



استانداردهای جاری در صنعت نفت

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فهرست برخی از مقررات ، استانداردها و کتابهای متداول بازرسی فنی در صنایع نفت

1. مقدمه :

نیازهای بازرسان فنی در صنایع نفت و گاز و پتروشیمی به علت تنوع فروشندگان از کشورهای مختلف و رعایت مقررات و استانداردهای هر کشور توسط سازنده یا تولید کننده کالای معین دامنه ای بی اندازه وسیع دارد . این امریکی از اشکالات صنایع ایران و بخصوص صنایع وابسته به نفت است و اغلب سبب می شود که مهندسين و متخصصين بازرسی فنی جهت یافتن مقررات و استانداردهای مربوطه با موانعی روبرو گردند. در تنظیم نیازهای بازرسان به کتاب ها و استانداردهای فنی ، اطلاعات گردآوری شده در دو بخش ارائه گردیده است .

– فهرست استانداردها و مقررات

– فهرست کتابهای فنی و مرجع که جهت استفاده بازرسان فنی مفید می باشد . البته باید در نظر داشت که در زمینه بازرسی فنی کتابها ، استانداردها و مرجع های متعددی منتشر شده است و علاقمندان می توانند با درخواست یا تماس با ناشرین و انجمن ها فهرست کامل کتابها و استانداردهای موجود را دریافت و اقدام به تهیه کتابها و مراجع مورد نظر بنمایند .

یحیی پور

آبان 1369

2. استانداردهای بازرسی فنی :

برای انتخاب دقیق استانداردهای بازرسی فنی که در صنایع نفت مورد نیاز هستند ، ابتدا می بایستی اقدام به بررسی و شناخت دستگاهها ولوازم صنعتی این صنعت کرد. با توجه به تنوع فروشندگان این دستگاهها و کشورهای آنها ، استانداردهای گوناگونی مورد نیاز است .

این استانداردها توسط موسسات مختلف بین المللی چاپ و نشر گردیده و به قرار زیر می باشند :

1- استانداردهای " BS " منتشره توسط " موسسه استاندارد کشور انگلستان "

"BRITISH STANDARD INSTITUTE"

2- استانداردهای " DIN " منتشره توسط " موسسه ، استاندارد کشور آلمان "

"DUTCH INSTITUTE NORM"

3- استانداردهای " JIS " منتشره توسط " موسسه استانداردهای صنعتی کشور ژاپن "

"JAPANESE INDUSTRIAL STANDARDS"

4- استانداردهای " ASTM " منتشره توسط " انجمن آمریکایی آزمایشات مواد "

"AMERICAN SOCIETY FOR TESTING AND MATERIALS"

5- استانداردهای " ANSI " منتشره توسط " موسسه ، ملی استاندارد آمریکا "

"AMERICAN NATIONAL STANDARDS INSTITIUTE"

6- استانداردهای " ASME " منتشره توسط " انجمن آمریکایی مهندسیین مکانیک "

"THE AMERICAN SOCIETY OF MECHANICAL ENGINEERS"

7- استانداردهای " API " منتشره توسط " انجمن نفت آمریکا "

"AMERICAN PETROLUME INSTITUTE"

8- استانداردهای "ISO" منتشر شده توسط "موسسه استاندارد های بین المللی"

"INTERNATIONAL ORGANIZATION FOR STANDARDIZATION"

9- استانداردهای "TEMA" منتشره توسط "انجمن تولید کنندگان مبدلهای حرارتی"

"TUBULAR EXCHANGAR MANUF ACTURERS ASSOCIATION"

10- استانداردهای "IEEE" منتشره توسط "انجمن مهندسين برق و الكترونیک آمریکا"

"INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS"

11- استانداردهای "NEMA" منتشره توسط "انجمن سازندگان ادوات و ماشین آلات برقی"

"NATIONAL ELECRICAL MANUF ACTURERS ASSOCIATION"

هریک از موسسات فوق الذکر دارای استانداردهای متعددی پیرامون طراحی, ساخت بهره برداری بازرسی فنی و آزمایش ماشین آلات و لوازم صنعتی می باشند . آن دسته از استاندارد و مقررات که برای ماشین آلات و دستگاههای صنایع نفت دارای کاربرد می باشند , در این مجموعه گردآوری گردیده و به شرح بخشهای بعدی ارائه می گردند.

2-1 استانداردهای "موسسه استاندارد انگلستان" (BS) :

فهرست این استانداردها که شامل عنوان کتاب و شماره استاندارد می باشد به شرح زیر است . در هنگام سفارش خرید این استانداردها آخرین چاپ های آن می باید درخواست گردند. این لیست مطابق فهرست منتشره سال 1985 موسسه می باشد.

STANDARD NO.	TITLE
BS -18	METHODS FOR TENSILE TESTING OF METALS: PART 1: NON-FERROUS METALS. PART 2: STEEL (GENERAL). PART 4: STEEL TUBES.
BS-21	PIPE THREADS FOR TUBES AND FITTINGS WHERE PRESSURE - TIGHT JOINTS ARE MADE ON THE THREADS.
BS-31	STEEL CONDUIT AND FITTINGS FOR ELECTRICAL WIRING
BS-DD 39	WELDING ON STEEL PIPELINES UNDER PRESSURE
BS-131	METHODS FOR NOTCHED BAR TESTS: PART 1 : THE IZOD IMPACT TEST ON METALS. PART 2 : THE CHARPY V-NOTCH IMPACT TEST ON METALS. PART 3 : THE CHARPY U-NOTCH IMPACT TEST ON METALS. PART 4 : CALIBRATION OF PENDULUM IMPACT TESTING MACHINES FOR METALS.
BS-142	ELECTRICAL PROTECTION RELAYS: PART 0 : GENERAL INTRODUCTION AND LISTS OF PARTS. PART 1: SECTION 1.1: GLOSSARY OF PROTECTION RELAY TERMS. PART 1: SECTION 1.2: SPECIFICATION FOR CONTACT PERFORMANCE. PART 1: SECTION 1.3: SPECIFICATION FOR INSULATING TESTING. PART 1: SECTION 1.4: SPECIFICATION FOR THE HIGH FREQUENCY DISTURBANCE TEST FOR STATIC RELAYS. PART 2 : SECTION 2.1: SPECIFICATION FOR ALL-OR-NOTHING ELECTRICAL PROTECTION RELAYS. PART2 : SECTION2.2 : SPECIFICATION FOR THE GENERAL REQUIRMENTS FOR MEASURING RELAYS USED FOR PROTECTION. PART2 : SECTION 2. 3 : SPECIFICATION FOR THERMAL ELECTRICAL RELAYS. PART2 : SECTION 4.1: SPECIFICATION FOR BIASED (PERCENTAGE) DIFFERENTIAL RELAYS. PART2 : SECTION4.2 : SPECIFICATION FOR DIRECTIONAL RELAYS AND POWER RELAYS. PART 3 : SECTION 3.1: SPECIFICATION FOR SINGLE INPUT ENERGIZING QUANTITY MEASURING RELAYS WITH NON-SPECIFIED TIME OR WITH INDEPENDENT SPECIFIED

STANDARD NO.**TITLE**

<u>STANDARD NO.</u>	<u>TITLE</u>
	TIME .
	PART3:SECTION3.2:SPECIFICATION FOR SINGLE INPUT ENERGIZING QUANTIT MEASURING RELAYS WITH DEPE-NDENT SPECIFIED TIME.
BS- 148	INSULATING OIL FOR TRANSFORMERS AND SWITCHGEAR.
BS- 162	ELECTRIC POWER SWITCHGEAR AND ASSOCIATED APPARATUS.
BS-171	POWER TRANSFORMERS:
	PART 1: GENERAL.
	PART 2: SPECIFICATION FOR TEMPERTURE RISE.
	PART 4: SPECIFICATION FOR TAPPINGS AND CONNECTIONS.
	PART 5: SPECIFICATION FOR ABILITY TO WITHSTAND SHORT CIRCUIT.
BS-240	METHOD FOR BRINELL HARDNESS TEST:
	PART 1: TESTING OF METALS.
	PART 2: VERIFICATION OF THE TESTING MACHINE.
BS-302	WIRE ROPES FOR CRANES, EXCAVATORS AND GENERAL ENGINEERING PURPOSES.
BS- 327	POWER-DRIVEN DERRICK CRANES.
BS- 349	IDENTIFICATION OF CONTENTS OF INDUSTRIAL GAS CONTAINERS.
BS- 427	METHOD FOR VICKERS HARDNESS TEST:
	PART 1: TESTING OF METALS
	PART 2: VERIFICATION OF THE TESTING MACHINE.
BS- 437	SPECIFICATION FOR CAST IRON SPIGOT AND SOCKET DRAIN PIPES AND FITTINGS.
BS- 449	THE USE OF STRUCTURAL STEEL IN BUILDING.
BS -466	SPECIFICATION FOR POWER DRIVEN OVERHEAD TRAVELLING CRANES,SEMI-GOLIATH AND GOLIATH CRANES FOR GENERAL USE.
BS-470	SPECIFICATION FOR INSPECTION ,ACCESS AND ENTRY ORENINGS FOR PRESSURE VESSELS.
BS-499	WELDING TERMS AND SYMBOLS:
	PART 1 : GLOSSARY FOR WELDING ,BRAZING AND THERMAL CUTTING.
	PART 2: SPECIFICATION FOR SYMBOLS FOR WELDING .
	PART 3 : CHART OF BRITISH STANDARD WELDING SYMBOLS.

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BS – 638	ARC WELDING POWER SOURCES, EQUIPMENT AND ACCESSORIES: PART 1 : SPECIFICATION FOR OIL COOLED POWER SOURCES. PART 2 : SPECIFICATION FOR AIR COOLED POWER SOURCES. PART 3 : SPECIFICATION FOR AIR COOLED POWER SOURCES. FOR SEMI-AUTOMATIC AND AUTOMATIC METAL-ARC WELDING . PART 4 : SPECIFICATION FOR WELDING CABLE.
BS – 639	COVERED ELECTRODES FOR THE MANUAL METAL-ARC WELDING OF CARBON MANGANESE STEELS.
BS – 709	METHODS OF DESTRUCTIVE TESTING FUSION WELDED JOINTS AND WELD METAL IN STEEL.
BS – 752	TEST CODE FOR ACCEPTANCE OF STEAM TURBINES.
BS – 759	PART 1: SPECIFICATION FOR VALVES, MOUNTINGS AND FITTINGS.
BS – 842	A.C VOLTAGE-OPERATED EARTH-LEAKAGE CIRCUIT BREAKERS.
BS – 891	METHOD FOR ROCKWELL HARDNESS TEST: PART 1 : TESTING OF METALS. PART 2 : VERIFICATION OF TESTING MACHINE.
BS – 1123	SPECIFICATION FOR SAFETY VALVES, GAUGES AND OTHER SAFETY FITTINGS FOR AIR RECEIVER AND COMPRESSED AIR INSTALLATION.
BS – 1449	STEEL PLATE, SHEET AND STRIP: PART 1 : SPECIFICATION FOR CARBON AND CARBON MANGANESE PLATE, SHEET AND STRIP. PART 2 : SPECIFICATION FOR STAINLESS AND HEAT RESISTING STEEL PLATE, SHEET AND STRIP.
BS – 1452	SPECIFICATION FOR GREY IRON CASTINGS.
BS – 1453	FILLER MATERIALS FOR GAS WELDING
BS - 1501	STEEL FOR FIRED AND UNFIRED PRESSURE VESSELS, PLATE. PART 1 : SPECIFICATION FOR CARBON AND CARBON MANGANESE STEELS. PART 2 : ALLOY STEELS. PART 3 : CORROSION AND HEAT RESISTING STEEL.

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BS -1502	SPECIFICATION FOR STEELS FOR FIRED AND UNFIRED PRESSURE VESSELS : SECTIONS AND BARS.
BS – 1503	SPECIFICATION FOR STEEL FORGINGS(INCLUDING SEMIFINISHED FORGED PRODUCTS) FOR PRESSURE PURPOSES.
BS – 1504	SPECIFICATION FOR STEEL CASTINGS FOR PRESSURE PURPOSES.
BS – 1571	TESTING OF POSITIVE DISPLACEMENT COMPRESSORS AND EXHAUSTERS: PART 1 : ACCEPTANCE TESTS. PART 2 : SIMPLIFIED ACCEPTANCE TESTS FOR AIR COMPRESSORS AND EXHAUSTERS.
BS – 1580	UNIFIED SCREW THREADS: PART 1 AND 2 : DIAMETERS 1/4 INCH AND LARGER. PART 3 : DIAMETERS BELOW 1/4 INCH.
BS – 1640	STEEL BUTT-WELDING PIPE FITTINGS FOR THE PETROLEUM INDUSTRY: PART 3 : WROUGHT CARBON AND FERRITIC ALLOY STEEL FITTINGS. PART 4 : WROUGHT AND CAST AUSTENITIC CHROMIUM NICKEL STEEL FITTINGS.
BS – 1646	SYMBOLIC REPRESENTATION FOR PROCESS MEASUREMENT CONTROL FUNCTIONS AND INSTRUMENTATION: PART 1 : BASIC REQUIREMENTS PART 2 : SPECIFICATION FOR ADDITIONAL BASIC REQUIREMENTS. PART 3 : SPECIFICATION FOR DETAILED SYMBOLS FOR INSTRUMENT INTERCONNECTION DIAGRAMS.
BS – 1655	FLANGED AUTOMATIC CONTROL VALVES FOR THE PROCESS CONTROL INDUSTRY.
BS – 1769	UNIFIED PRECISION HEXAGON BOLTS,SCREWS AND NUTS (UNC AND UNF THREADS).NORMAL SERIES.
BS – 1780	SPECIFICATION FOR BOURDON TUBE PRESSURE AND VACUUM GAUGES: PART 2 : METRIC UNITS.
BS – 1794	CHART RANGES FOR TEMPERATURE RECORDING INSTRUMENTS.
BS – 1965	BUTT-WELDING PIPE FITTINGS FOR PRESSURE PURPOSES: PART 1 : CARBON STEEL.

