

ABU DHABI SEWERAGE SERVICES COMPANY (ADSSC)

GENERAL SPECIFICATION FOR M & E WORKS

DIVISION 15 MECHANICAL

SECTION 15002 STANDARDS AND REGULATIONS

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Revision No.	Date	Revision Description / Purpose of Issue
01	April 2008	First Issue.
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1. **GENERAL REQUIREMENTS**

- a) The Contractor shall comply with all codes, regulations, specifications and standards referred to throughout the contract documents and listed herein.
- b) All references to codes, regulations, specifications and standards referred to in the Contract documents and drawings shall, unless stated otherwise, mean the latest edition, amendment or revision of such reference standard in effect as of date of submission of these bid documents by the Tenderers.
- c) Obtain an original copy of the latest edition of all codes, regulations, standards and technical literature referred to in the Contract documents and the same shall be kept on the project site, properly indexed and maintained in good order and readily available to ADSSC at all times. Upon completion of the works the said codes, standards, etc., shall be handed over to ADSSC.
- d) Present an affidavit from the manufacturer certifying that the product complies with the specified section. Where requested or specified, submit supporting test data to substantiate compliance in conformity with specified standards with a statement from the manufacturer that non-conformities have been observed.
- e) Where a reference standard referred to herein is in the form of a recommendation or suggestion, such recommendation or suggestion shall be deemed to be mandatory under this Contract unless conflicting with the particular specifications contained herein.
- f) For products or workmanship specified by association, trade or other consensus standards, the Contractor shall comply with the requirements of the standard, except when more rigid requirements are specified or are required by applicable codes.
- g) Should specified reference standards conflict with Contract documents, the Contractor shall request clarification from ADSSC before proceeding.
- h) References to published standards shall be construed as reference to a recognised equivalent standard.
- Neither the contractual relationship, duties and responsibilities of the parties in Contract nor those of ADSSC shall be altered by the Contract documents by mention or inference otherwise in any reference document.

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2. PURPOSE OF STANDARDS

- a) Equipment, plant, materials, installation and systems, etc. proposed to be used in the projects shall be strictly in compliance with all codes, regulations, specifications and standards.
- b) Standards shall be treated as a documented agreement with respect to the technical specifications and shall be followed throughout as rules and guidelines to ensure that the equipment, plant, materials, installation and systems, etc. are in accordance with the requirements of the specification.
- c) To ensure that the proposed equipment, plant, materials, installation and systems, etc. have been carefully examined by the Contractor that ensure product full compliance with the those requirements specified in the basic standards, product manufacturing standard, functional standards and quality standards.

3. INTERNATIONAL STANDARDS

- a) All equipment, plant, materials, systems, components, workmanship, working practices, procedures and all other items and activities shall comply with the quoted standards and regulations in Section 15002 of this specification and as qualified and amended throughout this specification.
- b) Section 15002 covers the main standards and codes of practice that cover the large majority of the contract requirements.
- c) Some requirements will not be covered by the above quoted standards, but regardless of whether or not a particular standard is specified, all products and services shall comply with any International ISO, IEC, BS EN, BS, PD and ASME covering such items, as a minimum, unless otherwise specified.
- d) Unless otherwise stated, ISO shall take precedent over IEC, which shall take precedence over BS EN, which will take precedence over BS, which will take precedence over all remaining standards.
- e) The following International Standards shall be used:

i. ISO ii. IEC iii. BS EN	International Organisation for Standardisation International Electrotechnical Commission British Standards European Norm
iv. BS	British Standards
v. PD	Published Documents
vi. CEN	European Committee for Standardisation
vii. ASTM	American Society for Testing and Materials
viii. NEMA	National Electrical Manufacturers Association
ix. ANSI	American National Standard Institution
x. ASME	American Society of Mechanical Engineers



xi. UL	Underwriters Laboratories
xii. NFPA	National Fire Protection Association
xiii. ATEX	Explosive Atmospheres Directive
xiv. AWS	American Welding Society
xv. AWWA	American Water Works Society
xvi. WIS	Water Industry Specification
xvii. DIN	German Institute for Standardisation
xviii. VDE	German Association for Electrical, Electronic & Information Technologies

4. INTERNATIONAL REGULATIONS

a) The following International Regulations shall be followed, where applicable:

i.	"IEEE"	Institut	e of Electri	ical a	nd Electroni	c En	gineers	
ii.	"IEE"	Latest	Edition	of	Institution	of	Electrical	
		Engine	Engineers Wiring Regulations					

5. LOCAL REGULATIONS

a) The following Local Regulations shall be followed:

i.	ADWEA	Abu Dhabi Water Electricity Authority					
ii.	ADDC	Abu Dhabi Distribution Company and other					
	ADWEA	Group Companies					
iii.	FEA	Federal Environmental Agency					
iv.	ETISALAT	The Emirates Telecommunication Corporation					
		Ltd.					
ν.	DCD	The General Directorate of Civil Defence					

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6. ISO STANDARDS

No.	STANDARD	DESCRIPTION		
1	ISO 1167	Thermoplastics pipes, fittings and assemblies for the conveyance of fluids		
2	ISO 11922-1	Thermoplastics pipes for the conveyance of fluids. Dimensions and tolerances. Part 1: Metric series		
3	ISO 12944	Paints and varnishes. Corrosion protection of steel structures by protective paint systems		
4	ISO 15614-8	Specification and qualification of welding procedures for metallic materials. Welding procedure test. Part 8: Welding of tubes to tube-plate joints		
5	ISO 161-1	Thermoplastics pipes for the conveyance of fluids. Nominal outside diameters and nominal pressures. Part 1: Metric series		
6 ISO 2045 Single sockets for unplasticized poly(vinyl chloride) pressure pipes with elastic sealing ring type jo Minimum depths of engagement				
7	ISO 2048	Double-socket fittings for unplasticized poly(vinyl chloride) (PVC-U) pressure pipes with elastic sealing ring type joints. Minimum depths of engagement		
8	ISO 2505	Thermoplastics pipes. Longitudinal reversion		
9	ISO 2507	Thermoplastics pipes and fittings. Vicat softening temperature		
10	ISO 2531	Ductile iron pipes, fittings, accessories and their joints for water or gas applications		
11	ISO 3126	Plastics piping systems. Plastics components. Determination of dimensions		
12	ISO 3127	Thermoplastics pipes. Determination of resistance to external blows. Round-the-clock method		
13	ISO 4065	Thermoplastics pipes. Universal wall thickness table		
14	ISO 4179	Ductile iron pipes and fittings for pressure and non- pressure pipelines. Cement mortar lining		
15	ISO 4427	Polyethylene (PE) pipes for water supply		
16	ISO 4633	Rubber seals. Joint rings for water supply, drainage and sewerage pipelines. Specification for materials		
17	ISO 5752	Metal valves for use in flanged pipe systems. Face-to- face and centre-to-face dimensions		
18	ISO 7186	Ductile iron products for sewage applications		
19	ISO 8179	Ductile iron pipes. External zinc-based coating		
20	ISO 8180	Ductile iron pipelines. Polyethylene sleeving for site application		
21	ISO 8501-1	Preparation of steel substrates before application of paints and related products. Visual assessment of surface cleanliness. Part 1: Rust grades and preparation grades of uncoated steel substrates and of steel substrates after overall removal of previous coatings		

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22	ISO 9000	Quality management systems. Fundamentals and vocabulary
23	ISO 9001	Quality management systems – Requirements
24	ISO 9906	Rotodynamic pumps. Hydraulic performance acceptance tests. Grades 1 and 2

7. IEC STANDARDS

No.	STANDARD	DESCRIPTION			
1	IEC 60044-1	Instrument transformers - Part 1: Current transformers			
2	IEC 60044-2	Instrument transformers - Part 2: Inductive Voltage Transformers			
3	IEC 60044-3	Instrument transformers - Part 3: Combined transformers			
4	IEC 60044-5	Instrument transformers - Part 5: Capacitor voltage transformers			
5	IEC 60051-1	Direct Acting Indicating Analogue Electrical Measuring Instruments and Their Accessories - Part 1: Definitions and General Requirements Common to All Parts			
6	IEC 60055-1	Paper-Insulated Metal-Sheathed Cables for Rated Voltages up to 18/30 kV (with Copper or Aluminium Conductors and Excluding Gas-Pressure and Oil- Filled Cables) Part 1: Tests on Cables and their Accessories			
7	IEC 60060	High-Voltage Test Techniques Part 1: General Definitions and Test Requirements			
8	IEC 60076-1	Power Transformers - Part 1: General			
9	IEC 60076-7	Power transformers - Part 7: Loading guide for oil- immersed power transformers			
10	IEC 60076-8	Power Transformers - Application Guide			
11	IEC 60076-10	Power Transformers - Part 10: Determination of Sound Levels			
12	IEC 60076-11	Power transformers Part 11: Dry-type transformers			
13	IEC 60079-0	Explosive atmospheres - Part 0: Equipment - General requirements			
14	IEC 60079-1	Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures 'd'			
15	IEC 60079-2	Explosive atmospheres - Part 2: Equipment protection by pressurized enclosures 'p'			
16	IEC 60079-5	Explosive atmospheres - Part 5: Equipment protection by powder filling 'q'			

