
ןע	categorization			international standards mentioned
	document BCB 503			therein and relevant statutes
9	(O&G)			therein and relevant statutes
)	IAF Scope 28			
)	Construction			Divis 0 Dainfarrand compared
0	Site preparation		IS 456:2000	Plain & Reinforced concrete - Code of Practice
)				
	Building of complete		BS EN 13501-	Fire classification of construction
0	constructions or		1:2007+A1:2009	products and
	parts thereof; civil			building elements. Classification
	engineering			using test data from reaction to fire
0				tests
	Building installation		Morth -Fifth Edition	Specification of Road and Bridge
)				works
0	Building completion		IS 1786:2008	High-strength deformed steel bars
	-			and wires for concrete
7		6.		reinforcement
0	Renting of		IS 383-2016	Specification of Coarse and Fine
	construction or			aggregate for concrete
7	demolition equipment			
0	with operator			

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	and Specific Item(s)		with year of		
0			publication		
)	Renting of	-	BS EN - 598:2007	Ductile iron pipes, fittings,	
	construction or		+A1:2009	accessories and their joints for	
0	demolition equipment			sewerage applications.	
)	with operator			Requirements and test methods	
)	Site Preparation,		IS13920:2016	Ductile Design & Detailing RC	
0	Building construction			structures	
)	/Civil Engineering,				
)	Building Installation,				
0	Building completion,				
)	Construction of				
	transmission towers				
0	(Power and				
1	Telecommunication) including				
)	stringing activities,				
0	Civil Engineering:				
,	Roads and Bridges,				
)	Audit of building				
)	construction	*			
			IS 1343:2012	Pre-stressed concrete - Code of	
)				practice	
)	Building -	Stagewise / Final	IS 11134:1984	Code of practice for setting out of	
<b>N</b>	construction site	Inspection		buildings	
)	preparation,				
	completion and				
1	installation				
0	Road – Bituminous				
	and Concrete				
1	RCC reservoirs				
1	Pipe Line Laying				

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) )	Machinery Foundation			
	Todridation		IS 15916:2011	Building Design and Erection Using Prefabricated Concrete - Code of Practice
			IS 15917:2010	Building design and erection using mixed/ composite construction - Code of practice
			IS 16231 (Part 2) : 2019	Use of Glass in Buildings — Code of Practice Part 2 Energy and Light-Part 1 - General Methodology for Selection Part 2 - Energy and Light Part 3 Fire and Loading
			IS 7740:1985	Code of practice for construction and maintenance of road gullies
			IS 11682:1985	Criteria for design of RCC staging for overhead water tanks
	Construction of Transmission Towers (Power and Telecom) – Tower Foundations	Stagewise / Final Inspection	IS 10297:1982	Code of practice for design and construction of floors and roofs using precast inforced / prestressed concrete ribbed or cored slab units
0000			IS 11384:1985	Code of Practice for Composite Construction in Structural Steel and Concrete

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		publication IS 11233:1985	Code of practice for design and construction of radar antenna, microwave and TV tower foundations
		IS 4091:1979	Code of practice for design and construction of foundations for transmission line towers and poles
		IS 1080 :1985	Code of Practice For Design And Construction Of Shallow Foundations In Soils (Other Than Raft, Ring And Shell)
		IS 11089:2002	Code of practice for design and construction of ring foundation

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