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BS – 1986	DESIGN AND DIMENSIONAL FEATURES OF MEASURING AND CONTROL INSTRUMENTS FOR INDUSTRIAL PROCESSES.
BS-2493	LOW ALLOY STEEL ELECTRODES FOR MANUAL METAL-ARC WELDING.
BS- 2569	SPRAYED METAL CONTINGS: PART 1 : PROTECTION OF IRON AND STEEL BY ALUMINIUM AND ZINC AGAINST ATMOSPHERIC CORROSION. PART 2 : PROTECTION OF IRON AND STEEL AGAINST CORROSION AND OXIDATION AT ELEVATED TEMPERATURES.
BS – 2573	RULES FOR THE DESIGN OF CRANES: PART 1 : SPECIFICATION FOR CLASSIFICATION , STRESS CALCULATIONS AND DESIGN CRITERIA FOR STRUCTURES.
BS – 2594	CARBON STEEL WELDED HORIZONTAL CYLINDRICAL STORAGE TANK.
BS – 2600	RADIOGRAPHIC EXAMINATION OF FUSION WELDED BUTT JOINTS IN STEEL. PART 1 : METHODS FOR STEEL 2 MM UP TO AND INCLUDING 50 MM THICK. PART 2 : OVER 50 MM UP TO AND INCLUDING 200 MM THICK.
BS – 2633	CLASS 1 ARC WELDING OF FERRITIC STEEL PIPE WORK FOR CARRYING FLUIDS.
BS – 2654	VERTICAL STEEL WELDED STORAGE TANKS WITH BUTT- WELDED SHELLS FOR THE PETROLEUM INDUSTRY.
BS – 2704	SPECIFICATION FOR CALIBRATION BLOCKS FOR USE IN ULTRASONIC FLAW DETECTION.
BS – 2709	ELECTRICAL PERFORMANCE OF SEMI-CONDUCTOR RECTIFIERS.
BS- 2737	TERMINOLOGY OF INTERNAL DEFECTS IN CASTING AS REVEALED BY RADIOGRAPHY.
BS – 2790	SPECIFICATION FOR SHELL BOILERS OF WELDED CONSTRUCTION .
BS- 2853	THE DESIGN AND TESTING OF STEEL OVERHEAD RUNWAY BEAMS.

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BS – 2871	<p>COPPER AND COPPER ALLOYS (TUBES) :</p> <p>PART 1 : COPPER TUBES FOR WATERS,GAS AND SANITATION .</p> <p>PART 2 : TUBES FOR GENERAL PURPOSE</p> <p>PART 3 : TUBES FOR HEAT EXCHANGERS.</p>
BS – 2901	<p>FILLERS RODS AND WIRES FOR GAS-SHIELDED ARC WELDING:</p> <p>PART 1 : FERRITIC STEELS.</p> <p>PART 2 : AUSTENITIC STANLESS STEELS.</p> <p>PART 3 : COPPER AND COPPER ALLOYS.</p> <p>PART 4 : ALUMINIUM AND ALUMINIUM ALLOYS AND</p> <p>MAGNESIUM ALLOYS</p> <p>PART 5 : NICKEL AND NIKEL ALLOYS.</p>
BS – 2910	<p>METHODS FOR RADIOGRAPHIC EXAMINATION OF FUSION</p> <p>WELDED CIRCUMFERENTIAL BUTT- JOINTS IN STEEL PIPES.</p>
BS -2926	<p>SPECIFICATION FOR CHROMIUM AND CHROMIUM NICKEL</p> <p>STEEL ELECTRODES FOR MANUAL METAL ARC WELDING.</p>
BS – 2971	<p>SPECIFICATION FOR CLASS IIARC WELDING OF CARBON</p> <p>STEEL PIPEWORK FOR CARRYING FLUIDS.</p>
BS – 3019	<p>TIG WELDING :</p> <p>PART 1 : SPECIFICATION FOR TIG WELDING</p> <p>OF ALUMINIUM,MAGNESIUM AND THEIR ALLOYS.</p> <p>PART 2 : AUSTENITIC STAINLESS AND HEAT-RESISTING STEELS.</p>
BS- 3048	<p>CODE FOR THE CONTINUOUS SAMPLING AND AUTOMATIC ANALYSIS</p> <p>OF FLUE GASES.</p>
BS – 3059	<p>SPECIFICATION FOR STEEL BOILER AND SUPER –HEATER TUBES:</p> <p>PART 1 : LOW TENSILE CARBON STEEL TUBS WITHOUT SPECIFIED</p> <p>ELEVATED TEMPERATURE PROPERTIES.</p> <p>PART 2 : CARBPON,ALLOY AND AUSTENITIC STAINLESS STEEL TUBES</p> <p>WITH SOECIFIED ELEVATED TEMPERATURE PROPERTIES.</p>
BS – 3063	<p>DIMENSIONS OF GASKETS FOR PIPE FLANGES.</p>
BS – 3100	<p>SPECIFICATION FOR STEEL CASTING FOR GENERAL ENGINEERING</p> <p>PURPOSES.</p>
BS – 3228	<p>PROCEDURES FOR OBTAINING PROPERTIES OF STEEL AT ELEVATED</p> <p>TEMPERATURES:</p> <p>PART 2 : RUPTURE STRENGH .</p> <p>PART 3 : CREEP STRENGTH.</p>
BS – 3274	<p>TUBULAR HEAT EXCHANGERS FOR GENERAL PURPOSES.</p>

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BS -3351	PIPING SYSTEM FOR PETROLUM REFINERIES AND PETROCHEMICAL PLANTS.
BS – 3468	AUSTENITIC CAST IRON.
BS – 3490	SIZES OF FILM FOR INDUSTRIAL RADIOGRAPHY AND X- RAY CRYSTALLOGRAPHY.
BS – 3500	METHODS FOR CREEP AND RUPTURE TESTING OF METALS: PART 1 : TENSILE RUPTURE TESTING . PART 2 : TENSILE CREEP TESTING.
BS- 3605	SEAMLESS AND WELDED AUSTENITIC STAINLESS STEEL PIPES AND TUBES FOR PRESSURE PURPOSES.
BS – 3606	SPECIFICATION FOR STEEL TUBES FOR HEAT EXCHANGERS.
BS – 3664	FILM BADGES FOR PERSONNEL RADIATION MONITORING.
BS – 3683	GLOSSARY OF TERMS USED IN NON-DESTRUCTIVE TESTING : PART 1 : PENETRANT FLAW DETECTION . PART 2 : MAGNETIC PARTICLE FLAW DETECTION . PART 3 : RADIOLOGICAL FLAW DETECTION. PART 4 : ULTRASONIC FLAW DETECTION.
BS – 3688	METHODS FOR MECHANICAL TESTING OF METALS AT ELEVATED TEMPERATURES.
BS – 3889	PART 1 : METHODS OF AUTOMATIC ULTRASONIC TESTING FOR THEDETECTION OF IMPERFECTIONS IN WROUGH STEEL TUBES.
BS – 3890	GENER RECOMMENDATIONS FOR THE TESTING,CALIBRATION AND PROCESSING OF RADIATION MONITORING FILMS.
BS- 3923	METHODS FOR ULTRASONIC EXAMINATION OF WELDS: PART 1 : MANUAL EXAMINATION OF FUSION WELDS IN FERRITIC STEELS. PART 2 : AUTOMATIC EXAMINATION OF FUSION BUTT JOINTS IN FERRITIC STEELS. PART 4 : MANUAL EXAMINATION OF NOZZLE WELDS.
BS – 3938	CURRENT TRANSFORMERS.

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BS – 3941	VOLTAGE TRANSFORMERS
BS- 3971	SPECIFICATION FOR IMAGE QUALITY INDICATORS FOR INDUSTRIAL RADIOGRAPHY.
BS – 3974	PIPE SUPPORTS: PART 1 : PIPE HANGERS,SLIDER AND ROLLER TYPE SUPPORTS. PART 2 : PIPE CLAMPS,CAGES,CANTILEVERS AND ATTACHMENTS TO BEAMS.
BS – 4076	SPECIFICATION FOR STEEL CHIMNEYS.
BS – 4080	METHODS FOR NON-DESTRUCTIVE TESTING OF STEEL CASTINGS.
BS – 4094	RECOMMENDATION FOR DATA ON SHIELDING FROM IONIZING RADIATION : PART 1 : SHIELDING FROM GAMMA RADIATION. PART 2 : SHIELDING FROM X-RADIATION.
BS – 4232	SURFACE FINISH OF BLAST- CLEANED STEEL FOR PATNTING.
BS – 4360	SPECIFICATION FOR WELDABLE STRUCTURAL STEELS.
BS- 4416	METHOD FOR PENETRANT TESTING OF WELDED OR BRAZED JOINTS IN METALS.
BS- 4417	SEMICONDUCTOR RECTIFIER EQUIPMENTS.
BS – 4485	WATER COOLING TOWERS: PART 1 : GLOSSARY OF TERMS. PART 2 : METHODS OF TEST AND ACCEPTANCE TESTING.
BS – 4509	METHOD FOR EVALUATING TRANSMITTERS FOR USE IN PROCESS CONTROL SYSTEMS: PART 1 : PRESSURE AND DIFFERENTIAL TRANSMITTERS WITH ANALOGUE D.C. OUTPUTS. PART 2 : INSTRUMENTS WITH ELECTRICAL INPUTS AND ANALOGUE D.C. OUTPUTS. PART 3 : FILLED SYSTEM TEMPERATURE TRANSMITTERS.
BS- 4515	SPECIFICATION FOR PROCESS OF WELDING OF STEEL PIPELINES ON LAND AND OFFSHORE.
BS – 4543	FACTOR- MADE INSULATED CHIMNEYS.
BS – 4617	METHODS FOR DETERMINING THE PERFORMANCE OF PUMPS AND MOTORS FOR HYDRAULIC FLUID POWER TRANSMISSION.

STANDARD NO.
BS- 4752

TITLE
SPECIFICATION FOR SWITCHGEAR AND CONTROLGEAR FOR

BS – 4794	<p>VOLTAGES UP TO AND INCLUDING 1000_v A.C AND 1200_v D.C :</p> <p>PART 1 : CIRCUIT – BREAKERS.</p> <p>SPECIFICATION FOR CONTROL SWITCHES:</p> <p>PART 1 : GENERAL REQUIREMENTS</p> <p>PART 2 : GENERAL REQUIREMENTS FOR SPECIFIED TYPES OF CONTROL SWITCHES :</p> <p>SECTION 2.1 : PUSH-BOTTOMS AND RELATED CONTROL SWITCHES.</p> <p>SECTION 2.2 : ADDITIONAL REQUIRMENTS FOR ROTARY CONTROL SWITCHES.</p> <p>SECTION 2.3 : CONTACTOR RELAYS.</p> <p>SECTION 2.4 : PILOT SWITCHES.</p> <p>SECTION 2.5 : INDICATOR LIGHTS.</p> <p>SECTION 2.6 : STANDARDIZATION OF FIXING HOLE OF SINGLE HOLE MOUNTED PUSH- BUTTONS AND INDICATOR LIGHTS.</p> <p>SECTION 2.20 : POSITION SWITCHES WITH POSITIVE OPENING OPERATION .</p>
BS – 4870	<p>APPROVAL TESTING OF WELDING PROCEDURES:</p> <p>PART 1 : FUSION WELDING OF STEELS.</p> <p>PART 2 : TIG OR MIG WELDING OF ALUMINIUM AND ITS ALLOYS.</p>
BS- 4871	<p>APPROVAL TESTING OF WELDERS WORKING TO APPROVED WELDING PROCEDURES:</p> <p>PART 1 : FUSION WELDING OF STEELS.</p> <p>PART 2 : TIG OR MIG WELDING OF ALUMINIUM AND ITS ALLOYS.</p>
BS- 4872	<p>APPROVAL TESTING OF WELDERS WHEN WELDING PROCEDURE APPROVAL IS NOT REQUIRED.</p> <p>PART 1 : FUSION WELDING OF STEELS.</p> <p>PART 2 : TIG OR MIG WELDING OF ALUMINIUM AND ITS ALLOYS.</p>
BS – 4882	<p>BOLTING FOR FLANGES AND PRESSURE CONTAINING PURPOSES.</p>
BS – 4888	<p>METHOD FOR SPECIFYING THE PREFORMANCE OF ELECTRONIC MEASURRING EQUIPMENT.</p>
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2-2 استانداردهای تهیه شده توسط " انجمن آمریکایی آزمایشات مواد " (ASTM):

استانداردهای تهیه شده توسط این انجمن در 15 بخش اصلی و پیرامون روش انجام آزمایشات کنترل کیفیت مواد می باشند . بخشهایی از این استاندارد که دارای کاربرد بیشتری هستند , به شرح زیرند. این لیست مطابق فهرست منتشره سال 1984 انجمن می باشد:

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2-4 استانداردهای تهیه شده توسط "انجمن مهندسين مکانیک آمریکا" (ASME) :

استاندارد های این انجمن , مقررات طراحی , ساخت و بازرسی حین ساخت دستگاهها و لوازم مکانیکی صنعتی تحت فشار را دربر میگیرد. برخی از این استانداردها شامل بخش های 3 و 11 کاربرد عمومی ندارد . لیکن جهت ارائه فهرست سری کامل , ذکر گردیده اند . این بخشها در جداول زیر با علامت ستاره مشخص گردیده اند.

<u>STANDARD.</u>	<u>SECTION NO.</u>	<u>TITLE.</u>
ASME	I	POWER BOILERS.
ASME	II	MATERIAL SPECIFICATIONS: PART A: FERROUS MATERIALS. PART B: NON – FERROUS MATERIALS. PART C: WELDING RODS,ELECTRODES, AND FILLER METALS.
ASME	III*	SUBSECTION NCA-GENERL REQUIRMENTS FOR DIVISION 1 AND DIVISION 2.
ASME	III *	DIVISION 1 : SUBSECTION NB-CLASS 1 COMPONETS. SUBSECTION NC-CLASS 2 COMPONETS. SUBSECTION ND-CLASS 3 COMPONETS. SUBSECTION NE-CLASS MC COMPONETS. SUBSECTION NF- COMPONET SUPPORTS. SUBSECTION NG-CORE SUPPORT STRUCTURE. APPENDICES.
ASME	III *	DIVISION 2 : CODE FOR CONCRETE REACTOR VESSELS AND CONTAINMENTS.
ASME	IV	HEATING BOILERS.
ASME	V	NON- DESTRUCTIVE EXAMINATION.
ASME	VI	RECOMMENDED RULES FOR CARE AND OPERATION OF HEATING BOILERS.
ASME	VII	RECOMMENDED RULES FOR CARE OF POWER BOILERS.
ASME	VIII	DIVISION 1 : PRESSURE VESSELS.