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17	IEC 60079-6	Explosive atmospheres - Part 6: Equipment protection by oil immersion 'o'				
18	IEC 60079-7	Explosive atmospheres - Part 7: Equipment protection by increased safety 'e'				
19	IEC 60079-10	Electrical apparatus for explosive gas atmospheres - Part 10: Classification of hazardous areas				
20	IEC 60079-11	Explosive atmospheres - Part 11: Equipment protection by intrinsic safety 'i'				
21	IEC 60079-14	Electrical apparatus for explosive gas atmospheres - Part 14: Electrical installations in hazardous areas (other than mines)				
22	IEC 60079-15	Electrical apparatus for explosive gas atmospheres - Part 15: Construction, test and marking of type of protection 'n' electrical apparatus				
23	IEC 60079-18	Electrical apparatus for explosive gas atmospheres - Part 18: Construction, test and marking of type of protection encapsulation 'm' electrical apparatus				
24	IEC 60079-25	Electrical apparatus for explosive gas atmospheres - Part 25: Intrinsically safe systems				
25	IEC 60079-26	Explosive atmospheres - Part 26: Equipment with equipment protection level (EPL) Ga				
26	IEC 60085	Electrical insulation - Thermal evaluation and designation				
27	IEC 60905	Loading Guide for Dry-Type Power Transformers				
28	IEC 60099-1	Surge Arresters - Part 1: Non-Linear Resistor Type Gapped Surge Arresters for a.c. Systems				
29	IEC 60137	Insulated bushings for alternating voltages above 1000 V				
30	IEC 60204	Safety of machinery - Electrical equipment of machines				
31	IEC 60249	Protection against lightning - Part 1: General principles				
32	IEC 60255	Measuring relays and protection equipment				
33	IEC 60255-6	Electrical relays - Part 6: Measuring relays and protection equipment				
34	IEC 60265-1	High-Voltage Switches - Part 1: Switches for Rated Voltages Above 1 kV and Less Than 52 kV				
35	IEC 60255-1	Measuring relays and protection equipment - Part 1: Common requirements				
36	IEC 60269-1	Low-voltage fuses - Part 1: General requirements				
37	IEC 60269-4	Low-voltage fuses -Part 4: Supplementary requirements for fuse-links for the protection of semiconductor devices				
38	IEC 60282-1	High-Voltage Fuses - Part 1: Current-Limiting Fuses				
39	IEC 60296	Fluids for electrotechnical applications Unused mineral insulating oils for transformers and switchgear				
40	IEC 60309-2	Plugs, socket-outlets and couplers for industrial purposes - Part 2: Dimensional interchangeability requirements for pin and contact-tube accessories				
		Standards and Standards and				

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41	IEC 60354	Loading guide for oil-immersed power transformers
42	IEC 60364-5-54	Electrical installations of buildings - Part 5-54: Selection and erection of electrical equipment - Earthing arrangements, protective conductors and protective bonding conductors
43	IEC 60439-1	Low-voltage switchgear and controlgear assemblies - Part 1: Type-tested and partially type-tested assemblies
44	IEC 60445	Basic and safety principles for man-machine interface, marking and identification - Identification of equipment terminals and conductor terminations
45	IEC 60446	Basic and safety principles for man-machine interface, marking and identification - Identification of conductors by colours or alphanumerics
46	IEC 60470	High-Voltage Alternating Current Contactors and Contactor-Based Motor-Starters
47	IEC 60529	Degrees of protection provided by enclosures (IP Code)
48	IEC 60623	Secondary Cells and Batteries Containing Alkaline or Other Non-Acid Electrolytes - Vented Nickel-Cadmium Prismatic Rechargeable Single Cells
49	IEC 60694	Common Specifications For High-Voltage Switchgear and Controlgear Standards
50	IEC 60695-11-10	Fire hazard testing - Part 11-10: Test flames - 50 W horizontal and vertical flame test methods
51	IEC 60695-11-20	Fire hazard testing - Part 11-20: Test flames - 500 W flame test methods
52	IEC 60871-1	Shunt capacitors for a.c. power systems having a rated voltage above 1000 V - Part 1: General
53	IEC 60898-1	Electrical Accessories - Circuit-Breakers for Overcurrent Protection for Household and Similar Installations - Part 1: Circuit-Breakers for A.C. Operation
54	IEC 60905	Loading Guide for Dry-Type Power Transformers
55	IEC 60947-1	Low-volt switchgear & controlgear – Part 1
56	IEC 60947-2	Low-voltage switchgear and controlgear - Part 2: Circuit-breakers
57	IEC 60947-3	Low-Voltage Switchgear and Controlgear - Part 3: Switches, Disconnectors, Switch-Disconnectors and Fuse-Combination Units
58	IEC 60947-5-1	Low-voltage switchgear and controlgear Part 5-1: Control circuit devices and switching elements Electromechanical control circuit devices
59	IEC 60947-6-1	Low-voltage switchgear and controlgear - Part 6-1: Multiple function equipment - Transfer switching equipment
60	IEC 60947-7-1	CORR 1 Low-voltage switchgear and controlgear - Part 7-1: Ancillary equipment - Terminal blocks for copper conductors CORRIGENDUM 1

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61	IEC 61008-1	Residual current operated circuit-breakers without integral overcurrent protection for household and
		similar uses (RCCBs) - Part 1: General rules
62	IEC 61009	Residual current operated circuit-breakers with integral overcurrent protection for household and similar uses (RCBOs)
63	IEC 61131	Programmable controllers - Part 1: General information
64	IEC 61131-3	Programmable controllers - Part 3: Programming languages
65	IEC 61175	Industrial systems, installations and equipment and industrial products - Designation of signals
66	IEC 61346-1	Industrial Systems, Installations and Equipment and Industrial Products - Structuring Principles and Reference Designations Part 1: Basic Rules
67	IEC 61386-1	Conduit systems for electrical installations - Part 1: General requirements
68	IEC 61537	Cable management - Cable tray systems and cable ladder systems
69	IEC 61558-1	Safety of power transformers, power supplies, reactors and similar products - Part 1: General requirements and tests
70	IEC 61641	Enclosed low-voltage switchgear and controlgear assemblies - Guide for testing under conditions of arcing due to an internal fault
71	IEC 61666	Industrial systems, installations and equipment and industrial products - Identification of terminals within a system
72	IEC 61800-1	Adjustable Speed Electrical Power Drive Systems - Part 1: General Requirements - Rating Specifications for Low Voltage Adjustable Speed d.c. Power Drive Systems
73	IEC 61800-3	Adjustable Speed Electrical Power Drive Systems - Part 3: EMC requirements and specific test methods
74	IEC 62040	Uninterruptible power systems (UPS)
75	IEC 62271-1	High-voltage switchgear and controlgear - Part 1: Common specifications
76	IEC 62271-100	High-Voltage Switchgear and Controlgear - Part 100: High Voltage Alternating-Current circuit breakers
77	IEC 62271-102	High-Voltage Switchgear and Controlgear - Part 102: Alternating current disconnectors and earthing switches
78	IEC 62271-105	High-Voltage Switchgear and Controlgear - Part 105: Alternating Current Switch-Fuse Combustions
79	IEC 62271-200	High-voltage switchgear and controlgear Part 200: AC metal-enclosed switchgear and controlgear for rated voltages above 1 kV and up to and including 52 kV
80	IEC 62305	Protection against lightning

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8. BS EN STANDARDS

No.	ST	ANDARD		DESCRIPTION				
1	BS EN 10025 Hot rolled products of structure and delivery and delivery and delivery and delivery					l steels. Ge	neral	
	DOLIN	10020		l delivery conc				
2	BS EN	10025-2		al delivery con	ditions fo	or non-alloy		
			structura					
3	BS EN	10084	conditio	rdening steels	. rechnic	cal delivery		
4		10000						
4	BS EN	10000		Stainless steels Stainless steels. Technical delivery conditions for				
5	BS EN	10088-2	sheet/pl	ate and strip of ral purposes				
6	BS EN	10095		Heat resisting steels and nickel alloys				
7	BS EN	1011-1	Welding	. Recommenda s. General guid	ations fo	r welding of		
8	BS EN	1011-2	Welding	. Recommenda s. Arc welding	ations fo	r welding of		
9	BS EN	1011-3		. Recommenda s. Arc welding			metallic	
10	BS EN	1011-4	material	Welding. Recommendations for welding of metallic materials. Arc welding of aluminium and aluminium alloys				
11	BS EN	10131	electroly strength	Cold rolled uncoated and zinc or zinc-nickel electrolytically coated low carbon and high yield strength steel flat products for cold forming. Tolerances on dimensions and shape				
12	BS EN	10137-1	structura precipita	Plates and wide flats made of high yield strength structural steels in the quenched and tempered or precipitation hardened conditions. General delivery conditions				
13	BS EN	10137-2		conditions for	quenche	ed and temp	pered	
14	BS EN	10137-3	Delivery steels	conditions for	precipita	ation harder	ned	
15	BS EN	10142	steels st	ously hot-dip z rip and sheet f conditions				
16	BS EN	10143		ously hot-dip c ces on dimensi			nd strip.	
17	BS EN	10162		ed steel sectio ns. Dimensiona es				
18	BS EN	10204	Metallic	materials. Typ	es of ins	pection doc	uments	
19	BS EN	10210-1	Hot finis	hed structural grain structura	hollow se	ections of n	on-alloy	
20	BS EN	10210-2		ces, dimension	is and se	ectional pro	perties	
21	BS EN	10216-1	Seamles	ss steel tubes f al delivery con	for press			
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	1						1	
22	BS EN 1	10217-1		steel tubes for al delivery con				
	_			ith specified ro				
				ding pipe fitting				
23	BS EN 1	10253-1		use and without	-	•		
			requirer				-	
				y steel tubes s	uitable f	or welding :	and	
24	BS EN 1	10255		g. Technical de		•		
				or water supply			20	
25	BS EN 1	1074		nents and appr	·			
				or water supply				
26	BS EN 1	1074-3		nents and appr				
20	DOLIN	107 4 0	Check v		opnate	Cimeation	.0010.	
				or water supply	/ Fitnes	s for purpos	20	
27	BS EN 1	1074 5		nents and appr		• •		
21	DSEN	1074-5	Control		opnate	enncation	18515.	
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28	BS EN 1	1088		ed with guards	s. Princip	les for desi	gn and	
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29	BS EN 1	1092		and their joints				
				fittings and acc				
			•	and their joints		•		
30	BS EN 1	1092-1		fittings and acc	essories	s, PN desigr	nated.	
				Steel flanges				
				Flanges and their joints. Circular flanges for pipes,				
31	BS EN 1	1092-2		valves, fittings and accessories, PN designated.				
			Cast iro	Cast iron flanges				
32	BS EN 1	1127-1		Explosive atmospheres. Explosion prevention and				
52	DOLIN	1127-1	protectio	protection. Basic concepts and methodology				
			Harmon	Harmonized system of quality assessment for				
33	BS EN 1	116000-1		electronic components. Generic specification:				
			electron	electromechanical all-or-nothing relays. General				
			Harmon	ized system of	quality a	assessment	for	
34	BS EN 1	116205	electron	ic components	. Blank c	letail specif	ication.	
34	DSEN	110205	Hermeti	cally sealed re	lays. For	severe sta	tic	
			environr	nental conditio	ns			
			Harmon	ized system of	quality a	assessment	for	
35	BS EN 1	116006	electron	electronic components. Blank detail specification.				
30	DOEN	110200	Hermeti	cally sealed re	lays. For	severe mo	bile	
			environr	nental conditio	ns			
				ized system of		assessment	for	
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36	BS EN 1	116207		electronic components. Blank detail specification. Hermetically sealed relays. For severe airborne				
				nental conditio				
37	BS EN 1	1171	Industria	al valves. Cast	iron date	e valves		
				um and alumini			4	
				n profiles in all				
38	BS EN 1	12020-1		3. Technical co				
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39	BS EN 1	12020-2		n profiles in all	•			
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		AW-6063. Tolerances on dimensions and form
40	BS EN 12162	Liquid pumps. Safety requirements. Procedure for hydrostatic testing
41	BS EN 12163	Copper and copper alloys. Rod for general purposes
42	BS EN 12164	Copper and copper alloys. Rod for free machining purposes
43	BS EN 12165	Copper and copper alloys. Wrought and unwrought forging stock
44	BS EN 12167	Copper and copper alloys. Profiles and rectangular bar for general purposes
45	BS EN 12201-1	Plastic piping systems for water supply. Polyethylene (PE). General
46	BS EN 12201-2	Plastic piping systems for water supply. Polyethylene (PE). Pipes
47	BS EN 12201-5	Plastic piping systems for water supply. Polyethylene (PE). Fitness for purpose of the system
48	BS EN 12288	Industrial valves. Copper alloy gate valves
49	BS EN 12334	Industrial valves. Cast iron check valves
50	BS EN 12373-1	Aluminium and aluminium alloys. Anodizing. Method for specifying decorative and protective anodic oxidation coatings on aluminium
51	BS EN 12385-1	Steel wire ropes. Safety. General requirements
52	BS EN 12390-8	Testing hardened concrete. Depth of penetration of water under pressure
53	BS EN 124	Gully tops and manhole tops for vehicular and pedestrian areas. Design requirements, type testing, marking, quality control
54	BS EN 12420	Copper and copper alloys. Forgings
55	BS EN 12464-1	Light and lighting. Lighting of work places. Indoor work places
56	BS EN 12570	Industrial valves. Method for sizing the operating element
57	BS EN 12573	Welded static non-pressurized thermoplastic tanks
58	BS EN 12639	Liquid pumps and pump units. Noise test code. Grade 2 and grade 3 of accuracy
59	BS EN 1295-1	Structural design of buried pipelines under various conditions of loading. General requirements
60	BS EN 12953-8	Shell boilers. Requirements for safeguards against excessive pressure
61	BS EN 13101	Steps for underground man entry chambers. Requirements, marking, testing and evaluation of conformity
62	BS EN 13190	Dial thermometers
63	BS EN 13566	Plastics piping systems for renovation of underground non-pressure drainage and
		sewerage networks. General

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			Sherard	zing. Zinc diffu	ision cos	atinas on fo	rrous	
65	BS EN	13811		Specification			11003	
66	BS EN	13835	Foundin	g. Austenitic ca	ast irons			
67	BS EN	14020-1		ements. Speci	fication f	for textile gl	ass	
				Designation	fication	or toytilo al		
68	BS EN	14020-2		ements. Speci Methods of tes				
				ements. Speci				
69	BS EN	14020-3		Specific requir		or toxtilo gi	400	
				ement. Specifi		or textile gl	ass	
70	BS EN	14118-1	mats (ch	opped strand	and cont	tinuous filar	nent	
				esignation				
				ement. Specifi				
71	BS EN	14118-2		opped strand				
				lethods of test				
				ement. Specifi				
72	BS EN	14118-3		opped strand		tinuous filar	nent	
				pecific require				
73	BS EN	14161		m and natural	0	istries. Pipe	line	
				tation systems				
74	BS EN	14181		ry source emis		uality assu	rance of	
				ed measuring				
75	BS EN	1435		tructive exami				
				Radiographic examination of welded jointsGeneral requirements for components specifically				
70		BS EN 14457						
76	B2 EN			d for use in tre	ncniess	construction	1 OF	
				nd sewers	forwat	or our ob.		
77	BS EN	1450 1		piping systems				
//	DO EN	1452-1		Unplasticized poly(vinyl chloride) (PVC-U). General				
				Plastics piping systems for water supply.				
78	BS EN	1452-2					Pines	
				Unplasticized poly(vinyl chloride) (PVC-U). Pipes Plastics piping systems for water supply.				
79	BS EN	1452-3		Unplasticized poly(vinyl chloride) (PVC-U). Fittings				
				piping systems				
80	BS EN 1452-4			cized poly(viny			. Valves	
-			•	llary equipmer		//	-	
				piping systems		er supply.		
81	BS EN	1452-5		cized poly(viny			. Fitness	
			for purpo	ose of the syste	em	, , , ,		
82	BS EN	1515-1	Flanges	and their joints	s. Bolting	g. Selection	of	
02		1010-1	bolting	-				
83	BS EN	1561	Foundin	g. Grey cast ir	ons			
84	BS EN	1562	Foundin	g. Malleable ca	ast irons			
85	BS EN 1563			g. Spheroidal g		cast iron		
				ents for slings			el liftina	
86	BS EN	16//-5		ith latch. Grad		0	5	
07		1714		tructive testing		ed joints. U	Itrasonic	
87	BS EN	1714		f welded joints		•		
88	BS EN	1751		on for building		minal devic	es.	
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		Aerodynamic testing of dampers and valves
89	BS EN 1982	Copper and copper alloys. Ingots and castings
90	BS EN 20273	Fasteners. Clearance holes for bolts and screws
91	BS EN 287-1	Approval testing of welders for fusion welding. Steels
92	BS EN 288-1	Specification and approval of welding procedures for metallic materials. General rules for fusion welding
93	BS EN 298	Automatic gas burner control systems for gas burners and gas burning appliances with or without fans
94	BS EN 40	Lighting columns. Definitions and terms
95	BS EN 440	Welding consumables. Wire electrodes and deposits for gas shielded metal arc welding of non alloy and fine grain steels. Classification
96	BS EN 473	Non-destructive testing. Qualification and certification of NDT personnel. General principles
97	BS EN 485-1	Aluminium and aluminium alloys. Sheet, strip and plate. Technical conditions for inspection and delivery
98	BS EN 499	Welding consumables. Covered electrodes for manual metal arc welding of non alloy and fine grain steels. Classification
99	BS EN 50018	Electrical apparatus for potentially explosive atmospheres. Flameproof enclosure 'd'
100	BS EN 50081	Electromagnetic compatibility. Generic emission standard
101	BS EN 50133-1	Alarm systems. Access control systems for use in security applications. System requirements
102	BS EN 50170	General purpose field communication system
103	BS EN 50268-1	Common test methods for cables under fire conditions. Measurement of smoke density of cables burning under defined conditions. Apparatus
104	BS EN 50347	General purpose three-phase induction motors having standard dimensions and outputs. Frame numbers 56 to 315 and flange numbers 65 to 740
105	BS EN 54-1	Fire detection and fire alarm systems. Introduction
106	BS EN 545	Ductile iron pipes, fittings, accessories and their joints for water pipelines. Requirements and test methods
107	BS EN 548	Resilient floor coverings. Specification for plain and decorative linoleum
108	BS EN 593	Industrial valves. Metallic butterfly valves
109	BS EN 598	Ductile iron pipes, fittings, accessories and their joints for sewerage applications. Requirements and test methods
110	BS EN 60255-6	Electrical relays. Measuring relays and protection equipment

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111	BS EN 60034-1	Rotating electrical machines. Rating and performance
112	BS EN 60044-1	Instrument transformers. Current transformers
113	BS EN 60044-2	Instrument transformers. Inductive voltage transformers
114	BS EN 60044-3	Instrument transformers. Combined transformers
115	BS EN 60051	Direct acting indicating analogue electrical
		measuring instruments and their accessories
116	BS EN 60060	High voltage test techniques
117	BS EN 60073	Basic and safety principles for man-machine interface, marking and identification. Coding principles for indicators and actuators
118	BS EN 60076	Power transformers
119	BS EN 60076-5	Power transformers. Ability to withstand short- circuit
120	BS EN 60079	Electrical apparatus for explosive gas atmospheres. General requirements
121	BS EN 60079-10	Electrical apparatus for explosive gas
		atmospheres. Classification of hazardous areas
122	BS EN 60079-14	Electrical apparatus for explosive gas atmospheres. Electrical installations in hazardous areas (other than mines)
123	BS EN 60085	Electrical insulation. Thermal classification
124	BS EN 60099-1	Surge arresters. Non-linear resistor type gapped surge arrestors for a.c. systems
125	BS EN 60137	Insulated bushings for alternating voltages above 1000 V
126	BS EN 60146-1	Semiconductor convertors. General requirements and line commutated convertors
127	BS EN 60204-1	Safety of machinery. Electrical equipment of machines. General requirements
128	BS EN 60255-6	Electrical relays. Measuring relays and protection equipment
129	BS EN 60265-1	Specification for high-voltage switches. Switches for rated voltages above 1 kV and less than 52 kV
130	BS EN 60269-1	Low-voltage fuses. General requirements
131	BS EN 60298-1	A.C. metal-enclosed switchgear and controlgear for rated voltages above 1 kV and up to and including 52 kV
132	BS EN 60309-1	Plugs, socket-outlets and couplers for industrial purposes. General requirements
133	BS EN 60309-2	Plugs, socket-outlets and couplers for industrial purposes. Dimensional interchangeability requirements for pin and contact-tube accessories
134	BS EN 60335-2-40	Household and similar electrical appliances. Safety. Particular requirements for electrical heat pumps, air-conditioners and dehumidifiers
135	BS EN 60439-1	Specification for low-voltage switchgear and controlgear assemblies. Specification for type- tested and partially type-tested assemblies