<u>STANDARD.</u>	<u>SECTION NO.</u>	<u>TITLE</u>
ASME	DIVISION 2 :	PRESSURE VESSELS ALTERNATIVE RULES.
ASME	IX	WELDING AND BRAZING QUALIFICATIONS.
ASME	X	FIBERGLASS- REINFORCED PLASTIC PRESSURE VESSELS.
ASME	XI	RULES FOR INSERVICE INSPECTION OF NUCLEAR POWER PLANT COMPONENTS.
ASME		NATIONAL BOARD INSPECTION CODES A MANUAL FOR BOILER AND PRESSURE VESSEL INSPECTORS.

2-5 استانداردهای تهیه شده توسط " انجمن نفت آمریکا " (API) :

استانداردهای تهیه شده توسط این انجمن از دو بخش عمومی و تخصصی متشکل می باشند . بخش تخصصی استانداردها در این ارتباط با دستگاهها و ماشین آلات تخصصی صنعت نفت بوده و بخش عمومی آن ماشین آلات و دستگاههای عمومی را در بر میگیرد

<u>ORDER NO .</u>	<u>TITLE</u>
	<u>GUIDE FOR INSPECTION OF REFINERY EQUIPMENT:</u>
821-00082	BINDER
821-00001	CHAPTER I : INTRUCTION .
821- 00002	CHAPTER II : CONDITIONS CAUSING DETERIORATION OR FAILURES.
821-00003	CHAPTER III : GENERAL PRELIMINARY AND PREPARATORY WORK.
821-04	CHAPTER IV : INSPECTION TOOLS.
821-05	CHAPTER V : PREPARATION OF EQUIPMENT FOR SAFE ENTRYAND WORK .
821-06	CHAPTER VI : PRESSURE VESSELS (TOWERS,DRUMS, AND REACTORS).
821-07	CHAPTER VII: HEAT EXCHANGERS,CONDENSERS, AND COLLER BOXES.
821-08	CHAPTER VIII : DIRECT-FIRED BOILERS AND AUXILIARY EQUIPMENT.
821-09	CHAPTER IX: FIRED HEATERS AND STACKS.
821-10	CHAPTER X: PUMPS,COMPRESSORS AND BLOWERS AND THEIR DRIVERS.
821-11	CHAPTER XI : PIPE ,VALVES AND FITTINGS.
821-12	CHAPTER XII : FOUNDATIONS,STRUCTURES,AND BUILDINGS.
821-13	CHAPTER XIII : ATOMOSPHERIC AND LOW PRESSURE STORAGE TANKS.

ORDER NO.

TITLE

821-14	CHAPTER XIV : ELECTRICAL SYSTEMS.
821-15	CHAPTER XV : INSTRUMENTS AND CONTROL EQUIPMENT.
821-16	CHAPTER XVI : PRESSURE RELIEVING DEVICES.
821-17	CHAPTERXVII : AUXILIARY]AND MISCELLANEOUS EQUIPMENT
821-18	CHAPTER XVIII : PROTECTION OF IDLE EQUIPMENT.
----	CHAPTER XIX : INSPECTION FOR ACCIDENT PREVENTION .
----	CHAPTER XX : INSPECTION FOR FIRE PROTECTION .
821-00080	APPENDIX : INSPECTION OF WELDING .

STANDARD NO.**ORDER NO.****TITLE****PRESSURE- RELIEVING SYSTEMS:**

	821-2028	PRESSURE-RELIEVING SYSTEM FOR REFINERY SERVICE BINDER.
RP 520	----	RECOMMENDED PRACTICE FOR THE DESIGN AND INSTALLATION OF PRESSURE RELIEVING SYSTEMS IN REFINERIES: PART I AND II :
----	822-52010	PART I – DESIGN.
----	822-52020	PART II –INSTALLATION
RP 521	822-52100	GUIDE FOR PRESSURE AND DEPRESSURING SYSTEMS.
526	822-52600	FLAGED STEEL SAFETY RELIEF VALVES (ANSI/API STD .526) .
527	822-52700	COMMERCIAL SEAT TIGHTNESS OF SAFETY RELIEF VALVES WITH METAL – TO – METAL SEATS.(ANSI/API STD.527).
2000	822-20000	VENTING ATMOSPHERIC AND LOW PRESSURE STORAGE TANKS (NON-REFRIGERATED AND REFRIGERATED) .

WELDED STEEL STORAGE TANKS:

510	822-51000	PRESSURE VESSEL INSPECTION CODE MAINTENANCE INSPECTION RATING, REPAIR, AND ALTERATION (ANSI / API STD. 510).
620	822-62000	RECOMMENDED RULES FOR DESIGN AND CONSTRUCTION OF LARGE WELDED , LOW PRESSURE STORAGE TANKS.

STANDARD NO.**TITLE**

A.P.I STD .2550	METHODS FOR MEASUREMENT AND CALIBRATION OF UPRIGHT.CYLINDRICAL TANKS. (A.S.T.M D- 1220)
A.P.I STD .2555	U.S.A STANDARD METHOD FOR –LIQUID CALIBRATION OF TANKS. (A.S.T.M D-1406)
A.P.I 660	SHELL- AND – TUBE HEAT EXCHANGERS FOR GENERAL REFINERY SERVICES, "REFINING DEPARTMENT".
A.P.I 661	AIR-COOLER HEAT EXCHANGERS FOR GENERAL REFINERY SERVICES "REFINING DEPARTMENT".
A.P.I SPEC-5L	TUBULAR GOODS, SPECIFICATION FOR LINE PIPE.
A.P.I SPEC – 5LU	SPECIFICATION FOR ULTRA HIGH-TEST HEAT TREATED LINE PIPE
A.P.I RP – 5L 2	RECOMMENDED PRACTICE FOR INTERNAL COATING OF LINE PIPE FOR NON CORROSIVE GAS TRANSMISSION SERVICE.
A.P.I BUL – 5T 1	BULLETION ON NON DESTRUCTIVE TESTING THERMINOLOGY.
A.P.I SPEC -6D	VALVES ,FITTINGS AND FLANGES, SPECIFICATION FOR PIPELINE VALVES, END CLOSURES,CONNECTORS AND SWIVELS.
A.P.I SPEC-12F	SPECIFICATION FOR SHOP WELDED TANKS FOR STORAGE OF PRODUCTION LIQUIDS.
<hr/>	
A.P.I 601	METALLIC GASKET FOR PIPING.
A.P.I 650	WELDED STEEL TANKS FOR OIL STORAGE.
A.P.I 1104	WELDING PIPE LINES AND RELATED FACILITIES.

2-6 استانداردهای تهیه شده توسط انجمن تولید کنندگان مبدل‌های حرارتی (TEMA) :
استانداردهای تهیه شده توسط این انجمن تنها مربوط به مبدل‌های حرارتی مورد استفاده در صنایع بوده و شامل دو جلد به شرح زیر می باشند. سفارش خرید این استانداردها , می باید بر مبنای آخرین چاپ آنها صورت پذیرد .

STANDARD.

T.E.M.A

TITLE .

STANDARDS OF TUBLAR EXCHANGER MANUFACTURERS
AS SOCIATION, LATEST EDITION.

PUBLISHED BY : TUBLAR EXCHANGER MANUFACTURES
ASSOCIATION INCORPORATED.

25 N. BROADWAY.

TARRYTOWN.

NEW YORK 10591

U .S .A

HEAT EXCHANGERS DATAS

AIR COOLER AND SHELL – TUBES.

HEATTRANSFER AND THE OVER ALL RATE.

PUBLISHED BY : ARROW INDUSTRIAL MFG. COMPANY.

TULSA OKLAHOMA,

U . S .A

2-7 استانداردهای تهیه شده توسط "موسسه استاندارد آلمان" (DIN) :

استانداردهای منتشر شده توسط این موسسه براساس موضوع گروه بندی شده اند . فهرست استانداردهای انتخاب شده شامل عنوان و شماره استاندارد و مطابق با گروه بندی انجام شده توسط موسسه به شرح زیراند . این لیست مطابق فهرست (کاتالوگ) منتشره سال 1985 (به زبان انگلیسی) می باشد .

STANDARD NO.

TITLE .

MATERIAL TESTING MACHINES AND EQUIPMENT IN GENERAL .
(GROUP NO . 1050) :

DIN 50011 Pt2	TESTING OF MATERIALS, STRUCTURAL COMPONENTS & EQUIPMENT, HOT CABINETS, DIRECTIONS FOR THE STORAGE OF SPECIMENS.
DIN 50107	THE MARTENS , MIRROR AND SCALE EXTENSOMETER,DESCRIPTION AND OPERATION.
DIN 51221 Pt1	TENSILE TESTING MACHINES, GENERAL REQUIREMENTS.
DIN 51221 Pt2	TENSILE TESTING MACHINES LARGE TENSIL TESTING MACH. AND UNIVERSAL TESTING MACHINES.
DIN 51221 Pt3	SMALL TESILE TESTING MACHINES.
DIN 51222	PENDULUM IMPACT TESTING MACHINES.
DIN 51223	COMPRESSION TESTING MACHINES.
DIN 51224	HARDNESS TESTING MACHINES WITH A DEPTH MEASURING DEVICE.
DIN 51225 Pt1	HARDNESS TESTING MACHINES WITH OPTICAL INDENATION MEASURING DEVICE, TEST LOAD RANGE : 49.03 TO 29420N (5 TO 30000 KP).
DIN 51226	GREEP TESTING MACHINES FOR TENSILE STRESS OF METALLIC MATERIAL .
DIN 51227	BEDING TEST MACHINES.
DIN 51228	FATIGUE TESTING MACHINES,DEFINITION ,GENERAL REQUIRETENTS.
DIN 51230	DYNSTAT APPARATUS FOR THE DETERMINATION OF BENDING STRENGTH AND IMPACT STRENGTH OF SMALL SPECIMENS.
DIN 51231 Pt1	TESTING INSTALLATIONS FOR BUILDING COMPONENTS, FLOOR SLABS OR BEAMS.
DIN 51300	VERIFICATION OF MATERIAL TESTING MACHINES ,GENERAL.

STANDARD NO.**TITLE**

DIN 51301	VERIFICATION OF MATERIALS TESTING MACHINES,ELASTIC PROVING DEVICES FOR STATIC LOAD MEASUREMENTS.
DIN 51304	VERIFICATION OF HARDNESS TESTING MACHINES FITTED WITH INDENTATION DEPTH MEASURING DEVICE.
DIN 51305	VERIFICATION OF HARDNESS TESTING MACHINES FITTED WITH AN OPTICAL INDENTATION DEPTH MEASURING DEVICE.
DIN 51306	VERIFICATION OF PENDULUM IMPACT TESTING MACHINES.
DIN 54120	NON- DESTRUCTIVE TESTING ,MAGNETIZING EQUIPMENT FOR MAGNETIC PARTICLE FLAW DETECTION ,FIXED AND MOBILE EQUIPMENT OTHER THAN HAND MAGNETS,CHARACTERISTICS AND THEIR DETERMINATION.
DIN 54131 Pt1	NON- DESTRUCTIVE TESTING , MAGNETIZING EQUIPMENT FOR MAGNETIC PARTICLE FLAW DETECTION,FIXED AND MOBILE EQUIPMENT OTHER THAN HAND MAGNETS,CHARACTERISTICS AND THEIR DETERMINATION.
DIN 54131 Pt2	NON- DESTRUCTIVE TESTING ,MAGNETIZING EQUIPMENT FOR MAGNETIC PARTICLE FLAW DETECTION ,HAND MAGNETS,CHARACTERISTIC AND THEIR DETERMINATION.
<u>MEASURMENT OF MECHANICAL PROPERTIES OF MATERIALS. STRENGTH TEST.INVESTIGATION OF STRUCTURE OF MATERIALS (GROUP NO 1060) :</u>	
DIN 50014	ATMOSPHERES AND THEIR TECHNICAL APPLICATION ,STANDARD ATMOSPHERES.
DIN 50015	ATMOSPHERER AND THEIR TECHNICAL APPLICATION,CONSTANT TEST ATMOSPHERES.
DIN 50100	TESTING OF MATERIALS,CONTINUOUS VIBRATION TES,DEFINITIONS,SYMBOLS,PROCEDURE,EVALUATION.
DIN 50332	TESTING OF MATERIALS, BLASTING(ABRASIVE JET)WEAR TESTING.
DIN 51200	MATERIALS TESTING ,HARDNESS TESTING,DIRECTIONS FOR THE DESIGN AND USE OF SUPPORTING DEVICES.
DIN 51303	MATERIAL TESTING MACHINES,STANDARDIZED FOR THE VERIFICATION OF STATIC HARDNESS TESTING MACHINES.

STANDARD NO.**TITLE**

DIN 54112	NON- DESTRUCTIVE TESTING, FILMS.EXPOSURE SCREENS,CASSETTES FOR X-RAY AND GAMMA RAY RADIOGRAPHS, DIMENTIONS.
DIN 54131 Pt1	NON-DESTRUCTIVE TESTING,MAGNETIZING EQUIPMENT FOR MAGNETIC PARTICLE TESTING ,MAGNETIZING EQUIPMENT FOR MAGNETIC PARTICLE FLAW EDTECTION, FIXED AND MOBILE EQUIPMENT OTHER THAN HAND MAGNETS,CHARACTERISTICS&THEIR DETERMINATION.
DIN 51301	VERIFICATION OF MATERIALS TESTING MACHINES,ELASTIC PROVING DEVICES FOR STATIC LOAD MEASUREMENTS.
DIN 51304	VERIFICATION OF HARDNESS TESTING MACHINEST FITTED WITH INDENTATION DEPTH MEASURING DEVICE.
DIN 51305	VERIFICATION OF HARDNESS TESTING MACHINES FITTED WITH AND OPTICAL INDENTATION DEPTH MEASURING DEVICE.
DIN 51306	VERIFICATION OF PENDULUM IMPACT TESTING MACHINES.
DIN 54120	NON- DESTRUCTIVE TESTING ,CALIBRATION BLOCK 1 AND ITS USE FOR THE ADJUSTMENT AND CONTROL OF ULTRASONIC ECHO EQUIPMENT.
DIN 54131 Pt 1	NON-DESTRUCTIVE TESTING,MAGNETIZING EQUIPMENT FOR MAGNETIC PARTICLE FLAW DETECTION,FIXED AND MOBILE EQUIPMENT OTHER THAN HAND MAGNETS,CHARACTERISTICS AND THEIR DETERMINATION.
DIN 54131 Pt2	NON-DESTRUCTIVE TESTING ,MAGNETIZING EQUIPMENT FOR MAGNETIC PARTICLE FLAW DETECTION ,HAND MAGNETS,CHARACTERISTICS AND THEIR DETERMINATION.