136	BS EN 60439-3	Specification for low-voltage switchgear and controlgear assemblies. Particular requirements for low-voltage switchgear and controlgear assemblies intended to be installed in places where unskilled persons have access to their use. Distribution boards
137	BS EN 60445	Basic and safety principles for man-machine interface, marking and identification. Identification of equipment terminals and conductor terminations
138	BS EN 60446	Basic and safety principles for man-machine interface, marking and identification. Identification of conductors by colours or alphanumerics
139	BS EN 60470	High-voltage alternating current contactors and contactor-based motor starters
140	BS EN 60529	Specification for degrees of protection provided by enclosures (IP code)
141	BS EN 60598-2-3	Luminaires. Particular requirements. Luminaires for road and street lighting
142	BS EN 60598-2-22	Luminaires. Particular requirements. Luminaires for emergency lighting
143	BS EN 60617-2	Graphical symbols for diagrams. Symbol elements, qualifying symbols and other symbols having general application
144	BS EN 60623	Secondary cells and batteries containing alkaline or other non-acid electrolytes. Vented nickel- cadmium prismatic rechargeable single cells
145	BS EN 60669-1	Switches for household and similar fixed-electrical installations. General requirements
146	BS EN 60694	Common specifications for high-voltage switchgear and controlgear standards
147	BS EN 60702-1	Mineral insulated cables and their terminations with a rated voltage not exceeding 750 V. Cables
148	BS EN 60742	Isolating transformers and safety isolating transformers. Requirements
149	BS EN 60831	Shunt power capacitors of the self-healing type for a.c. systems having a rated voltage up to and including 1kV
150	BS EN 60871-1	Shunt capacitors for a.c. power systems having a rated voltage above 1000 V. General
151	BS EN 60898	Specification for circuit-breakers for overcurrent protection for household and similar installations
152	BS EN 60903	Live working. Gloves of insulating material
153	BS EN 60947-1	Low-voltage switchgear and controlgear. General rules
154	BS EN 60947-2	Low-voltage switchgear and control gear. Circuit- breakers
155	BS EN 60947-3	Low voltage switchgear and controlgear. Switches, disconnectors, switch-disconnectors and fuse-combination units

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156	BS EN 60947-4	Low-voltage switchgear and controlgear.
100	BO EN COOTA 4	Contactors and motor-starters
157	BS EN 60947-4-1	Low-voltage switchgear and controlgear. Contactors and motor-starters. Electromechanical contactors and motor-starters
158	BS EN 60947-5-1	Specification for low-voltage switchgear and controlgear. Control circuit devices and switching elements. Electromechanical control circuit devices
159	BS EN 60947-6	Low-voltage switchgear and controlgear. Multiple function equipment
160	BS EN 60947-6-1	Low-voltage switchgear and controlgear. Multiple function equipment. Transfer switching equipment
161	BS EN 60947-7	Specification for low-voltage switchgear and controlgear. Ancillary equipment
162	BS EN 60947-7-1	Specification for low-voltage switchgear and controlgear. Ancillary equipment. Terminal blocks for copper conductors
163	BS EN 60950	Safety of information technology equipment
164	BS EN 61000	Electromagnetic compatibility (EMC)
165	BS EN 61000-6	Electromagnetic compatibility (EMC). Generic standards
166	BS EN 61000-6-1	Electromagnetic compatibility (EMC). Generic standards. Immunity for residential, commercial and light-industrial environments
167	BS EN 61000-6-2	Electromagnetic compatibility (EMC). Generic standards. Immunity for industrial environments
168	BS EN 61000-6-3	Electromagnetic compatibility (EMC). Generic standards. Emission standard for residential, commercial and light-industrial environments
169	BS EN 61008	Residual current operated circuit-breakers without integral overcurrent protection for household and similar used (RCCBs).
170	BS EN 61010-1	Safety requirements for electrical equipment for measurement, control and laboratory use. General requirements
171	BS EN 61131	Programmable controllers. General information
172	BS EN 61131-3	Programmable controllers. Programming languages
173	BS EN 61175	Industrial systems, installation and equipment and industrial products. Designation of signals
174	BS EN 61810-1	Electromechanical elementary relays. General and safety requirements
175	BS EN 61330	High-voltage/low-voltage prefabricated substations
176	BS EN 61346	Industrial systems, installations and equipment and industrial products. Structuring principles and reference designations. Basic rules
177	BS EN 61386-1	Conduit systems for cable management. General requirements
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178	BS EN 61537	Cable management. Cable tray systems and
179	BS EN 61666	cable ladder systems Identification of terminals within a system
180	BS EN 62040	Uninterruptible power systems (UPS)
181	BS EN 62271	High-voltage switchgear and controlgear
101	B3 EN 0227 1	<u> </u>
		High-voltage switchgear and controlgear. AC metal-enclosed switchgear and controlgear for
182	BS EN 62271-200	rated voltages above 1 kV and up to and including
		52 kV
183	BS EN 62271 202	High-voltage switchgear and controlgear. Part
103	BS EN 62271-202	202: High voltage/low voltage prefabricated
404		substation
184	BS EN 62305	Protection against lightning
185	BS EN 671-1	Fixed fire fighting systems. Hose systems. Hose
		reels with semi-rigid hose
186	BS EN 671-2	Fixed fire fighting systems. Hose systems. Hose
		systems with lay-flat hose
		Fixed fire fighting systems. Hose systems.
187	BS EN 671-3	Maintenance of hose reels with semi-rigid hose
		and hose systems with lay-flat hose
188	BS EN 681	Elastomeric seals. Material requirements for pipe
100		joint seals used in water and drainage applications
	BS EN 682	Elastomeric seals. Materials requirements for
189		seals used in pipes and fittings carrying gas and
		hydrocarbon fluids
190	BS EN 696	Fibre ropes for general service. Polyamide
191	BS EN 729	Quality requirements for welding. Fusion welding
101	B0 ER 723	of metallic materials
192	BS EN 809	Pumps and pump units for liquids. Common safety
		requirements
193	BS EN 837	Pressure gauges
194	BS EN 837-1	Pressure gauges. Bourdon tube pressure gauges.
134	BS EN 837-1	Dimensions, metrology, requirements and testing
]		Safety of machinery. Guards. General
195	BS EN 953	requirements for the design and construction of
		fixed and movable guards
196	BS EN 970	Non-destructive examination of fusion welds.
130		Visual examination
197	BS EN ISO 10088	Small craft. Permanently installed fuel systems
131		and fixed fuel tanks
198	BS EN ISO 12100	Safety of machinery. Basic concepts, general
190		principles for design
		Safety of machinery. Basic concepts, general
199	BS EN ISO 12100 -1	principles for design. Basic terminology,
		methodology
200		Safety of machinery. Permanent means of access
200	BS EN ISO 14122-2	to machinery. Working platforms and walkways
		Safety of machinery. Permanent means of access
201	BS EN ISO 14122-3	to machinery. Stairways, stepladders and guard-
		rails

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202	BS EN ISO 1461	Hot dip galvanized coatings on fabricated iron and steel articles. Specifications and test methods
203	BS EN ISO 14847	Rotary positive displacement pumps. Technical requirements
204	BS EN ISO 15614	Specification and qualification of welding procedures for metallic materials. Welding procedure test
205	BS EN ISO 16330	Reciprocating positive displacement pumps and pump units. Technical requirements
206	BS EN ISO 4624	Paints and varnishes. Pull-off test for adhesion
207	BS EN ISO 5210	Industrial valves. Multi-turn valve actuator attachments
208	BS EN ISO 5211	Industrial valves. Part-turn actuator attachments
209	BS EN ISO 6817	Measurement of conductive liquid flow in closed conduits. Method using electromagnetic flowmeters
210	BS EN ISO 9906	Rotodynamic pumps. Hydraulic performance acceptance tests. Grades 1 and 2
211	BS EN ISO 9934-1	Non-destructive testing. Magnetic particle testing. General principles

9. **BS STANDARDS**

No.	STANDARD	DESCRIPTION
1	BS 1042	Measurement of fluid flow in closed conduits
2	BS 1042-2	Measurement of fluid flow in closed conduits. Velocity area methods
3	BS 1088	Marine plywood
4	BS 1203	Hot-setting phenolic and aminoplastic wood adhesives. Classification and test method
5	BS 1247-1	Manhole steps. Specification for galvanized ferrous or stainless steel manhole steps
6	BS 1387	Specification for screwed and socketed steel tubes and tubulars and for plain end steel tubes suitable for welding or for screwing to BS 21 pipe threads
7	BS 142	Electrical protection relays
8	BS 1449-1-1	Steel plate, sheet and strip. Carbon and carbon- manganese plate, sheet and strip. General specification
9	BS 1452	Specification for flake graphite cast iron
10	BS 1470	Specification for wrought aluminium and aluminium alloys for general engineering purposes: plate, sheet and strip
11	BS 148	Specification for unused and reclaimed mineral insulating oils for transformers and switchgear
12	BS 1486	Lubricating nipples
13	BS 1523	Glossary of terms used in automatic controlling and regulating systems

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	DO 4500	Circular flanges for pipes, valves and fittings (Class			
14	BS 1560	designated)			
15	BS 1561	Specification for silver anodes and silver salts for electroplating			
16	BS1571	Specification for testing of positive displacement compressors and exhausters			
17	BS 1586	Methods for performance testing and presentation of performance data for refrigerant condensing units			
18	BS 159	Specification for high-voltage busbars and busbar connections			
19	BS 1615	Method for specifying anodic oxidation coatings on aluminium and its alloys			
20	BS 1640-3	Specification for steel butt-welding pipe fittings for the petroleum industry. Wrought carbon and ferritic alloy steel fittings. Metric units			
21	BS 1646-1	Symbolic representation for process measurement control functions and instrumentation. Basic requirements			
22	BS 1646-2	Symbolic representation for process measurement control functions and instrumentation. Specification for additional basic requirements			
23	BS 1646-3	Symbolic representation for process measurement control functions and instrumentation. Specification for detailed symbols for instrument interconnection diagrams			
24	BS 1646-4	Symbolic representation for process measurement control functions and instrumentation. Specification for basic symbols for process computer, interface and shared display/control functions			
25	BS 171	Power transformers			
26	BS 1710	Specification for identification of pipelines and services			
27	BS 1804-3	Specification for parallel steel dowel pins. Parallel and taper types having screw threads for extraction purposes. Metric series			
28	BS 1881	Testing concrete			
29	BS 2035	Specification for cast iron flanged pipes and flanged fittings			
30	BS 2048	Specification for dimensions of fractional horse-power motors			
31	BS 21	Specification for pipe threads for tubes and fittings where pressure-tight joints are made on the threads (metric dimensions)			
32	BS 6244	Code of practice for stationary air compressors			
33	BS 2562	Specification for cable boxes for transformers and reactors			
34	BS 2573 Rules for the design of cranes				
35	BS 2633	Specification for Class I arc welding of ferritic steel			
36	BS 2757	pipework for carrying fluids Method for determining the thermal classification of electrical insulation			
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37	BS 2782-0	Methods of testing. Plastics. Introduction
		Methods of testing plastics. Thermal properties.
38	BS 2782-1	Flammability of a test piece 550 mm x 35 mm of thin
		polyvinyl chloride sheeting (laboratory method)
		Methods of testing plastics. Electrical properties.
39	BS 2782-2	Determination of effect of polyvinyl chloride compound
		on the loss tangent of polyethylene
		Methods of testing plastics. Mechanical properties.
40	BS 2782-3	Complex shear viscosity using a parallel-plate
		oscillatory rheometer
	50.0070	Specification for the design and testing of steel
41	BS 2853	overhead runway beams
		Specification for class II arc welding of carbon steel
42	BS 2971	pipework for carrying fluids
43	BS 302	Stranded steel wire ropes
44	BS 3145	Specification for laboratory pH meter
45	BS 3169	Specification for first aid reel hoses for fire-fighting
		purposes
46	BS 3170	Specification for flexible couplings for power
		transmission
47	BS 3396-1	Woven glass fibre fabrics for plastics reinforcement.
		Specification for loom-state fabrics
48	BS 3396-2	Woven glass fibre fabrics for plastics reinforcement.
40	DO 3330-2	Specification for desized fabrics
		Woven glass fibre fabrics for plastics reinforcement.
49	BS 3396-3	Specification for finished fabrics for use with polyester
		resin systems
		Specification for bitumen-based coatings for cold
50	BS 3416	application, suitable for use in contact with potable
		water
51	BS 3532	Method of specifying unsaturated polyester resin
51	DS 3032	systems
52	BS 3535	Isolating transformers and safety isolating
52	DG 3030	transformers
		Specification for carbon steel pipes and tubes with
53	BS 3601	specified room temperature properties for pressure
		purposes
54	BS 3643	ISO metric screw threads
	DO 0070	Switches for household and similar fixed electrical
55	BS 3676	installations
56	BS 3680	Measurement of liquid flow in open channels
		Methods of measurement of liquid flow in open
57	BS 3680-4C	channels. Weirs and flumes. Flumes
┝───┼		
58	BS 3692	ISO metric precision hexagon bolts, screws and nuts.
		Specification
		Specification for E glass fibre woven roving fabrics for
	BS 3749	the reinforcement of polyester and epoxy resins
59	DO 0749	systems

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		Specification for colours for identification, coding and
60	BS 381C	special purposes
61	BS 3892	Pulverized-fuel ash
62	BS 3900	Methods of test for paints
63	BS 3939	Graphical symbols for electrical power,
		telecommunications and electronics diagrams
64	BS 3958	Thermal insulating materials
65	BS 3958-4	Thermal insulating materials. Bonded preformed man- made mineral fibre pipe sections
66	BS 3974-1	Specification for pipe supports. Pipe hangers, slider and roller type supports
67	BS 3974-2	Specification for pipe supports. Pipe clamps, cages, cantilevers and attachments to beams
68	BS 4	Structural steel sections
69	BS 4-1	Structural steel sections. Specification for hot-rolled sections
70	BS 4027	Specification for sulfate-resisting Portland cement
71	BS 4079	Specification for textile reinforced rubber hydraulic hoses and hose assemblies
72	BS 4211	Specification for permanently fixed ladders
		Specification for industrial plugs, socket-outlets and
73	BS 4343	couplers for a.c. and d.c. supplies
74	BS 4360	Specification for weldable structural steels
75	BS 4409	Screw conveyors
76	BS 4449	Steel for the reinforcement of concrete. Weldable reinforcing steel. Bar, coil and decoiled product. Specification
77	BS 449	Specification for the use of structural steel in building
78	BS 4504	Circular flanges for pipes, valves and fittings (PN designated)
79	BS 4504-3-3	Circular flanges for pipes, valves and fittings (PN designated). Specification for copper alloy and composite flanges
80	BS 4515	Specification for welding of steel pipelines on land and offshore
81	BS 4549	Guide to quality control requirements for reinforced plastics mouldings
82	BS 4568	Specification for steel conduit and fittings with metric threads of ISO form for electrical installations
83	BS 4584	Metal-clad base materials for printed wiring boards
84	BS 4592	Industrial type flooring and stair treads
85	BS 4592-1	Industrial type flooring and stair treads. Metal open bar gratings. Specification
86	BS 4592-4	Industrial type flooring and stair treads. Glass reinforced plastics (GRP) open bar gratings. Specification
87	BS 4607	Non-metallic conduits and fittings for electrical installations

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88	BS 466	Specification for power driven overhead travelling cranes, semi-goliath and goliath cranes for general use			
89	BS 4662	Specification for boxes for the enclosure of electrical accessories			
90	BS 4675	Mechanical vibration in rotating machinery			
91	BS 4677	Specification for arc welding of austenitic stainless steel pipework for carrying fluids			
92	BS 4678	Cable trunking			
93	BS 476	Fire tests on building materials and structures			
94	BS 476-7	Fire tests on building materials and structures. Method of test to determine the classification of the surface spread of flame of products			
95	BS 476-22	Fire tests on building materials and structures. Methods for determination of the fire resistance of non-loadbearing elements of construction			
96	BS 4800	Schedule of paint colours for building purposes			
97	BS 486	Specification for asbestos-cement pressure pipes and joints			
98	BS 4871	Specification for approval testing of welders working to approved welding procedures			
99	BS 4872	Specification for approval testing of welders when welding procedure approval is not required			
100	BS 4921	Specification for sherardized coatings on iron or steel			
101	BS 4994	Specification for design and construction of vessels and tanks in reinforced plastics			
102	BS 4999	General requirements for rotating electrical machines			
103	BS 4999-101	General requirements for rotating electrical machines. Specification for rating and performance			
104	BS 4999-105	General requirements for rotating electrical machines. Classification of degrees of protection provided by enclosures for rotating machinery			
105	BS 4999-140	General requirements for rotating electrical machines. Specification for voltage regulation and parallel operation of a.c. synchronous generators			
106	BS 4999-143	General requirements for rotating electrical machines. Specification for tests			
107	BS 5000	Rotating electrical machines of particular types or for particular applications			
108	BS 5000-11	Specification for rotating electrical machines of particular types or for particular applications. Small-power electric motors and generators			
109	BS 5000-99	Rotating electrical machines of particular types or for particular applications. Machines for miscellaneous applications			
110	BS 50081	Electromagnetic compatibility. Generic emission			
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		standard
111	BS 5075	Concrete admixtures
	03 307 3	Method of specifying general purpose polypropylene
112	BS 5139	and propylene copolymer materials for moulding and extrusion
113	BS 5150	Specification for cast iron gate valves
114	BS 5153	Specification for cast iron check valves for general purposes
115	BS 5155	Specification for butterfly valves
116	BS 5158	Specification for cast iron plug valves
117	BS 5163	Valves for waterworks purposes
118	BS 5266	Emergency lighting
119	BS 5274	Specification for fire hose reels (water) for fixed installations
120	BS 5306	Code of practice for fire extinguishing installations and equipment on premises
121	BS 5306-1	Code of practice for fire extinguishing installations and equipment on premises. Hose reels and foam inlets
122	BS 5308	Instrumentation cables
123	BS 5308-2	Instrumentation cables. Specification for PVC insulated cables
124	BS 5328	Concrete
125	BS 5395	Stairs, ladders and walkways
126	BS 5395-3	Stairs, ladders and walkways. Code of practice for the design of industrial type stairs, permanent ladders and walkways
127	BS 5446	Fire detection and fire alarm devices for dwellings
128	BS 5455	Specification for polyurethane coated nylon fabric for mattress covers
129	BS 546	Specification for plugs made of resilient material
130	BS 5467	Electric cables. Thermosetting insulated, armoured cables for voltages of 600/1000 V and 1900/3300 V
131	BS 5480	Specification for glass reinforced plastics (GRP) pipes, joints and fittings for use for water supply or sewerage
132	BS 5486-12	Low-voltage switchgear and controlgear assemblies. Specification for particular requirements of type-tested miniature circuit-breaker boards
133	BS 5486-13	Low-voltage switchgear and controlgear assemblies. Specification for particular requirements of consumer units
134	BS 5489	Code of practice for the design of road lighting
135	BS 5512	Method of calculating dynamic load ratings and rating life of rolling bearings
136	BS 5514-4	Reciprocating internal combustion engines. Performance. Speed governing

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		Specification for electronic variable control switches
137	BS 5518	(dimmer switches) for tungsten filament lighting
138	BS 5588-9	Fire precautions in the design, construction and use of buildings. Code of practice for ventilation and air conditioning ductwork
139	BS 5720	Code of practice for mechanical ventilation and air conditioning in buildings
140	BS 5733	Specification for general requirements for electrical accessories
141	BS 5839	Fire detection and fire alarm systems for buildings
142	BS 5863	Analogue signals for process control systems
143	BS 5918	Code of practice for solar heating systems for domestic hot water
144	BS 5950	Structural use of steelwork in building
145	BS 5950-1	Structural use of steelwork in building. Code of practice for design. Rolled and welded sections
146	BS 5970	Code of practice for thermal insulation of pipework and equipment in the temperature range of -100°C to +870°C
147	BS 599	Methods of testing pumps
148	BS 6004	Electric cables. PVC insulated, non-armoured cables for voltages up to and including 450/750 V, for electric power, lighting and internal wiring
149	BS 6007	Electric cables. Single core unsheathed heat resisting cables forvoltages up to and including 450/750 V, for internal wiring
150	BS 6121	Mechanical cable glands
151	BS 6177	Guide to selection and use of elastomeric bearings for vibration isolation of buildings
152	BS 6180	Barriers in and about buildings. Code of practice
153	BS 6207	Specification for mineral-insulated copper-sheathed cables with copper conductors
154	BS 6220	Specification for junction boxes for use in electrical installations with rated voltages not exceeding 250 V
155	BS 6231	Electric cables. Single core PVC insulated flexible cables of rated voltage 600/1000 V for switchgear and controlgear wiring
156	BS 6297	Code of practice for design and installation of small sewage treatment works and cesspools
157	BS 6346	Electric cables. PVC insulated, armoured cables for voltages of 600/1000 V and 1900/3300 V
158	BS 6399	Loading for buildings
159	BS 6399-1	Loading for buildings. Code of practice for dead and imposed loads
160	BS 6399-2	Loading for buildings. Code of practice for wind loads
161	BS 6399-3	Loading for buildings. Code of practice for imposed roof loads