**MEASURMENT OF MECHANICAL PROPERTIES OF
MATERIALS.STRENGTH TEST.INVESTIGATION OF STRUCTURE
OF MATERIALS (GROUP NO.1060) :**

DIN 50014	ATMOSPHERES AND THEIR TECHNICAL APPLICATION , STANDARD ATMOSPHERES.
DIN 50015	ATMOSPHERES AND THEIR TECHNICAL APPLICATION , CONSTANT TEST ATMOSPHERES.

STANDARD NO.**TITLE**

DIN 50100	TESTING OF MATERIALS CONTINUOUS VIBRATION TEST. DEFINATIONS, SYMBOLS, PROCEDURE, EVALUATION .
P DIN 50332	TESTING OF MATERIALS, BLASTING(ABRASIVE JET) WEAR TESTING.
DIN 51200	MATERIALS TESTING, HARDNESS TESTING, DIRECTIONS FOR THE DESIGN AND USE OF SUPPORTING DEVICES.
DIN 51303	MATERIAL TESTING, MACHINES,STANDARDIZED FOR THE VERIFICATION OF STATIC HARDNESS TESTING MACHINES.
DIN 54112	NON- DESTRUCTIVE TESTING ,FILMS, EXPOSURE SCREENS,CASSETTES FOR X-RAY AND GAMMA RAY RADIOGRAPHS, DIMENSIONS.
DIN 54131 Pt1	NON-DESTRUCTIVE TESTING ,MAGNETIZED EQUIPMENT FOR MAGNETIC PARTICLE FLAW DETECTION ,FIXED AND MOBILE EQUIPMENT OTHER THAN HAND MAGNETS, CHARACTERISTICS & THEIR DETERMINATION.
DIN 54131 Pt2	NON-DESTRUCTIVE TESTING, MAGNETIZING EQUIPMENT FOR MAGNETIC PARTICLE FLAW DETECTION ,HAND MAGNETS.CHARACTERISTICS AND THEIR DETERMINATION.

MATERIAL DEFECTS AND THEIR TESTING.CORROSION .EROSION.PROTECTION OF MATERIALS.(GROUP NO.1070):

DIN 30674.Pt1	COATING OF DUCTILE CAST IRON PIPES, POLYETHLENE COATING.
DIN 30674 Pt2	COATING OF DUCTILE CAST IRON PIPES, ZING COATING WITH PROTECTIVE COVERING.
DIN 54131 Pt3	COATING OF DUCTILE CAST IRON PIPES, BITUMENT COATING.

HEAT ENGINES IN GENERAL.STEAM ENGINES.(INTERNAL COMBUSTION ENGINES S.UDC 621.43) (GROUP NO .1140) :

DIN 1943	THERMAL ACCEPTANCE TESTS OF STEAM TURBINES.
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STANDARD NO.

TITLE

STEAM BOILERS (GROUP NO. 1143) :

DIN 1942 ACCEPTANCE TESTS ON STEAM GENERATORS (VDI-RULES FOR STEAM GENERATORS).

VDE SPECIFICATIONS.GROUP 1. POWER INSTALLATION.

(GROUP NO .1180) :

DIN 57116 ELECTRICAL EQUIPMENT OF FURNACES.

/VDE 0116

DIN 57141 SPECIFICATION FOR EARTHING IN INSTALLATION FOR RATED VOLTAGES ABOVE 1 KV A.C.

/VDE 0141

VDE SPECIFICATIONS .GROUP 2 .POWER CABLING

.(GROUP NO. 1190) :

DIN 57207 P t22 SPECIFICATIONS FOR INSULATING AND SHEATHING COMPOUNDS FOR CABLES AND FLEXIBLE CORDS, XLPE INSULATING COMPOUNDS.

/VDE 0207 Pt22

DIN 57211 A SPECIFICATIONS FOR THE CONSTRUCTION OF OVERHEAD POWER LINES WITH RATED VOLTAGES UP TO 1000V, AMENDMENT TO VDE 0211/2.70

/VDE 0211 A

DIN 57220 Pt3 SPECIFICATIONS FOR SINGLE-AND MULTIPLE CBLE CLAMPS WITH INSULATING PARTS IN ELECTRICAL POWER CABLE INSTALLATIONS UP TO 1000V

/VDE 0220 Pt3

DIN 57250 Pt1 SPECIFICATIONS FOR CBLES,WIRES AND FLEXIBLE CORDS FOR POWER INSTALLATION, GENERAL.

DIN 57250 Pt1

/VDE 0250 Pt1

DIN 57250 Pt405 SPECIFICATIONS FOR CABLES,WIRES AND FLEXIBLE CORDS FOR POWER INSTALLATIONS : GENERAL,PVC-PILOT CABLE.

/VDE 0250 Pt405

DIN 57253 SPECIFICATION FOR HEATING CABLES.

/VDE 0253

DIN 57265 SPECIFICATIONS FOR THERMOPLASTIC-INSULATED LEAD-SHEATHED CABLES FOR ELECTRICITY SUPPLY.

DIN 57265

/ADE 0265

DIN 57273 POLYETHYLENE OR CROSSLINKED POLYETHYLENE INSULATED CABLES,NOMINAL VOLTAGES. U0/U6/10,12/20 AND 18/30KV.

DIN 57273

/VDE 0273

STANDARD NO.**TITLE**

DIN 57281 Pt1
/VDE 0281 Pt1

SPECIFICATIONS FOR PVC.CABLES AND FLEXIBLE CORDS
FOR POWER INSTALLATION,GENERAL.

DIN 57281 PtA1
/DVE 0281 PtA1

SPECIFICATIONS FOR PVC.CABLES AND FLEXIBLE CORDS
FOR POWER INSTALLATION,AMENDMENT TO VDE 0281 PART
1/10.79

DIN 57281 Pt 101
/DVE 0281

SPECIFICATIONS FOR PVC.CABLES AND FLEXIBLE CORDS
FOR POWER INSTALLATION,PVC-SINGLE CORE NON-SHEATHED
CABLES FOR INTERNAL WIRING.

DIN 57281 Pt 103
/VDE 0281 Pt 103

SPECIFICATIONS FOR PVC.CABLES AND FLEXIBLE CORDS
FOR POWER INSTALLATION , PVC-SINGLE CORE NON-
SHEATHED CABLES.

**VDE SPECIFICATIONS.GROUP 3 . INSULATING MATERIALS.
(GROUP NO 1200) :**

DIN 57370 Pt1
3VDE 0370 Pt1

INSULATING OILS: NEW INSULATING OILS FOR TRANSFORMERS
AND SWITCHGEAR.

DIN57370 Pt2
/VDE 0370 Pt2

INSULATING OILS,INSULATING OILS IN SERVICE IN
TRANSFORMERS AND SWITCHGEAR.

**VDE SPECIFICATIONS.GROUP
4.MEASUREMENT.CONTROL.TESTING.(GROUP NO.1210):**

DIN 57411 Pt1

SPECIFICATIONS FOR ELECTRONIC MEASURING INSTRUMENTS
AND MUTOMATIC CONTROLS,PROTECTIVE MEASURES FOR
ELECTRONIC MEASURING INSTRUMENTS.

DIN IEC 255 Pt 0-20
/DVE 0435 Pt 120

ELECTRICAL RELAYS,CONTACT PERFORMANCE OF
ELECTRICAL RELAYS.

DIN IEC 255 Pt 1-00
/DVE 0435 Pt 201

ALL-OR-NOTHING ELECTRICAL RELAYS.

DIN IEC 255 Pt8
/DVE 0435 Pt 3011

ELECTRICAL RELAYS,PART 8 : THERMAL ELECTRICAL
RELAYS.

DIN IEC 255 Pt17
/DVE 0435 Pt 3012

ELECTRICAL RELAYS,PART 17 : THERMAL ELECTRICAL RELAYS
FOR MOTOR PROTECTION.

DIN IEC 255 Pt18
/DVE 0435 Pt2011

ELECTRICAL RELAYS,PART 1 8 : DIMENTIONS FOR GENERAL
PURPOSE ALL – OR- NOTHING RELAYS.

STANDARD NO.

TITLE

**VED SPECIFICATIONS GROUP 6.INSTALLATION
MATERIAL.SWITCHGEAR. (GROUP NO.1230) :**

DIN 57607
/VDE 0607

SPECIFICATIONS FOR THE CLAMPS OF SCREWIESES
TERMINALS FOR CONNECTING OR JOINING COPPER
CONDUCTORS FROM 0.5 MM² UP TO 16 MM².

DIN 57611 Pt1
/DVE 0611 Pt1

SPECIFICATIONS FOR TERMINAL BLOCK FOR
CONNCTING COPPER CONDUCTORS UP TO 1000_v A.C. AND
1200_v D.C. STRAIGHTTHROUGH TERMINAL BLOCK UP TO
240 MM².

DIN 57670 Pt3
/VDE 0670 Pt3

A.C. SWITCHGEAR AND CONTROLGEAR FOR VOLTAGES
ABOVE 1KV, HIGH-VOLTAGE SWITCHES.

DIN IEC 168

TESTS ON INDOOR AND OUTDOOR POST INSULATORS OF
CERAMIC MATERIAL OR GLASS FOR SYSTEMS WITH
NOMINAL VOLTAGES GREATER THAN 1000_v. (VDE
SPECIFICATION)

DIN IEC 233
/VD 0674 Pt2

TESTS ON HOLLOW INSULATION FOR USE IN
ELECTRICAL EQUIPMENT.

DIN IEC 644
/VD 0670Pt 401

SPECIFICATION FOR HIGH-VOLTAGE FUSE-LINKS FOR
MOTOR CIRCUIT APPLICATIONS.

DIN IEC 644
/VD 0670 Pt 401

SPECIFICATION FOR HIGH -VOLTAGE FUSE-LINKS FOR
MOTOR CIRCUIT APPLICATIONS.

TRANSFORMERS IN TENERAL. (GROUP NO.1540) :

DIN 42560
DIN 42561
DIN 42562
DIN 42565

THROTTLE-VALVES NW 80, DIMENSIONS,TIGHTNESS TESTING.
WHEELS.
SILICA-GEL BREATHERS FOR TRANSFORMERS.
POWER TRANSFORMERS,FANS, BLADE DIAMETER 350MM,
FOR OPEN -AIR INSTALLATION.

**TRANSFORMERS WITH OIL INSULATION AND COOLING.
(GROUP NO . 1570) :**

DIN 42551
DIN 42552

POWER TRANSFORMERS, OIL DRAINING DEVICES.
OIL LEVEL INDICATOR TYPE B FOR TRANSFORMERS.

STANDARD NO.

TITLE

DIN 42556 Pt1

OIL –TO – WATER HEAT EXCHANGER FOR TRANSFORMERS,VERTICAL ARRANGE MENT.

DIN 42557

OIL-TO- AIR HEAT EXCHANGERS FOR TRANFORMERS.

CONVERSION OF ALTERNATING CURRENT INTO DIRECT CURRENT AND VERSA.RECTIFIERS.CONVERTERS. INVERTERS.(GROUP NO. 1580):

DIN 41762 Pt1

STATIC POWER CONVERTORS. RATING CODE DESIGNATION FOR SEMICONDUCTOR POWER CONVERTOR ASSEMBLIES: POLYCRISTALLINE SEMICONDUCTOR RECTIFIER ASSEMBLIES.

NON- PERMANENT JOINTS.(GROUP NO . 1780):

DIN 46207

CONNECTIONS FOR ELECTRICAL DEVICES,SLEEVE TERMINALS AND SIDE OPENING SLEEVE TERMINALS,PRINCIPAL DIMENSIONS AND CORRELATION .

DIN 46288

CONNETING WASHERS FOR CONDUCTORS.

DIN EN50027

INDUSTRIAL LOW VOLTAGE SWITCHGEAR AND CONTROLINGEAR,TERMINAL APERTURE SIZES FOR UNPREPARED ROUND COPPER CONDUCTORS.

LOW-VOLTAGE SWITCHGEAR AND CONTROLGEAR . CLOSING AND OPENING OF CIRCUITS SWITCHING DEVICES IN GENERAL (GROUP NO . 1840):

DIN EN 50001

DIMENSIONS,GENRAL RULES .

DIN EN 50002

DIMENSIONS,FIXING HOLES OF CONTACTOR RELAYS.

DIN EN 50003

FOR INDUSTRIAL USE : DIMENSIONS ,FIXING HOLES OF CONTACTORS FOR MOTORS.

DIN EN 50005

TERMINAL MARKING AND DISTINCTIVE NUMBER,GENERAL RULES.

DIN EN 50007

SINGLE HOLE MOUNTED CONTROL SWITCHES AND INDICATOR LIGHTS,MOUNTING DIMENSIONS.

DIN EN 50008

INDUCTIVE PROXIMITY SWITCH ,FORMA ,FOR DIRECT CURRENT ,3 OR 4 TERMINALS.

<u>STANDARD NO.</u>	<u>TITLE</u>
DIN EN 50010	METHODS FOR MEASURING THE OPERATING DISTANCE AND OPERATING FREQUENCY.
DIN EN 50011	TERMINAL MARKING, DISTINCTIVE NUMBER AND DISTINCTIVE LETTER FOR PARTICULAR CONTACTOR RELAYS.
DIN EN 50012	TERMINAL MARKING AND DISTINCTIVE NUMBER FOR AUXILIARY CONTACTS OF PARTICULAR CONTACTORS.
DIN EN 50013	TERMINAL MARKING AND DISTINCTIVE NUMBER FOR PARTICULAR CONTROL SWITCHES.
DIN EN 50022	MOUNTING RAILS, TOP HAT RAILS , 35MM WIDE , FOR SNAP-ON MOUNTING OF EQUIPMENT.
DIN EN 50023	MOUNTING RAILS, TOP HAT RAILS, 75MM WIDE, FOR SNAP-ON MOUNTING OF EQUIPMENT.
DIN EN 50024	MOUNTING RAILS, C-PROFILE AND ACCESSORIES FOR THE MOUNTING OF EQUIPMENT.
DIN EN 50025	INDUCTIVE PROXIMITY SWITCHES, FORM C, FOR DIRECT CURRENT , 3 OR 4 TERMINALS.
DIN EN 50026	INDUCTIVE PROXIMITY SWITCHES, FORM D , FOR DIRECT CURRENT , 3 OR 4 TERMINALS.
DIN EN 50032	INDUCTIVE PROXIMITY SWITCHES, DEFINITION, CLASSIFICATION AND DESIGNATION.
DIN EN 50035	MOUNTING RAILS, G-PROFILE FOR THE FIXING OF TERMINAL BLOCKS.
DIN EN 50036	INDUCTIVE PROXIMITY SWITCHES, FORM A, FOR ALTERNATING CURRENT 2 TERMINALS.
DIN EN 50037	INDUCTIVE PROXIMITY SWITCHES, FORM C, FOR ALTERNATING CURRENT 2 TERMINALS.
DIN EN 50038	INDUCTIVE PROXIMITY SWITCHES, FORM D, FOR ALTERNATING CURRENT 2 TERMINALS.

STANDARD NO.**TITLE**

DIN EN 50042

TERMINAL MARKING ,TERMINALS FOR EXTERNAL ASSOCIATED ELECTRONIC CIRCUIT COMPONENTS AND CONTACTS.

DIN EN 50045

MOUNTING RAILS,TOR HAT RAIL, 15 MM WIDE FOR THE FIXING OF TERMINAL BLOCKS.

SWITCHES IN GENERAL.CIRCUIT BREAKERS.(GROUP NO.1920)

DIN 43697

LOW VOLTAGE SWICHGEAR AND CONTROLGEAR,MULTI POSITION SWITCHES.

DIN 50041

LOW VOLTAGE SWICHGEAR AND CONTROLGEAR FOR INDUSTRIAL USE, CONTROL SWITCHES, POSITION SWITCHES 42, 5X80. DIMENSIONS AND CHARACTERISTICS.

DIN EN 50044

LOW VOLTAGE SWITCHGEAR AND CONTROLGEAR FOR INDUSTRIAL USE, INDUCTIVE PROXIMITY SWITCHES, IDENTIFICATION OF CONNECTIONS.

DIN EN 50047

LOW VOLTAGE SWITCHGEAR AND CONTROLGEAR FOR INDUSTRIAL USE, CONTROL SWITCHES, POSITION SWITCHES 30*55. DIMENSIONS AND CHARACTERISTICS.

HARMONIZED SYSTEM OF QUALITY ASSESSMENT FOR ELECTRONIC COMPONENETS. VARIABLE RESISTORS DEPENDENT ON TEMPERATURE THERMISTORS.(GROUP NO.1990) :DIN 45924 Pt101
/CECC 43001

BLANK DETAIL SPECIFICATION: DIRECTLY HEATED NEGATIVE TEMPERATURE COEFFICIENT THERMISTORS (BEADS IN SOLID GLASS OR VITREOUS ENAMEL).

DIN 45924 Pt 102
/CECC 43002

BLANK DETAIL SPECIFICATION : DIRECTLY HEATED NEGATIVE TEMPERATURE COEFFICIENT THERMISTORS (BEADS IN ENVELOPES).

DIN 45924 Pt 103
/CECC 43003

BLANK DETAIL SPECIFICATION : DIRECTLY HEATED NEGATIVE TEMPERATURE COEFFICIENT THERMISTORS (DISC TYPE) .

DIN 45924 Pt 104
/CECC 43004

BLANK DETAIL SPECIFICATION : DIRECTLY HEATED NEGATIVE TEMPERATURE COEFFICIENT THERMISTORS (ROD TYPE).

STANDARD NO.**TITLE****HARMONIZED SYSTEM OF QUALITY ASSESSMENT FOR ELECTRONIC COMPONENTS. RELAYS. (GROUP NO. 2108) :**

DIN 45960Pt 1 /CECC 16000	GENERIC SPECIFICATION : ELECTROMECHANICAL ALL-OR-NOTHING RELAYS.
DIN 45960 Pt 11 /CECC 16100	SECTIONAL SPECIFICATION : ELECTROMECHANICAL ALL – OR – NOTHING RELAYS.
DIN 45960 Pt 1101 /CECC 16101	BLANK DETAIL SPECIFICATION :ELECTROMECHANICAL ALL-OR – NOTHING RELAYS.
DIN 45965 Pt1 /CECC 19000	GENERIC SPECIFICATION : DRY REED MAKE CONTACT UNITS.
DIN 45960 Pt1001 /CECC 19001	BLANK DETAIL SPECIFICATION : DRY REED MAKE CONTACT UNITS FOR TELECOMMUNICATION APPLICATIONS.
DIN 45960 Pt1002 /CECC 40101	BLANK DETAIL SPECIFICATION : DRY REED MAKE CONTACT UNITS FOR GENERAL APPLICATIONS.
DIN ISO 7588	ROAD VEHICLES, RELAYS AND FLASHERS,MOUNTING AND POSITIONING DIMENSIONS OF MALE TABS AND SOCKET APERTURES FOR RELAYS AND FLASHERS.

APPLIED ELECTROSTATICS.CAPACITORS IN GENERAL.(GROUP NO . 2110):

DIN 45924 /CECC30000	HARMONIZED SYSTEM OF QUALITY ASSESSMENT FOR ELECTRONIC COMPONENTS, GENERIC SPECIFICATION : FIXED CAPACITORS.
DIN IEC418 Pt1	VARIABLE CAPACITORS. PART 1 : TERMS AND METHDS OF TEST.
DIN IEC418 Pt2	VARIABLE CAPACITORS PART2 : TYPE SPECIFICATION FOR VARIABLE TUNING CAPACITORS TYPE A.
DIN IEC418 Pt2A	VARIABLE CAPACITORS, PART2: TYPE SPECIFICATION FOR VARIABLE TUNING CAPACITORS TYPE A: BLANK DETAIL SPECIFICATION FOR VARIABLE TUNING CAPACITORS TYPE A
DIN IEC418 Pt3	VARIABLE CAPACITORS, PART3: TYPE SPECIFICATION FOR VARIABLE TRIMMER CAPACITORS TYPE B .

STANDARD NO.**TITLE**

DIN IEC418 PT3A

VARIABLE CAPACITORS, PART3: TYPE SPECIFICATION FOR VARIABLE TRIMMER CAPACITORS TYPE, BLANK DETAIL SPECIFICATION.

DIN IEC418 Pt4

VARIABLE CAPACITORS, PART4: TYPE SPECIFICATION FOR VARIABLE TRIMMER CAPACITORS TYPE B.

DIN IEC418 Pt4A

VARIABLE CAPACITORS, PART3: TYPE SPECIFICATION FOR VARIABLE TRIMMER CAPACITORS TYPE, BLANK DETAIL SPECIFICATION.

DIN IEC 717

METHOD FOR THE DETERMINATION OF THE SPACE REQUIRED BY CAPACITORS AND RESISTORS WITH UNIDIRECTIONAL TERMINATIONS.

HARMONIZED SYSTEM OF QUALITY ASSESSMENT FOR ELECTRONIC COMPONENTS. TRANSISTORS. (GROUP NO. 2400) :DIN 45930Pt103
/CECC 50002

BLANK DETAIL SPECIFICATION: AMBIENT-RATED BIPOLAR TRANSISTORS FOR LOW AND HIGH FREQUENCY AMPLIFICATION.

DIN 45930Pt104

DETAIL SPECIFICATION , NG-TRANSISTOR TYPE BCY 59.

DIN 45930 Pt107
/CECC 50003

BLANK DETAIL SPECIFICATION : CASE-RATED BIPOLAR TRANSISTORS FOR LOW FREQUENCY AMPLIFICATION .

DIN 45930 Pt108
/CECC 50004

BLANK DETAIL SPECIFICATION : BIPOLAR TRANSISTORS FOR SWITCHING APPLICATIONS.

DIN 45930 Pt1023
/CECC 50012

BLANK DETAIL SPECIFICATION : SINGLE GATE FIELD-EFFECT TRANSISTORS.

DIN 45953 Pt2
/CECC 50002

DETAIL SPECIFICATION: HF-TRANSISTOR TYPE BRY 90.

DIN 45956 Pt1
/CECC 50007

BLANK DETAIL SPECIFICATION :CASE-RATED BIPOLAR TRANSISTORS FOR HIGH FREQUENCY.

FIXED CONTAINERS AND TANKS(GROUP NO.2585):

DIN 41119 Pt1

ABOVE-GROUND CULINDRICAL FLAT-BOTTOMED TANK INSTALLATION OF METALLIC MATERIALS, FUNDAMENTALS, DESIGN.TESTS.

STANDARD NO.

TITLE

**CAST IRON FITINGS FOR PIPE AND HOSEPIPE CONNECTIONS.
(GROUP NO.2620):**

DIN 28500 CAST IRON PRSSURE PIPES AND SPECIAL CASTINGS,
TECHNICAL CONDITIONS OF DELIVERY.

**STEEL FITTINGS FOR PIPE AND HOSEPIPE
CONNECTIONS.(GROUP NO.2630):**

DIN 2605 TUBE BENDS FOR BUTT WELDING, STEEL TUBES.

DIN 2606 TUBE BENDS IN STEEL FOR BUTT WELDING, TYPE 5D.

DIN 30670 POLYETHYLENE SHEATHING OF STEEL TUBES AND OF STEEL
SHAPES AND FITTINGS.

PIPE S IN GENERAL (GROUP NO.2660) :

DIN 2401 Pt1 COMPONENTS SUBJECT TO INTERNAL OR EXTERNAL
PRESSURE, PRESSURE AND TEMPERATURE
DATA, TERMINOLOGY,NOMINAL PRESSURE RATINGS.

CONTING OF DUCTILE CAST IRON PIPES.(GROUP NO.2700):

DIN 2401 Pt1 PIPES, SURVEY OF STANDARDS FOR TUBES OF DUCTILE CASI
IRON.

DIN 2401 Pt1 TECHNICAL CINDITIONS OF DELIVERY.

DIN 2401 Pt1 POYETHYLENE COATING.

DIN 2401 Pt1 ZINC COATING WITH PROTECTIVE COVERING.

DIN 2401 Pt1 BITUMENT COATING.

STEEL PIPES. (GROUP NO.2710):

DIN 2391 Pt1 SEAMLESS PRECISION STEEL TUBES, DIMENTIONS.

DIN 2391 Pt2 SEAMLESS PRECISION STEEL TUBES, TECHNICAL DELIVERY
CONDITION.

DIN 2393 Pt1 WELDED PRECISION STEEL TUBES, DIMENSIONS.

DIN 2394 Pt1 WELDED AND SIZED PREISION STEEL TUBES, DIMENSIONS.

DIN 2394 Pt2 WELDED AND SIZED PREISION STEEL TUBES, TECHNICAL
CONDITIONS OF DELIVERY.

STANDARD NO.**TITLE**

DIN 2410 Pt1	TUBES, GENERAL REVIEW OF STANDARDS FOR STEEL TUBES.
DIN 2440	MEDIUM-WEIGHT SUITABLE FOR SCREWING.
DIN 2441	STEEL TUBES, HEAVY-WEIGHT SUITABLE FOR SCREWING.
DIN 2442	STEEL TUBES.OF SPECIFIED QUALITY SUITABLE FOR SCREWING, NOMINAL PRESSURE 1 TO 100.
DIN 2445	SEAMLESS STEEL TUBES FOR DYNAMIC LOADS, BASIS FOR CALCULATION OF STRAIGHT TUBES.
DIN 2445 Pt1	SEAMLESS STEEL TUBES FOR DYNAMIC LOADS, HOT FINISHED TUBES, NOMIANL PRESSURES 100 TO 400.
DIN 2448	SEAMLESS STEEL PIPES AND TUBES, DIMENSIONS, CONVENTIONAL MASSES PER UNIT LENGTH.
DIN 2449	SEAMLESS STEEL TUBES IN ST 00, DIMENSIONS & RANGE OF APPLICATION .
DIN 2450	SEAMLESS STEEL TUBES IN ST 35, DIMENSIONS &RANGE OF APPLICATION.
DIN 2458	WELDED STEEL PIPES & TUBES,DIMENSIONS,CONVENTIONAL MASSES PER UNIT LENGTH.
DIN 2413	STEEL PIPES,CALCULATION OF WALL THICKNESS SUBJECTED TO INTERNAL PRESSURE.
DIN 2462 Pt1	SEAMLESS STAINLESS STEEL TUBES, DIMENSIONS, MASSES PER UNIT LENGTH.
P DIN 2462 Pt2	SEAMLESS TUBES OF STAINLESS STEEL,DATA FOR ORDERING AND DELIVERY.
DIN 2915	SEAMLESS & WELDED STEEL TUBES FOR BOILERS, SURVEY.
DIN 2917	SEAMLESS STEEL TUBES FOR SUPERHEATED STEAM PIPELINES AND HEADERS.
DIN 17172	STEEL PIPES FOR LONG-DISTANCE PIPELINES FOR COMBUS-TIBLE LIQUIDS AND GASES, TECHNICAL CONDITIONS OF DELIVERY.