162	BS 6405	Specification for non-calibrated short link steel chain (grade 30) for general engineering purposes: class 1 and 2				
163	BS 6436	Specification for ground mounted distribution transformers for cable box or unit substation connection				
164	BS 6480	Specification for impregnated paper-insulated lead or lead alloy sheathed electric cables of rated voltages up to and including 33000 V				
165	BS 65	Specification for vitrified clay pipes, fittings and ducts, also flexible mechanical joints for use solely with surface water pipes and fittings				
166	BS 6500	Electric cables. Flexible cords rated up to 300/500 V, for use with appliances and equipment intended for domestic, office and similar environments				
167	BS 6593	Code of practice for on-site non-mechanical jointing of plied textile and steel reinforced conveyor belting				
168	BS 6651	Code of practice for protection of structures against lightning				
169	BS 6699	Specification for ground granulated blastfurnace slag for use with Portland cement				
170	BS 6730	Specification for black polyethylene pipes up to nominal size 63 for above ground use for cold potable water				
171	BS 6739	Code of practice for instrumentation in process control systems: installation design and practice				
172	BS 6757	Methods of test for thermal performance of solar collectors				
173	BS 7079	Preparation of steel substrates before application of paints and related products				
174	BS 7226	Methods of test for performance of inlet air cleaning equipment for internal combustion engines and compressors				
175	BS 7273	Code of practice for the operation of fire protection measures				
176	BS 7288	Specification for socket outlets incorporating residual current devices (S.R.C.D.s)				
177	BS 7346	Components for smoke and heat control systems				
178	BS 7405	Guide to selection and application of flowmeters for the measurement of fluid flow in closed conduits				
179	BS 7430	Code of practice for earthing				
180	BS 750	Specification for underground fire hydrants and surface box frames and covers				
181	BS 7523	Specification for preformed cellular polyethylene (PE) materials for the thermal insulation of pipework				
182	BS 7671	Requirements for electrical installations. IEE Wiring Regulations. Sixteenth edition				
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183BS 7679Plain bearings. Quality control techniques and inspection of geometrical and material quality characteristics184BS 7735Guide to loading of oil-immersed power transformers185BS 7772Plain bearings. Measurement of wall thickness of thin- walled half-bearings and thin-walled bushes186BS 7775Penstocks for use in water and other liquid flow applications. Specification187BS 7821Three phase oil-immersed distribution transformers, 50 Hz, from 50 to 2500 kVA with highest voltage for equipment not exceeding 36 Kv188BS 7844Three-phase dry-type distribution transformers 50 Hz, from 100 to 2500 kVA with highest voltage for equipment not exceeding 36 kV189BS 7919Electric Cables. Flexible cables rated up to 450/750V, for use with appliances and equipment intended for industrial and similar environments190BS 8002Code of practice for deating structures191BS 8007Code of practice for dundations192BS 8110Structural use of concrete194BS 848-1Fans for general purposes. Performance testing using standardized airways195BS 848-5Fans for general purposes. Special for mechanical safety (guarding)196BS 8666Scheduling, dimensioning, bending and cutting of steel reinforcement for concrete. Specification197BS 88Direct acting indicating analogue electrical measuring instruments and their accessories198BS 90Specification for direct-acting electrical recording instruments and their accessories198BS 903Physical tes			<u>.</u>
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186BS 7775applications. Specification187BS 7821Three phase oil-immersed distribution transformers, 50 Hz, from 50 to 2500 kVA with highest voltage for equipment not exceeding 36 Kv188BS 7844Three-phase dry-type distribution transformers 50 Hz, from 100 to 2500 kVA with highest voltage for equipment not exceeding 36 kV189BS 7919Electric Cables. Flexible cables rated up to 450/750V, for use with appliances and equipment intended for industrial and similar environments190BS 8002Code of practice for earth retaining structures191BS 8004Code of practice for design of concrete structures for retaining aqueous liquids193BS 8110Structural use of concrete194BS 848-1Fans for general purposes. Performance testing using standardized airways195BS 8666Scheduling, dimensioning, bending and cutting of steel reinforcement for concrete. Specification197BS 89Direct acting indicating analogue electrical measuring instruments and their accessories199BS 903Physical testing of rubber	185	BS 7772	
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194BS 848-1standardized airways195BS 848-5Fans for general purposes. Special for mechanical safety (guarding)196BS 8666Scheduling, dimensioning, bending and cutting of steel reinforcement for concrete. Specification197BS 88Cartridge fuses for voltages up to and including 1000 V a.c. and 1500 V d.c.198BS 89Direct acting indicating analogue electrical measuring instruments and their accessories199BS 90Specification for direct-acting electrical recording instruments and their accessories200BS 903Physical testing of rubber	193	BS 8110	Structural use of concrete
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196BS 8000reinforcement for concrete. Specification197BS 88Cartridge fuses for voltages up to and including 1000 V a.c. and 1500 V d.c.198BS 89Direct acting indicating analogue electrical measuring instruments and their accessories199BS 90Specification for direct-acting electrical recording instruments and their accessories200BS 903Physical testing of rubber	195	BS 848-5	safety (guarding)
197BS 88V a.c. and 1500 V d.c.198BS 89Direct acting indicating analogue electrical measuring instruments and their accessories199BS 90Specification for direct-acting electrical recording instruments and their accessories200BS 903Physical testing of rubber	196	BS 8666	reinforcement for concrete. Specification
198BS 89instruments and their accessories199BS 90Specification for direct-acting electrical recording instruments and their accessories200BS 903Physical testing of rubber	197	BS 88	V a.c. and 1500 V d.c.
199 BS 90 instruments and their accessories 200 BS 903 Physical testing of rubber	198	BS 89	instruments and their accessories
	199	BS 90	
201 BS 921 Specification. Rubber mats for electrical purposes	200	BS 903	Physical testing of rubber
	201	BS 921	Specification. Rubber mats for electrical purposes



10. PD STANDARDS

No.	STANDARD	DESCRIPTION
1	PD 5000	International Code of Practice for electronic documents and e-business transactions as legally admissible evidence
2	PD 5500	Specification for unfired fusion welded pressure vessels

11. CEN STANDARDS

No.	STANDARD	DESCRIPTION
1	EN 12255-1	Wastewater treatment plants. General construction principles
2	EN 1295-1	Structural design of buried pipelines under various conditions of loading. General requirements
3	EN 1452-5	Plastics piping systems for water supply. Unplasticized poly(vinyl chloride) (PVC-U). Fitness for purpose of the system
4	EN 22063	Metallic and other inorganic coatings. Thermal spraying. Zinc, aluminium and their alloys
5	EN 25199	Technical specifications for centrifugal pumps. Class II
6	EN 287	Qualification test of welders. Fusion welding
7	EN 288	Specification and approval of welding procedures for metallic materials
8	EN 50014	Electrical apparatus for potentially explosive atmospheres. General requirements
9	EN 50018	Electrical apparatus for potentially explosive atmospheres. Flameproof enclosure 'd'
10	EN 50019	Electrical apparatus for potentially explosive atmospheres. Increased safety 'e'
11	EN 60085	Electrical insulation. Thermal classification
12	EN 837	Pressure gauges

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12. ASTM STANDARDS

No.	STANDARD	DESCRIPTION
1	ASTM A 106	Standard Specification for Seamless Carbon Steel Pipe for High-Temperature Service
2	ASTM A 108	Standard Specification for Steel Bar, Carbon and Alloy, Cold-Finished
3	ASTM A 123	Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products
4	ASTM A 135	Standard Specification for Electric-Resistance- Welded Steel Pipe
5	ASTM A 153	Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware
6	ASTM A 167	Standard Specification for Stainless and Heat- Resisting Chromium-Nickel Steel Plate, Sheet, and Strip
7	ASTM A 234	Standard Specification for Piping Fittings of Wrought Carbon Steel and Alloy Steel for Moderate and High Temperature Service
8	ASTM A 242/A 242M	Standard Specification for High-Strength Low- Alloy Structural Steel
9	ASTM A 252	Standard Specification for Welded and Seamless Steel Pipe Piles
10	ASTM A 268	Standard Specification for Seamless and Welded Ferritic and Martensitic Stainless Steel Tubing for General Service
11	ASTM A 269	Standard Specification for Seamless and Welded Austenitic Stainless Steel Tubing for General Service
12	ASTM A 283	Standard Specification for Low and Intermediate Tensile Strength Carbon Steel Plates
13	ASTM A 325	Standard Specification for Structural Bolts, Steel, Heat Treated, 120/105 ksi Minimum Tensile Strength
14	ASTM A 36	Standard Specification for Carbon Structural Steel
15	ASTM A 449	Standard Specification for Hex Cap Screws, Bolts and Studs, Steel, Heat Treated, 120/105/90 ksi Minimum Tensile Strength, General Use
16	ASTM A 47	Standard Specification for Ferritic Malleable Iron Castings
17	ASTM A 48	Standard Specification for Gray Iron Castings
18	ASTM A 480	Standard Specification for General Requirements for Flat-Rolled Stainless and Heat- Resisting Steel Plate, Sheet, and Strip
19	ASTM A 490	Standard Specification for Structural Bolts, Alloy Steel, Heat Treated, 150 ksi Minimum Tensile Strength



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38	ASTM	B 1		Standa Wire	rd Specificatio	on for Ha	rd-Drawn C	opper	
37	ASTM	A 924/A 92	4M	Require	rd Specificatio ements for Ste Hot-Dip Proce	el Sheet		coated	
36	ASTM A 795			Standard Specification for Black and Hot-Dipped Zinc-Coated (Galvanized) Welded and Seamless Steel Pipe for Fire Protection Use					
35	ASTM	A 666		Worked Plate, a	rd Specificatio d Austenitic St and Flat Bar	ainless S	Steel Sheet,	Strip,	
34	ASTM	A 653/A 65	3M	Coatec (Galva	rd Specificatio I (Galvanized) nnealed) by th	or Zinc-I e Hot-Dij	ron Alloy-C p Process	oated	
33	ASTM	A 6		Require Plates,	rd Specificatio ements for Ro Shapes, and	lled Struc Sheet Pi	ctural Steel ling		
32	ASTM	A 591/A 59	1M		rd Specificatio			bon and	
31	ASTM	A 572/A 57	2M		rd Specificatio				
30	ASTM	A 568		Standard Specification for Steel, Sheet, Carbon, Structural, and High-Strength, Low-Alloy, Hot- Rolled and Cold-Rolled, General Requirements for					
29	ASTM	A 563		Standard Specification for Carbon and Alloy Steel Nuts					
28	ASTM	A 53		Standa	Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless				
27	ASTM	a 529/529N	Л	Standa	rd Specificatio	on for Hig	h-Strength		
26	ASTM	A 525/A 52	5M	Standa Require	rd Specificatio ements for Ste nized) by the H	el Sheet	, Zinc- Coa	ted	
25	ASTM	A 514/A 51	4M	Standa Quencl	rd Specification hed and Temp e for Welding	on for Hig			
24	ASTM	A 510M		Require	rd Specification ements for Wir Carbon Steel [N	re Rods a		Round	
23	ASTM	A 502		Standa Structu	rd Specificatio	on for Riv	ets, Steel,		
22	ASTM	A 501			rd Specificatio				
21	ASTM /	A 500		and Se	rd Specificatio amless Carbo s and Shapes				
20	ASTM	A 497			rd Specificatio			Wire	



39	ASTM B 108	Standard Specification for Aluminum-Alloy Permanent Mold Castings			
40	ASTM B 177	Standard Guide for Engineering Chromium Electroplating			
41	ASTM B 2	Standard Specification for Medium-Hard-Drawn Copper Wire			
42	ASTM B 209	Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate			
43	ASTM B 210M	Standard Specification for Aluminum and Aluminum-Alloy Drawn Seamless Tubes [Metric]			
44	ASTM B 211M	Standard Specification for Aluminum and Aluminum-Alloy Bar, Rod, and Wire [Metric]			
45	ASTM B 221	Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes			
46	ASTM B221M	Standard Specification for Aluminium and Aluminium-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes [Metric]			
47	ASTM B 228	Standard Specification for Concentric-Lay- Stranded Copper-Clad Steel Conductors			
48	ASTM B 232	Standard Specification for Concentric-Lay- Stranded Aluminium Conductors, Coated-Steel Reinforced (ACSR)			
49	ASTM B 241	Standard Specification for Aluminum and Aluminum-Alloy Seamless Pipe and Seamless Extruded Tube			
50	ASTM B 251	Standard Specification for General Requirements for Wrought Seamless Copper and Copper-Alloy Tube			
51	ASTM B 26	Standard Specification for Aluminum-Alloy Sand Castings			
52	ASTM B 280	Standard Specification for Seamless Copper Tube for Air Conditioning and Refrigeration Field Service			
53	ASTM B 3	Standard Specification for Soft or Annealed Copper Wire			
54	ASTM B 308	Standard Specification for Aluminum-Alloy 6061- T6 Standard Structural Profiles			
55	ASTM B 32	Standard Specification for Solder Metal			
56	ASTM B 42	Standard Specification for Seamless Copper Pipe, Standard Sizes			
57	ASTM B 455	Standard Specification for Copper-Zinc-Lead Alloy (Leaded-Brass) Extruded Shapes			
58	ASTM B 456	Standard Specification for Electrodeposited Coatings of Copper Plus Nickel Plus Chromium and Nickel Plus Chromium			
59	ASTM B 483	Standard Specification for Aluminium and Aluminium-Alloy Drawn Tube and Pipe for General Purpose Applications			
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		Specification for Aluminium and Aluminium Allow
60	ASTM B483M	Specification for Aluminium and Aluminium-Alloy Drawn Tubes for General-Purpose Applications (Metric)
61	ASTM B 584	Standard Specification for Copper Alloy Sand Castings for General Applications
62	ASTM B 68	Standard Specification for Seamless Copper Tube, Bright Annealed
63	ASTM B 75	Standard Specification for Seamless Copper Tube
64	ASTM B 8	Standard Specification for Concentric-Lay- Stranded Copper Conductors, Hard, Medium- Hard, or Soft
65	ASTM B 85	Standard Specification for Aluminum-Alloy Die Castings
66	ASTM B 88	Standard Specification for Seamless Copper Water Tube
67	ASTM C 1071	Standard Specification for Fibrous Glass Duct Lining Insulation (Thermal and Sound Absorbing Material)
68	ASTM C 1202	Standard Test Method for Electrical Indication of Concrete's Ability to Resist Chloride Ion Penetration
69	ASTM C128	Standard Test Method for Density, Relative Density (Specific Gravity), and Absorption of Fine Aggregate
70	ASTM C 150	Standard Specification for Portland Cement
71	ASTM C 476	Standard Specification for Grout for Masonry
72	ASTM C 494	Standard Specification for Chemical Admixtures for Concrete
73	ASTM C 533	Standard Specification for Calcium Silicate Block and Pipe Thermal Insulation
74	ASTM C 534	Standard Specification for Preformed Flexible Elastomeric Cellular Thermal Insulation in Sheet and Tubular Form
75	ASTM C 547	Standard Specification for Mineral Fiber Pipe Insulation
76	ASTM C 581	Standard Practice for Determining Chemical Resistance of Thermosetting Resins Used in Glass-Fiber-Reinforced Structures Intended for Liquid Service
77	ASTM C 615M	Standard Specification for Granite Dimension Stone
78	ASTM C 624	Method for Determination of The DIH Purity Of Nuclear Graphite
79	ASTM C 636	Standard Practice for Installation of Metal Ceiling Suspension Systems for Acoustical Tile and Lay- In Panels
80	ASTM C700	Standard Specification for Vitrified Clay Pipe, Extra Strength, Standard Strength, and Perforated



		Standard Specification for Elastomeric Joint
81	ASTM C 920	Sealants
82	ASTM C 921	Standard Practice for Determining the Properties of Jacketing Materials for Thermal Insulation
83	ASTM D1447	Standard Test Method for Length and Length Uniformity of Cotton Fibers by Fibrograph Measurement
84	ASTM D 16-03	Standard Terminology for Paint, Related Coatings, Materials, and Applications
85	ASTM D 1784	Standard Specification for Rigid Poly(Vinyl Chloride) (PVC) Compounds and Chlorinated Poly(Vinyl Chloride) (CPVC) Compounds
86	ASTM D 1785	Standard Specification for Poly(Vinyl Chloride) (PVC) Plastic Pipe, Schedules 40, 80, and 120
87	ASTM D 2241	Standard Specification for Poly(Vinyl Chloride) (PVC) Pressure-Rated Pipe (SDR Series)
88	ASTM D 2466	Standard Specification for Poly(Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 40
89	ASTM D 2564	Standard Specification for Solvent Cements for Poly(Vinyl Chloride) (PVC) Plastic Piping Systems
90	ASTM D 2581	Standard Classification System for Polybutylene (PB) Plastics Molding and Extrusion Materials
91	ASTM D 2584-68	Standard Test Method for Ignition Loss of Cured Reinforced Resins
92	ASTM D 2665	Standard Specification for Poly(Vinyl Chloride) (PVC) Plastic Drain, Waste, and Vent Pipe and Fittings
93	ASTM D 2924-79	Standard Test Method for External Pressure Resistance of "Fiberglass" (Glass-Fiber- Reinforced Thermosetting-Resin) Pipe
94	ASTM D 2992-71	Standard Practice for Obtaining Hydrostatic or Pressure Design Basis for "Fiberglass" (Glass- Fiber-Reinforced Thermosetting-Resin) Pipe and Fittings
95	ASTM D 295	Standard Test Methods for Varnished Cotton Fabrics Used for Electrical Insulation
96	ASTM D 2996	Standard Specification for Filament-Wound "Fiberglass" (Glass-Fiber-Reinforced Thermosetting-Resin) Pipe
97	ASTM D 3035	Standard Specification for Polyethylene (PE) Plastic Pipe (DR-PR) Based on Controlled Outside Diameter
98	ASTM D 3262	Standard Specification for "Fiberglass" (Glass- Fiber-Reinforced Thermosetting-Resin) Sewer Pipe
99	ASTM D 3517	Standard Specification for "Fiberglass" (Glass- Fiber-Reinforced Thermosetting-Resin) Pressure Pipe

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100	ASTM D 3681	Standard Test Method for Chemical Resistance of "Fiberglass" (Glass–Fiber–Reinforced Thermosetting-Resin) Pipe in a Deflected Condition
101	ASTM D 3754	Standard Specification for "Fiberglass" (Glass- Fiber-Reinforced Thermosetting-Resin) Sewer and Industrial Pressure Pipe
102	ASTM D 4060	Standard Test Method for Abrasion Resistance of Organic Coatings by the Taber Abraser
103	ASTM D 412	Standard Test Methods for Vulcanized Rubber and Thermoplastic Elastomers - Tension
104	ASTM D 638	Standard Test Method for Tensile Properties of Plastics
105	ASTM D 695	Standard Test Method for Compressive Properties of Rigid Plastics
106	ASTM D 775	Drop Test Drop for Loaded Boxes
107	ASTM D 790	Standard Test Methods for Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials
108	ASTM E 1	Standard Specification for ASTM Liquid-in-Glass Thermometers
109	ASTM E 580	Standard Practice for Application of Ceiling Suspension Systems for Acoustical Tile and Lay- In Panels in Areas Requiring Seismic Restraint
110	ASTM E 84	Standard Test Method for Surface Burning Characteristics of Building Materials
111	ASTM F 708	Design and Installation of Rigid Pipe Hangers