STANDARD NO.**TITLE**

DIN 17175	SEAMLESS TUBES OF HEAT-RESISTANT STEELS, TECHNICAL CONDITIONS OF DELIVERY.
DIN 17177	ELECTRIC PRESSURE-WELDED STEEL TUBES FOR ELVATED TEMPERATURES, TECHNICAL CONDITIONS OF DELIVERY.
DIN 19530 Pt1	STEEL SOCKET PIPES & FITTINGS FOR SEWRS, DIMENSIONS.
DIN 50137	TESTING OF STEEL, RING EXPANDING TEST ON TUBES.
DIN 50138	TESTING OF METALLIC MATERIALS, RING TENSILE TEST ON TUBES.
DIN 50139	TESTING OF STEEL, FLANGING TEST ON TUBES.
DIN ISO 4200	PLAIN END STEEL TUBES, WELDED AND SEAMLESS,GENERAL TABLE OF DIMENSIONS AND CONVENTIONAL MASSES PER UNIT LENGTH.
<u>NONFERROUS METAL PIPES (GROUP NO. 2720) :</u>	
DIN 1754 Pt1	COPPER TUBES, SEAMLESS DRAWN, DIMENSION RANGES & COORDINATION OF TOLERANCES.
DIN 1754 Pt2	COPPER TUBES, SEAMLESS DRAWN, PREFERRED DIMENSIONS FOR GENERAL.
DIN 1754 Pt3	COPPER TUBES, SEAMLESS DRAWN, PREFERRED DIMENSIONS FOR PIPELINES.
DIN 1755 Pt1	WROUGHT COPPER ALLOY TUBES, SEAMLESS DRAWN, DIMENSION RANGES AND COORDINATION OF TOLERANCES.
DIN 1755Pt2	COPPER WROUGHT ALLOY TUBES, SEAMLESS DRAWN, PREFERRED DIMEN.PURPOSES.
DIN 1755 Pt3	COPPER WROUGHT ALLOY TUBES, SEAMLESS DRAWN, PREFERRED DIMENSIONS FOR PIPELINE.
DIN 1795 Pt1	ALUMINIUM TUBES,(HIGHEST GRADE ALUMINIUM,HIGH GRADE ALUMINIUM & WROUGHT ALUMINIUM ALLOYS), SEAMLESS DRAWN ,DIMENSION RANGES & TOLERANCE SCHEMES.
DIN 1795 Pt2	ALUMINIUM TUBES,(HIGHEST GRADE ALUMINIUM,HIGH GRADE ALUMINIUM & ALUM WROUGHT ALLOYS), SEAMLESS DRAWN , PEREFERED DIMENSIONS FOR GENERAL PORPUSES..
DIN 1795 Pt3	ALUMINIUM TUBES, (HIGHEST GRADE ALUMINIUM, HIGH GRADE ALUMINIUM & ALUM.WROUGHT ALLOYS), SEAMLESS DRAWN, PREFERRED DIMENSIONS FOR PIPELINES.

<u>STANDARD NO.</u>	<u>TITLE</u>
DIN 2410 Pt1	TUBES, GENERAL REVIEW OF STANDARDS FOR STEEL TUBES.
DIN 2440	MEDIEM – WEIGHT SUITABLE FOR SCREWING.
DIN 2441	STEEL TUBES, HEAVY-WEIGHT SUITABLE FOR SCREWING .
DIN 2442	STEEL TUBES, OF SPECIFIED QUALITY SUITABLE FOR SCREWING, NOMINAL PRESSURE 1 TO 100.
DIN 2445	SEAMLESS STEEL TUBES FOR DYNAMIC LOADS,BASIS FOR CALCULATION OF STRAIGHT TUBES.
DIN 2445 Pt1	SEAMLESS STEEL TUBES FOR DYNAMIC LOADS, HOT FINISHED TUBES,NOMINAL PRESSYRES 100 TO 400.
DIN 2448	SEAMLESS STEEL PIPES AND TUBES,DIMENSIONS,CONVENTIONAL MASSES PER UNIT LENGTH.
DIN 2449	SEAMLESS STEEL TUBES IN SY 00, DIMENSIONS & RANGE OF APPLICATION.
DIN 2450	SEAMLESS STEEL TUBES IN ST 35, DIMENSIONS & RANGE OF APPLICATION .
DIN 2458	WELDED STEEL PIPES & TYBES,DIMENSIONS,CONVENTIONAL MASSES PER UNIT LENGTH.
DIN 2413	STEEL PIPES,CALCULATION OF WALL THICKNESS SUBJECTED TO INTERNAL PRESSURE.
DIN 2462 Pt1	SEAMLESS STAINLESS STEEL TUBES, DIMENSIONS,MASSSES PER UNIT LENGTH.
P DIN 2462 Pt2	SEAMLESS TUBES OF STAINLESS STEEL ,DATA FOR ORDERING AND DELIVERY.
DIN 2463 Pt1	WELDED AUSTENITIC STAINLESS STEEL, PIPES AND TUBES, DIMENSIONS, CONVENTIONAL MASSES PER UINT LENGTH.
P DIN 2463 Pt2	WELDED TUBES OF AUSTENITIC STAINLESS STEEL, DATA FOR ORDERING AND DELIVERY.
DIN 2915	SEAMLESS & WELDED STEEL TUBES FOR BOILERS,SURVEY.
DIN 2917	SEAMLESS STEEL TUBES FOR SUPER HEATED STEAM PIPELINES AND HEADERS.
DIN 17172	STEEL PIPES FOR LONG-DISTANCE PIPELINES FOR COMBUSTIBLE LIQUIDS AND GASES,TECHNICAL CONDITIONS OF DELIVERY.

STANDARD NO.**TITLE**

DIN 1795 Pt1 ALUMINIUM TUBES,(HIGHEST GRADE ALUMINIUM,HIGH GRADE ALUMINIUM & WROUGHT ALUMINIUM ALLOYS),SEAMLESS DRAWN,DIMENSION RANGES & TOLERANCE SCHEMES.

DIN 1795 Pt2 ALUMINIUM TUBES,(HIGHEST GRADE ALUMINIUM,HIGH GRADE ALUMINIUM & ALUM .WROUGHT ALLOYS), SEAMLESS DRAWN, PREFERRED DIMENSION FOR GENERAL PORPUSES.

DIN 1795 Pt3 ALUMINIUM TUBES,(HIGHEST GRADE ALUMINIUM,HIGH GRADE ALUMINIUM & ALUM .WROUGHT ALLOYS),SEAMLESS DRAWN, PEREFERRED DIMENSIONS FOR PIPELINES.

DIN 9107 ALUMINIUM TUBES(HIGHEST GRADE ALUMINIUM, HIGH GRADE ALUMINIUM & WROUGHT ALUM. ALLOYS), ECTRUDED, DIMENSIONS.

DIN 17671 Pt2 TUBES OF COPPER AND WROUGHT COOER ALLOYS, TECHNICAL CONDITIONS OF DELIVERY.

DIN 17679 WORUGHT COPPER AND COOER ALLOY TUBES WITH ROLLED FINS FOR USE IN HEAT EXCHANGERS.

BUTT WELDING STEEL FITTINGS.SOLID PIPE JOINTS.(GROUP NO.2800):

DIN 2615 T

DIN 2616 REDUCERS.

DIN 2617 CAPS

DIN 2618 WELDING SADDLES, NOMINAL PRESSURE 16 .

DIN 2619 BENDS FOR WELDING, NOMINAL PRESSURE 16.

DIN 3239 Pt2 WELD-ON ENDS OF VALVES FOR SOCKET WELDING.

FLANGE PIPE JOINTS IN GENERAL (GROUP NO.2810):

DIN 2500 GENERAL INFORMATION ,SURVEY.

DIN 2501 Pt1 CONNECTION DIEMENSIONS.

DIN 2505 CALCULATION OF FLANGED JOINTS.

STANDARD NO.**TITLE****FLANGES FOR SOLDERING WELDING.WELDING NECK
FLANGES.(GROUP NO.2870):**

DIN 2573	PLAIN FACE FLANGES FOR BRAZING OR WELDING, NOMINAL PRESSURE 6.
DIN 2576	SLIP-ON TYPE FOR BRAZING OR WELDING, NOMINAL PRESSURE 10.
DIN 2627	NOMINAL PRESSURE 400.
DIN 2628	NOMINAL PRESSURE 250
DIN 2628	NOMINAL PRESSURE 320
DIN 2630	NOMINAL PRESSURE 1 AND 2.5
DIN 2631	NOMINAL PRESSURE 6
DIN 2632	NOMINAL PRESSURE 10
DIN 2633	NOMINAL PRESSURE 16
DIN 2634	NOMINAL PRESSURE 25
DIN 2635	NOMINAL PRESSURE 40
DIN 2636	NOMINAL PRESSURE 64
DIN 2637	NOMINAL PRESSURE 100
DIN 2638	NOMINAL PRESSURE 160

PIPELINGES IN GENERAL .(GROUP NO. 3010):

DIN 2401 Pt2	PRESSURE RATINGS, PERMISSIBLE WORKING PRESSURE FOR PIPELINE COMPONENTS OF IRON AND STEEL.
DIN 2402	NOMINAL WIDTHS, DEFINITION,GRADING.
DIN 2404	IDENTIFICATION COLOUR CODE FOR HEATING SYSTEM PIPELINES.
DIN 2406	PIPELINES, SYMBOLS, PIPE CLASSES.
DIN 2428	DRAWING FOR PIPELINES, FORMS FOR ISOMETRIC REPRESENTATION.
DIN 2429	SYMBOLS FOR PIPELINE SYSTEMS.

<u>STANDARD NO.</u>	<u>TITLE</u>
DIN 3568	CLAMPING PLATES FOR THE SUSPENSION OF PIPES ON IANDIP STEEL BEAMS.
	<u>VALVES IN GENERAL.(GROUP NO.3030) :</u>
DIN 3320	SAFETY VALVES, SAFETY SHUT-OOF VALVES, DEFINITIONS, SIZING,MARKING.
DIN IEC 534 Pt2-1	INDUSTRIAL-PROCESS CONTROL VAVES, PART 2: FLOW CAPACITY, SECTION ONE: SIZING EQATIONS FOR INCOMPRESSIBLE FLUID FLOW UNDER INSTALLED CONDITIONS.
DIN IEC 534 Pt2-2	INDUSTRIAL-PROCESS CINTROL VALVES, PART2:FLOW CAPACITY, SECTION ONE: SIZING EQATIONS FOR COMPRESSIBLE FLUID FLOW UNDER INSTALLED CONDITIONS.
DIN IEC 534 Pt5	INDUSTRIAL-PROCESS CONTROL VALVES,PART 5:MARKING.
	<u>PUMPS . (GROUP NO .3150) :</u>
DIN 1944	ACCEPTANCE TESTS ON CENTRIFUGAL PUMPS (VDI RULES FOR CENTRIFUGAL PUMPS).
DIN 5437	HAND PUMPS, VANE-PUMPS, DOUBLE AND QUADRUPLE ACTING
DIN 5440	COOLANT PUMPS FOR MACHINE TOOLS, NOMINAL CAPACITY, DIMENSIONS.
DIN 249000	GRAPHICAL SYMBOLS FOR USE IN THE ENGINEERING AND RELATED FIELDS, CONCRETE PUMPS.
DIN ISO 3019 Pt2	HYDRAULIC FLUID POWER, POSITIVE DISPLACEMENT PUMPS AND MOTORS, DIMENSIONS AND IDENTIFICATION CODE FOR MOUNTING FLANGES AND SHAFT ENDS. PART 2:2 AND 4-HOLE FLANGES AND SHAFT ENDS, METRIC SERIES.
DIN ISO 3019 Pt3	HYDRAULIC FLUID POWER,POSITIVE DISPLACEMENT PUMPS AND MOTORS, DIMENSIONS AND IDENTIFICATION CODE FOR MOUNTING FLANGES AND SHAFT ENDS. PART 3:POLYGONAL FLANGES (INCLUDING CIRULAR GLANGES).
DIN ISO 4391	HYDRAULIC FLUID POWER, PUMPS,MOTORS AND INTEGRAL TRANSMISSIONS, PARAMETER DERINITIONS AND LETTER SYMBOLS.

STANDARD NO.**TITLE****WELDING AND ALLIED TECHNIQUES IN GENERAL. (GROUP NO.3240):**

DIN 1910 Pt1	CONCEPTS, CLASSIFICATION OF WELDING PROCESSES.
DIN 1910 Pt2	WELDING OF METALS, PROCESSES.
DIN 8528 Pt2	WELDING SUITABILITY OF GENERAL STRUCTURAL STEELS FOR SUSION.
DIN 8562	SELDING OF VESSELS, VESSELS OF METALLIC MATERIALS, PRINCIPLES FOR SUSION.
DIN 8563 Pt1	QUALITY ASSURANCE OF WELDING OPERATIONS, GENERAL PRINCIPLES.
DIN 8570 Pt1	GENERAL TOLERANCES FOR WELDING CONSTRUCTIONS, DIMENSIONS FOR LENGTHS AND ANGLES.
P DIN 8570 Pt3	GENERAL TOLERANCES FOR WELDED STRUCTURES, FORM AND POSITION.
P DIN 8570 Pt4	GENERAL TOLERANCES FOR WELDED STRUCTURES, BUTT WELDS AND FILLET WELDS FOR ALUMINIUM COMPONENTS.

TRAINING FOR WELDING AND FOR ALLIED TECHNIQUES. (GROUP NO . 3245) :

DIN 8560	QUALIFICATION TESTING OF WELDERS FOR WELDING STEEL.
DIN 8561	EXAMINATION OF WELDERS FOR WELDING NONFERROUS METALS.

FILLER MATERIALS AND FLUXES FOR SOLDERING AND WELDING .(GROUP NO . 3250) :

DIN 1732 Pt1	WELDING FILLER METALS FOR ALUMINIUM: COMPOSITION, USE AND TECHNICAL CONDITIONS OF DELIVERY.
DIN 1732 Pt2	WELDING FILLER METALS FOR ALUMINIUM: TESTING BY WELDED JOINTS.
DIN 1733 Pt1	WELDING FILLER METALS FOR COPPER AND COPPER ALLOYS: COMPOSITION, USE AND TECHNICAL CONDITIONS OF DELIVERY.

<u>STANDARD NO.</u>	<u>TITLE</u>
DIN 1736 Pt1	WELDING FILLER METALS FOR NICKEL AND NICKEL ALLOYS. COMPOSITION , USE AND TECHNICAL CONDITIONS OF DELIVERY.
DIN 1736 Pt2	WELDING FILLER METALS FOR NICKEL AND NICKEL ALLOYS.TEST PIECE, SPECIMENS, MECHANICAL-TECHNOLOGICAL PROPERTIES.
DIN 8511 Pt1	FLUXES FOR SOLDERING METALLIC MATERIALS, FLUXES FOR HARD SLODERING HEAVY METALS.
DIN 8511 Pt2	FLUXES FOR SOFT SOLDERING EIGHT METALS.
DIN 8511 Pt3	FLUXES FOR HARD AND SOFT SOLDERING LIGHT METALS.
DIN 8513 Pt1	BRAZING AND BRAZE WELD FILLER METALS. COPPER BRAZING ALLOYS.COMPOSITION ,USE,TECHNICAL CONDITIONS OF DELIVERY.
DIN 8513 Pt2	BRAZING AND BRAZE WELD FILLER METALS.COPPER BRAZING ALLOYS WITH LESS THAN 20 % BY WT.SILVER, COMPOSION, USE, TECHNICAL CONDITIONS OF DELIVERY.
DIN 8513 Pt3	BARAZING AND BRAZE WELD FILLER METALS.COPPER BRAZING ALLOYS SILVER-BEARING OF AT LEAST 20 % BY WT.SILVER, COMPOSITION , USE,TECHNICAL CONDITIONS OF DELIVERY.
DIN 8513Pt5	BRAZING FILLER METALS, NICKEL BASE FILLER METALS FOR HIGH TEMPERORE BRAZING, APPLICATION,COMPOSITION,TECHNICAL DELIVERY CONDITIONS.
DIN 8516	SOFT SOLDERS WITH FLUX CORES ON RESIN BASIS, COMPOSITION, TECHNICAL CONDITIONS OF DELIVERY,TESTING.
DIN 8527 Pt1	FLUXES FOR SOFT SOLDERING HEAVY METALS,TESTING.
DIN 8554 Pt1	GAS WELDING RODS FOR JOINT WELDING OF UNALLOYED AND LOW ALLOY STEELS,DESIGNATION ,TECHNICAL CONDITIONS OF DELIVERY.
DIN 8554 Pt3	GAS WELDING RODS FOR JOINT WELDING OF UNALLOYED AND LOW ALLOY STEELS,PROOF TESTING UNDER FABRICATION CONDITIONS.

<u>STANDARD NO.</u>	<u>TITLE</u>
DIN 8555 Pt1	FILLER METALS USED FOR SURFACING,FILLER WIRES,FILLER RODS,WIRE ELECTRODES, COVER ELECTRODS, DESIGNATION, TECHNICAL DELIVERY CONDITONS.
DIN 8555 Pt2	FILLER METALS USED IN SURFACING, HARDNESS TESTING OF THE WELD METAL.
DIN 8556 Pt1	FILLER METALS FOR WELDING STAINLESS AND HEAT-RESISTANT STEELS, DESIGNATION,TECHNICAL CONDITIONS OF DELIVERY.
DIN 8556 Pt2	FILLER METALS FOR WELDING STAINLESS AND HEAT-RESISTING STEELS, TESTING OF COVERED ROD ELECTRODES,WELD METAL SPECIMEN.
DIN 8571	FILLER MTETALS AND AUXILIARY METALS FOR METAL WELDING, CONCEPTS, CLASSIFICATION.
DIN 8573 Pt1	FILLER METALS FOR WELDING UNALLOYED AND ALLOY CAST IRON MATERIALS, DESIGNATION, TECHNICAL DELIVERY CONDITIONS.
DIN 8575 Pt1	FILLER METALS FOR ARC WELDING OF CREEP-RESISTING STEELS, CLASSIFICATION ,DESIGNATION,TECHNICAL DELIVERY CONDITIONS.
DIN 32525 Pt1	TESTING FILLER METALS BY MEANS OF WELD METAL SPECIMENS, ARC WELDED TEST PIECES, SPECIMENS FOR MECHANICAL-TECHNOLOGICAL TESTS.
DIN 32525 Pt2	TESTING FILLER METALS BY MEANS OF WELD METAL SPECIMENS, TEST PIECES FOR DETERMINING CHEMICAL COMPOSITION WITH LOW HEAT INPUT.
DIN 32526	SHIELDING GASES FOR WELDING .
DIN ISO 3677	FILLER METALS FOR BRAZING AND SOLDERING, CODE OF SYMBOLS.
<u>JOINTS IN WELDING AND ALLIED TECHNIQUES</u> <u>JOINTS.WELDS.CUTS.(GROUP NO.3260) :</u>	
DIN 1912 Pt1	GRAPHICAL REPRESENTATION OF WELDED,SOLDERED AND BRAZED JOINTS,DEFINITIONS AND TERMS FOR WELDING JOINTS,EDGES AND WELDS.

<u>STANDARD NO.</u>	<u>TITLE</u>
DIN 2556 Pt1	EDGE PREPARATION FOR WELDING, DIRECTIONS REGARDING EDGE FORMS, FUSION WELDING OF BUTT JOINTS IN STEEL TUBES.
DIN 8515 Pt1	DEFECTS IN METALLIC SOLDER JOINTS,BRAZING JOINS AND HIGH TEMPERATURE SOLDER JOINTS,CLASSIFICATION, DESIGNATION, EXPLANATORY NOTES.
DIN 8524 Pt1	DEFECTS IN METALLIC FUSION WELDED JOINTS,CLASSIFICATION, DENOMINATIONS,EXPLANATORY NOTES.
DIN 8524 Pt2	DEFECTS IN METALLIC FUSION WELDED JOINTS, PRESSURE WELDED JOINTS, CLASSIFICATION, DESIGNATION , DENOMINATIONS,EXPLANATORY NOTES.
DIN 8524 Pt3	DEFECTS IN METALLIC FUSION WELDED JOINTS,CRACKS,CLASSIFICATION, DENOMINATIONS,EXPLANATORY NOTES.
DIN 8525 Pt1	TESTING OF BRAZING JOINTS, GAP BRAZED JOINTS ,TENSILE TEST.
DIN 8525 Pt2	TESTING OF BRAZING JOINTS, GAP BRAZED JOINT,SHEAR TEST.
DIN 8526	TESTING OF SOLDERING JOINTS,GAP SOLDERED JOINTS,SHEAR TEST, CREEP SHEAR TEST.
DIN 8551 Pt1	EDGE PREPARATION FOR WELDING, EDGE FORMS ON STEEL, GAS WELDING MANUAL ARC WELDING AND GAS-SHIELDED ARC WELDING .
DIN 8551 Pt4	EDGE PREPARATION FOR WELDING ,EDGE FORMS ON STEEL GAS WELDING MANUAL ARC WELDING AND GAS-SHIELDED ARC WELDING .
DIN 8552 Pt1	WELD PREPARATION ,GROOVE FORMS FOR ALUMINIUM AND ALUMINIUM ALLOYS,GAS WELDING AND GAS-SHIELDED ARC WELDING.
DIN 8552 Pt3	EDGE PREPARATION FOR WELDING ,GROOVE FORMS ON COPPER AND COPPER ALLOYS,GAS WELDING AND GAS-SHIELDED ARC WELDING .
DIN 8558 Pt1	DIRECTIONS FOR WELDED ASSEMBLIES FOR BOILERS,VESSELS AND PIPING IN UNALLOYED AND ALLOY STEELS,EXAMPLES OF FABRICATION.

<u>STANDARD NO.</u>	<u>TITLE</u>
DIN 8558 Pt2	DIRECTIONS FOR WELDED ASSEMBLIES FOR BOILERS.VESSELS AND APPARATUS USED IN THE CHEMICAL INDUSTRY.
DIN 8563 Pt3	QUALITY ASSURANCE OF WELDING OPERATIONS,FUSION-WELDED JOINTS IN STEEL, REQUIRMENTS, EVALUTION GROUPS.
DIN 8564 Pt1	WELDING OF PIPELINES,MANUFACTURING,TESTING OF WELDS.
DIN 50120 Pt1	TESTING OF STEEL,TENSILE TEST IN WELDED JOINTS,FUSION WELDED BUTT JOINTS.
DIN 50121 Pt1	TESTING OF METALLIC MATERIALS,TECHNOLOGICAL BENDING TEST ON WELDED JOINTS AND WELD PLATINGS,FUSION WELDED JOINTS.
DIN 50121 Pt2	TESTING OF METALLIC MATERIALS,TECHNOLOGICAL BENDING TEST ON WELDED JOINTS AND WELD PLATINGS, PRESSURE WELDED JOINTS.
DIN 50121 Pt3	TESTING OF METALLIC MATERIALS,TECHNOLOGICAL BENDING TEST ON WELDED JOINTS AND WELD PLATINGS,FUSION WELDED PLATINGS.
DIN 50123	TESTING ON NON-FERROUS METALS, TENSILE TEST ON WELDED JOINTS, FUSION WELDED BUTT JOINTS.
DIN 50124	TESTING OF METALLIC MATERIALS,TENSILE SHEAR TEST ON RESISTANCE SPOT WELDED, PROJECTION WELDED AND FUSION SPOT WELDED JOINTS.
DIN 50127	TESTING OF STEEL, BENDOVER TEST SPECIMEN,WEDGE TEST SPECIMEN,NOTCHED PIPE TENSION TEST SPECIMEN FOR ASSESSMENT OF FUSION –WELDED FILLET OR BUTT JOINTS.
DIN 50129	TESTING OF METALLIC AMTERIALS,TESTING OF WELDING FILLER METALS FOR LIABILITY TO CRACKING.
DIN 50163 Pt1	TESTING OF METALLIC AMTERIALS,HARDNESS TEST ON WELDS,TRANSVERSE SECTION OF JOINT WELDS.
DIN 50164	TESTING OF METALS ,TOP TENSILE TEST ON RESISTANCE SPOT WELDED JOINTS.RESISTANCE PROJECTION WELDED JOINTS AND FUSION SPOT WELDED JOINTS.
DIN 54111 Pt	NON-DESTRUCTIVE TESTING ,TESTING OF METALLIC WELDS BY X-RAY OR GAMMA-RAYS, RADIOGRAPHIC TECHNIQUES.

STANDARD NO.**TITLE****SOLDERING AND BRAZING : (GROUP NO.3270) :**

DIN 1707	SOFT SOLDERS,COMPOSITION,USE,TECHNICAL DELIVERY CONDITIONS.
DIN 4816	COMPRESSED GAS EQUIPMENT, CONNECTIONS FOR PROPANE-HEATED SOLDERING APPLIANCES, SURVEY,CONNECTIONS.
DIN 5805 Pt1	GENERAL, TERMS.
DIN 5805 Pt3	CLASSIFICATION OF PROCESSES ACCORDING TO ENERGY TRANSFER MEDIA,DESCRIPTION OF PROCESSES.
DIN 8513 Pt4	BRAZING AND BRAZE WELD FILLER METALS,ALUMINIUM-BASE BRAZING ALLOYS,COMPOSITION,USE,TECHNICAL CONDITIONS OF DELIVERY.
DIN 8515 Pt1	DEFECTS IN METALLIC SOLDER JOINTS, BRAZING JOINTS AND HIGH-TEMPERATURE SOLDER JOINTS,CLASSIFICATION, DESIGNATIONS,EXPLANATORY NOTES.
DIN 8527 Pt1	FLUXES FOR SOFT SOLDERING HEAVY METALS,TESTING.
DIN 8543 Pt2	BLOWPIPES FOR OXY-FUEL GAS PROCESSES,MANUAL BLOW-PIPES FOR FUEL GAS/OXYGEN AND FUEL GAS/COMPRESSED AIR,TESTING.
DIN 32506 Pt1	TESTING OF SOLDERABILITY FOR SOFT SOLDERING,WETTING TEST.
DIN 32506 Pt2	TESTING OF SOLDERABILITY FOR SOFT SOLDERING,VERTICAL DIPPINGTEST FOR SPECIMENS OF COPPER ALLOYS,TESTING ,ASSESSMENT.
DIN 32506 PT3	TESTING OF SOLDERABILITY FOR SOFT SOLDERING,VERTICAL DIPPINGTEST FOR PRE-TINNED SPECIMENS,TESTING,ASSESSMENT.
DIN 32506 Pt4	TESTING OF SOLDERABILITY FOR SOFT SOLDERING,MEASUREMENT OF WETTING FORCE,TESTING ,ASSESSMENT.
DIN ISO 3677	FILLER METALS FOR BRAZING AND SOLDERING:CODE OF SYMBOLS.

STANDARD NO.**TITLE****ARC WELDING : (GROUP NO.327095) :**

DIN 1910 Pt4	GAS-SHIELEDE WELDING ,PROCESSES.
DIN 1910 Pt10	MECHANIZED FUSION ARC WELDING PROCESSES,TERMS.
DIN 8529 Pt1	COVERED ELECTRODES FOR JOINT WELDING OF HIGH TENSILE FINE-GRAINED STRUTURAL STEELS, BASIC COVERED ELECTRODES,CLASSIFICATION, DESIGNATION,TECHNICAL DELIVERY CONDITIONS.
DIN 8551 Pt1	EDGE PREPARATION FOR WELDING , EDGE FORMS ON STEEL,SUBMERGED ARC WELDING.
DIN 8552 Pt2	EDGE PREPARATION FOR WELDING,GROOVE FORMS ON COPPER AND COPPER ALLOYS,GAS WELDING AND GAS-SHIELDED ARC WELDING.
DIN 8569 Pt1	ROD FLECVTRODE HOLDERS FOR METAL ARC WELDING; SIZES, REQUIRE – MENTS TESTING.
DIN 8572 Pt1	DETERMINATION OF DIFFUSIBLE HYDROGEN IN WELD METAL, MANUAL ARC WELDING.
DIN 8573 Pt1	FILLER METALS FOR WELDING UNALLOED AND LOW ALLOY CAST IRON MATERIALS,DESIGNATION,TECHNICAL DELIVERY CONDITIONS.
DIN 8575 Pt1	FILLER METALS FOR ARC WELDING OF CREEP-RESISTING STEELS, CLASSIFICATION, DESIGNATION ,TECHNICAL DELIVERY CONDITIONS.
DIN 32525 Pt1	TESTING FILLER METALS BY MEANS OF WELD METAL SPECIMENS, ARC WELDED TEST PIECES,SPECIMENS FOR MECHANICAL-TECHNOLOGICAL TESTS.
DIN 32525 Pt2	TESTING FILLER METALS BY MEANS OF WELD METAL SPECIMENS,TEST PIECES FOR DETERMINING CHEMICAL COMPOSITION WITH LOW HEAT INPUT.
DIN 32526	SHIELDING GASES FOR WELDING .