13. NEMA STANDARDS

No.	STANDARD	DESCRIPTION
1	NEMA 250	Enclosures for Electrical Equipment (1000 Volts Maximum)
2	NEMA BU 1	Busways
3	NEMA BU 1.1	General Instructions for Handling, Installation, Operation, and Maintenance of Busway Rated 600 Volts or Less
4	NEMA DC 3	Residential Controls–Electrical Wall-Mounted Room Thermostats
5	NEMA FB 1	Fittings, Cast Metal Boxes, and Conduit Bodies for Conduit, Electrical Metallic Tubing, and Cable
6	NEMA FG 1	Fiberglass Cable Tray Systems
7	NEMA FU 1	Low Voltage Cartridge Fuses
8	NEMA ICS 1	Industrial Control and Systems General Requirements
9	NEMA ICS 2.3	Instructions for the Handling, Installation, Operation, and Maintenance of Motor Control Centers Rated Not More Than 600 Volts

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10	NEMA ICS 3	Industrial Control and Systems: Medium Voltage Controllers Rated 2001 to 7200 Volts AC			
11	NEMA ICS 4	Terminal Blocks			
12	NEMA ICS 6	Industrial Control and Systems Enclosures			
13	NEMA KS 1	Enclosed and Miscellaneous Distribution Equipment Switches (600 Volts Maximum)			
14	NEMA LA 1	Surge Arresters			
15	NEMA MG 1	Motors and Generators			
16	NEMA OS 1	Sheet-Steel Outlet Boxes, Device Boxes, Covers, and Box Supports			
17	NEMA OS 2	Nonmetallic Outlet Boxes, Device Boxes, Covers, and Box Supports			
18	NEMA PB 1	Panelboards			
19	NEMA PB 1.1	General Instructions for Proper Installation, Operation, and Maintenance of Panelboards Rated 600 Volts or Less			
20	NEMA PB 2	Deadfront Distribution Switchboards			
21	NEMA PB 2.1	General Instructions for Proper Handling, Installation, Operation, and Maintenance of Deadfront Distribution Switchboards Rated 600 Volts or Less			
22	NEMA PE 1	Uninterruptible Power Systems (UPS)—Specification and Performance Verification			
23	NEMA RN 1	Polyvinyl-Chloride (PVC) Externally Coated Galvanized Rigid Steel Conduit and Intermediate Metal Conduit			
24	NEMA ST 1	Specialty Transformers (Except General-Purpose Type			
25	NEMA ST 20	Dry Type Transformers for General Applications			
26	NEMA TC 14	Reinforced Thermosetting Resin Conduit (RTRC) and Fittings			
27	NEMA TC 2	Electrical Polyvinyl Chloride (PVC) Tubing and Conduit			
28	NEMA TC 3	Polyvinyl Chloride (PVC) Fittings for Use with Rigid PVC Conduit and Tubing			
29	NEMA TC 6	Polyvinyl Chloride (PVC) Plastic Utilities Duct for Underground Installations			
30	NEMA TC 9	Fittings for Polyvinyl Chloride (PVC) Plastic Utilities Duct for Underground Installation			
31	NEMA TC 10	PVC and ABS Plastic Communications Duct and Fittings for Underground Installations			
32	NEMA UC 2	Undercarpet Power Distribution Systems			
33	NEMA VE 1	Metal Cable Tray Systems			
34	NEMA WD 1	General Color Requirements for Wiring Devices			
35	NEMA WD 6	Wiring Devices - Dimensional Specifications			
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14. ANSI STANDARDS

No.	STANDARD	DESCRIPTION
1	ANSI/IEEE C2	National Electrical Safety Code
2	ANSI C80.1	Electrical Rigid Steel Conduit (ERSC)
3	ANSI C80.3	Steel Electrical Metallic Tubing (EMT)
4	ANSI C80.5	Electrical Rigid Aluminium Conduit (ERAC)
5	ANSI C82.1	Ballasts for Fluorescence Lamp Specification
6	ANSI C82.4	Ballasts for High Intensity Discharge

15. ASME STANDARDS

No.	STANDARD	DESCRIPTION
1	ASME A 112.18.1	Plumbing Supply Fittings
2	ASME A 13.1	Scheme for the identification of piping systems
3	ASME A 112.19.3	Stainless Steel Plumbing Fixtures (Designed for Residential Use)
4	ASME B 16.1	Gray Iron Pipe Flanges and Flanged Fittings (Classes 25, 125, and 250)
5	ASME B 16.11	Forged Fittings, Socket-Welding and Threaded
6	ASME B 16.18	Cast Copper Alloy Solder Joint Pressure Fittings
7	ASME B 16.22	Wrought Copper and Copper Alloy Solder Joint Pressure Fittings
8	ASME B 16.25	Buttwelding Ends
9	ASME B 16.3	Malleable Iron Threaded Fittings Classes 150 and 300
10	ASME B 16.4	Gray Iron Threaded Fittings Classes 125 and 250
11	ASME B 16.5	Pipe Flanges and Flanged Fittings Nps 1/2 Through Nps 24 Metric/ Inch Standard
12	ASME B 16.9	Factory-Made Wrought Buttwelding Fittings
13	ASME B 31.2	Fuel Gas Piping
14	ASME B 31.5	Refrigeration Piping and Heat Transfer Components
15	ASME B 31.9	Building Services Piping
16	ASME B 36.1	Welded and Seamless Wrought Steel Pipe
17	ASME B 40.1	Pressure Gauges and Gauge Attachments



16. UL STANDARDS

No.	STANDARD	DESCRIPTION
1	UL 33	Standard for Safety Heat Responsive Links for Fire- Protection Service
2	UL 181	Standard for Safety Factory-Made Air Ducts and Connectors
3	UL 207	Standard for Safety Refrigerant-Containing Components and Accessories, Nonelectrical
4	UL 262	Standard for Safety Gate Valves for Fire-Protection Service
5	UL 312	Standard for Check Valves for Fire-Protection Service
6	UL 393	Standard for Indicating Pressure Gauges for Fire- Protection Service
7	UL 404	Standard for Gauges, Indicating Pressure, for Compressed Gas Service
8	UL 448	Standard for Safety Centrifugal Stationary Pumps for Fire-Protection Service
9	UL 555	Standard for Safety Fire Dampers
10	UL 555S	Standard for Safety for Smoke Dampers
11	UL 705	Standard for Safety Power Ventilators
12	UL 778	Standard for Motor-Operated Water Pumps
13	UL 1247	Standard for Safety Diesel Engines for Driving Stationary Fire Pumps
14	UL 1478	Standard for Fire Pump Relief Valves
15	UL 96	Standard for Safety Lightning Protection Components
16	UL 96A	Standard for Safety Installation Requirements for Lightning Protection Systems
17	UL 651A	Standard for Safety Type EB and A Rigid PVC Conduit and HDPE Conduit

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17. NFPA STANDARDS

No.	STANDARD	DESCRIPTION
1	NFPA 70	National Electrical Code, USA
2	NFPA 72	National Fire Alarm Code, USA
3	NFPA 72E	Standard on the Automatic Fire Detectors
4	NFPA 72G	Guide for the Installation, Maintenance and Use of Notification Appliances for Protective Signalling Systems.
5	NFPA 72H	Guide for Testing Procedures for Local, Auxiliary, Remote Station and Proprietary Protective Signalling Systems
6	NFPA 101	Life Safety Code

18. ATEX STANDARDS

No.	STANDARD	DESCRIPTION
1	ATEX 95	Manufacturers Explosive Atmospheres Directive
2	ATEX 137	User Explosive Atmospheres Directive

19. AWS STANDARDS

No.	STANDARD	DESCRIPTION				
1	AWS A 2.4	Standard Symbols for Welding, Brazing and Nondestructive Examination				
2	AWS D 1.1	Structural Welding Code - Steel				
3	AWS D 1.2	Structural Welding Code - Aluminium				
4	AWS D 1.4	Structural Welding Code - Sheet Steel				

20. AWWS STANDARDS

No.	STANDARD	DESCRIPTION				
1	AWWA C 110	Ductile-Iron and Gray-Iron Fittings for Water				
2	AWWA C 151	Ductile-Iron Pipe, Centrifugally Cast, for Water				
3	AWWA D 102	Coating Steel Water-Storage Tanks				
4	AWWA C 400	Asbestos-Cement Pressure Pipe, 4 IN. Through 16 IN. (100 MM Through 400 MM), for Water Distribution Systems				



21. WIS STANDARDS

No.	STANDARD	DESCRIPTION			
1	WIS 4-52-01	Polymeric anti-corrosion (Barrier) coatings			

22. DIN STANDARDS

No.	STANDARD	DESCRIPTION				
1	DIN 1230	Clayware for Sewerage Systems				
2	DIN 1999-2	Eurocode 9: Design of aluminium structures - Part 2: Structures susceptible to fatigue; German version ENV 1999-2:1998				
3	DIN 4113 Aluminium Constructions Under Predominantly Static Loading					
4	DIN 42531	Transformers; Bushings for Indoor and Outdoor Types; Insulation Classes 10 N to 30 N, 250 A, Assembly				
5	DIN 43623	Three-Pole Fuse-Base Racks 660 V, 100 to 630 A, for LVHRC Fuses, for Busbar Mounting				
6	DIN 8074	High-Density Polyethylene (PE-HD) Pipes; Dimensions				

23. VDE STANDARDS

No.	STANDARD	DESCRIPTION					
1	VDE 0875 (N)	Electromagnetic compatibility – Specifications for household appliances, power tools and similar electrical devices					

24. UK ENGINEERING RECOMMENDATIONS

No.	STANDARD	DESCRIPTION				
1	G5/4-1	Planning Levels for harmonic Voltage Distortion and the Connection of Non-Linear Equipment to Transmission Systems and Distribution Networks in the United Kingdom				
2	G5/9	Recommendations for the connection of embedded generating plant to the Public Electricity Suppliers distribution systems				

END OF SECTION

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