LIFTING APPLIANCES.MATERIALS HANDING IN GENERAL. (GROUP NO.3580) :

DIN 15002	LOAD CARRYING DEVICES, VOCABULARY.
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<u>STANDARD NO.</u>	<u>TITLE</u>
DIN 15020 Pt2	PRINCIPLES RELATING TO ROPE DRIVES, SUPERVISION DURING OPERATION.
DIN 15062 Pt1	CRANES, ROPE PULLEYS, SELECTED RANGES AND CORRELATION OF DIAMETERS AND OVERALL WIDTHS.
DIN 15062 Pt2	CRANES, ROPE PULLEYS, DIMENSIONS OF HUBS AND BEARINGS.
DIN 15400	LIFTING HOOKS FOR LIFTING APPLIANCES: MECHANICAL PROPERTIES, LIFTING CAPACITIES, STRESSES AND MATERIALS.
DIN 15401 Pt1	LIFTING HOOKS FOR LIFTING APPLIANCES, SINGLE HOOKS, UNMACHINED PARTS.
DIN 15401 Pt2	LIFTING HOOKS FOR LIFTING APPLIANCES, SINGLE HOOKS, FINISHED PARTS WITH THREADED SHANK.
DIN 15411	LIFTING HOOK SUSPENSIONS FOR BOTTOM BLOCKS.
	<u>CRANES, TRANSPORTER CRANES, LIFTS, ESCALATORS, LEVELLERS AND GRADERS, SCRAPERS, DIGGING, EXCAVATING AND DREDGING MACHINERY IN GENERAL. (GROUP NO. 3660) :</u>
DIN 15026	LIFTING APPLIANCES, MARKING OF POINTS OF HAZARD.
DIN 15400	LIFTING HOOKS FOR LIFTING APPLIANCES, MECHANICAL PROPERTIES, LIFTING CAPACITIES, STRESSES AND MATERIALS.]
	<u>CRANES IN GENERAL. (GROUP NO. 3670) :</u>
DIN 536 Pt	CRANE RAILS, TYPE F (FLAT), DIMENSIONS, STATIC VALUES, STEEL GRADES.
DIN 4132	CRANE WAYS, STEEL STRUCTURES, PRINCIPLES FOR CALCULATION, DESIGN, AND CONSTRUCTION.
DIN 15001 Pt1	VOCABULARY, CLASSIFICATION ACCORDING TO TYPE.
DIN 15001 Pt2	VOCABULARY, CLASSIFICATION ACCORDING TO APPLICATION.

<u>STANDARD NO.</u>	<u>TITLE</u>
DIN 15019 Pt1	STABILITY FOR ALL CRANES EXCEPT NON-RAIL MOUNTED MOBIL CRANES AND EXCEPT FLOATING CRANES.
DIN 15019 Pt1	STABILITY FOR NON RAIL-MOUNTED MOBILE CRANES , TEST LOADING AND CALCULATION.
DIN 15025	DIRECTION OF ACTUATION AND ARRANGEMENT OF CONTROLS IN CRANE CABINS.
DIN 15030	LIFTING EQUIPMENT, ACCEPTANCE TESTING OF CRANE INSTALLATIONS, PRINCIPLES.
DIN 15062 Pt1	ROPE PULLEYS, SELECTED RENGES AND CORRELATION OF DIAMETERS AND OVERALL WIDTHS.
DIN 15062 Pt2	ROPE RULLEYS, DIMENSIONS OF HUBS AND BEARINGS.
DIN 15090	DRIVING WHEEL UNITS AND IDLER WHEEL UNITS, ASSEMBLY.
DIN 15091	DRIVING WHEEL UNITS AND IDLER WHEEL UNITS, TRAVELLING SHEEL SHAFTS.
DIN 15092	DRIVING WHEEL UNITS AND IDLER WHEEL UNITS, SEALING COVERS.
DIN 15093	DRIVING WHEEL UNITS AND IDLER WHEEL UNITS,TRAVELLING WHEELS.
DIN 15094	DRIVING WHEEL UNITS AND IDLER WHEEL UNITS, BEARING CAGE RINGS.
	<u>COATING MATERIALS AFTER APPLICATION AND DRYING (I.E.APPLIED COATINGS):</u>
DIN 50986	MEASUREMENT OF COATING THICKNESS, WEDGE CUT METHOD FOR MEASURING THE THICKNESS OF PAINTS AND RELATED COATINGS.
DIN 53153	TESTING OF PAINTS, VARINSHES AND SIMILAR COATING MATERIALS,BUCHHOLZ INDENTATION TEST ON PAINT COATINGS AND SIMILAR COATINGS.
DIN 53159	TESTING OF PAINTS, VARINSHES AND SIMILAR COATING MATERIALS, DETERMINATION OF THE DEGREE OF CHALKING OF PAINT COATINGS AND SIMILAR COATINGS BY KEMPF' S MDTHOD.

STANDARD NO.**TITLE**

DIN ISO 1520

PAINTS AND VANISHES,CUPPING TEST.

**TESTING OF METALLIC MATERIALS IN GENERAL.
(GROUP NO.5980):**

DIN 1605

MECHANICAL TESTING OF METALS,GENERAL AND ACCEPTANCE.

DIN 50115

NOTCHED BAR IMPACT BENDING TEST.

DIN 50125

TENSILE TEST SPECIMENS,DIRECTIONS FOR THEIR PREPARATION.

DIN 50131

DETERMINATION OF SHRINKAGE.

DIN 50133 Pt1

VICKERS HARDNESS TESTING,TEST LOAD RANGE:49 TO 980 N
(5 TO 100 KP)

DIN 50133 Pt2

VICKERS HARDNESS TESTING,TEST LOAD RANGE: 1.96 TO 49 N (0.2 TO 5
KP) (MINIMUM LOAD RANGE)

DIN 50351

BRINELL HARDNESS TSTING .

DIN 54109 Pt1

NON-DESTRUCTIVE TESTING ,IMAGE QUALITY OF RADIOGRAPHS OF
METALLIC MATERIALS,DEFINITIONS LIMAGE QUALITY
INDICATORS,DETERMINATION OF IMAGE QUALITY INDEX.

DIN 54109 Pt2

NON-DESTRUCTIVE TESTING ,IMAGE QUALITY OF X-RAY AND GAMMA-
RAY RADIOGRAPHS OF METALLIC MATERIALS,DIRECTIONS
FORMATION OF IMAGE QUALITY CLASSES.

DIN 54111 Pt1

NON-DESTRUCTIVE TESTING ,TESTING OF METALLIC WELDS BY X-
RAYS OR GAMMA-RAYS,RADIOGRAPHIC TECHINQUES.**FERROUS METALLURGY.IRON MATERIALS IN GENERAL.
(GROUP NO 6000):**

DIN 54111 Pt2

NON-DESTRICITIVE TESTING ,TESTING OF METALLIC MATERIALS BY X-
RAY OR GAMMA RAYS,RADIOGRAPHIC TECHNIQUES FOR CASTINGS OF
FERROUS MATERIALS.

DIN 54123

NON- DESTRUCTIVE TEST, UL TRASONIC METHOD OF TESTING
CLADDINGS,PRODUCED BY WELDING ,ROLLING AND EXPLOSION.

STANDARD NO.**TITLE****CAST IRON (GROUP NO.6010):**

DIN 1691	CAST IRON WITH LAMELLAR GRAPHIT (GREY CAST IRON)
DIN 1691 SUPPL	CAST IRON WITH LAMELLAR GRAPHIT (GREY CAST IRON),EXPLANATION ON THE STRENGTH PROPERTIES OF CASTINGS.
DIN 1692	MALLEABLE CAST IRON,CONCEPTS,PROPERTIES.
DIN 1693 Pt1	CAST IRON WITH LAMELLAR GRAPHIT,UNALLOYED AND LOW ALLOY GRADES.
DIN 1693 Pt2	CAST IRON WITH LAMELLAR GRAPHIT,UNALLOYED AND LOW ALLOY GRADES PROPERTIES IN CAST-ON TEST PIECE.
DIN 1694	AUSTENITIC CAST IRON.
DIN 1694 SUPPL 1	AUSTENITIC CAST IRON REFERENCE DATA ON MECHANICAL AND PHYSICAL PROPERTIES.
DIN 50108	TESTING OF CAST IRON WITH LAMELLAR GRAPHITE(GREY CAST IRON),SAMPLING FOR TENSILE AND BENDING TESTS.
DIN 50109	TESTING OF CAST IRON WITH LAMELLAR GRAPHITE(GREY CAST IRON),TENSILE TEST.
DIN 50110	TESTING OF GREY VAST IRON ,TRANSVERSE BENDING TEST.
DIN 50149	TESTING OF MALLEABLE IRON ,TENSILE TEST.

STEEL AND ALLOY STEEL IN GENERAL.(GROUP NO.6020) :

DIN 1599	IDENTIFICATION MARKINGS FOR STEEL.
DIN 1651	FREE CUTTING STEELS,TECHNICAL CONDITIONS OF DELIVERY
DIN 1681	STEEL CASTING FOR GENERAL USE,QUALITY SPECIFICATIONS.
DIN 6420	SPRING STEEL,HOT ROLLED FOR THE PRODUCTION OF LAMINATED SPRINGS.
DIN 17111	LOW CARBON UNALLOYED STEELS FOR BOLTS,NUTS AND RIVETS,TECHNICAL CONDITIONS OF DELIVERY.

STANDARD NO.**TITLE**

DIN 17212	FLAME AND INDUCTION HARDENING STEELS,QUALITY SPECIFICATIONS.
DIN 17221	HOT ROLLED STEELS FOR QUENCHED NAD TEMPERED SPRINGS,QUALITY SPECIFICATIONS.
DIN 17230	BALL AND ROLLER BEARING STEELS,TECHNICAL CONDITIONS OF DELIVERY.
DIN 17250	TOOL STEELS,TECHNICAL CONDITIONS OF DELIVERY.
DIN 17250	TOOL STEEL,TECHNICAL CONDITIONS OF DELIVERY
SUPPL1	ADDITIONAL INFORMATION ON TREATMENT.
DIN 50150	TESTING OF STEEL AND CAST STEEL,CONVERSION TABLE FOR VICKERS HARDNESS,BRINELL HARDNESS,ROCKWELL HARDNESS AND TENSILE STRENGTH.

STRUCTURAL AND CONSTRUCTIONAL STEELS CASE-HARDENING AND HEAT-TREATABLE STEELS.(GROUP NO.6093):

DIN 17100	STEELS FOR GENERAL STRUCTURAL PURPOSES,QUALITY STANDARD.
DIN 17102	WELDING NORMALIZED FINE GRAIN STRUCTURAL STEELS,TECHNICAL DELIVERY CONDITIONS FOR PLATE,STRIP,WIDE FLATS , SECTIONS AND BARS.

STEEL WITH SPECIAL THERMAL PROPERTIES.(GROUP NO.6994):

DIN 17155	CREEP RESISTANT STEEL PLATE AND STRIP,TECHNICAL DELIVERY CONDITIONS.
DIN 17225	HIGH- TEMPERATURE STEELS FOR SPRINGS,QUALITY PROPERTIES.
DIN 17240	HEAT RESISTING AND HIGHLY HEAT RESISTING MATERIALS FOR BOLTS AND NUTS,QUALITY SPECIFICATIONS.
DIN 17245	FERRITIC STEEL CASTINGS CREEP RESISTANT AT ELEVATED TEMPERATURES, TECHNICAL CINDITION OF DELIVERY.
DIN 17465	HEAT RESISTING STEEL CASTINGS,TECHNICAL CONDITIONS OF DELIVERY.

استانداردهای منتشره توسط این موسسه براساس عناوین و یا موضوعات کلی طبق بندی شده اند . از این موسسه استانداردهای زیر انتخاب شده اند .

<u>STANDARD NO.</u>	<u>TITLE</u>
<u>MECHANICAL ENGINEERING MACHINE AND PARTS:</u>	
B-2003	GENERAL RULES FOR INSPECTION OF VALVES.
B- 2202	DIMENSIONS FOR PIPE FLANGE FACING
B- 2203	TOLERANCES FOR PIPE FLANGES
<u>GENERAL MACHINE</u>	
B-8041	TEST ODE FOR GAS-TURBINES
B- 8101	GENERAL SPECIFICATION OF STEAM TURBINES
B – 8102	RULES FOR ACCEPTANCE TEST OF STEAM TURBINES
B- 8103	METHODS FOR MODEL TEST HYDRAULIC TURBINES
B- 8104	METHODS FOR MODEL TESTS OF REVERSIBLE PUMP TURBINES.
B- 8201	CONSTRUCTION OF STEEL BOILERS FOR LAND USE
B- 8203	CONSTRUCTION OF CAST IRON BOILERS
B-8210	SPRING SAFETY VALVES FOR STEAM BOILERS AND PRESSURE VESSELS.
B-8211	GAUGE GLASSES FOR BOILERS
B-8213	REFLEX TYPE WATER CAUGES FOR BOILERS
B -8215	TRANSPARENT TYPE WATER GAUGES FOR BOILERS
B-8249	SHELL AND TUBE HEAT EXCHANING FOR APPLICATON TO GENERAL USE

<u>STANDARD NO.</u>	<u>TITLE</u>
B- 8301	TESTING METHODS FOR CENTRIFUGAL PUMPS, MIXED FLOW PUMPS AND AXIAL FLOW PUMPS.
B- 8302	MEASUREMENT METHODS OF PUMP DISCHARGE
B-8225	MEASURING METHODS FOR COEFFICIENT OF DISCHARGE OF SAFETY VALVES.
B- 8303	TESTING METHODS OF BOILER FEED PUMPS
B- 8304	TESTING METHODS FOR CONDENSATE PUMPS
B- 8305	TESTING METHODS FOR SELF-PRIMING CENTRIFUGAL PUMPS.
B- 8306	TESTING METHODS FOR CENTRIFUGAL TYPE OIL PUMPS
B – 8311	TESTING AND INSPECTING METHODS FOR RECIPROCATING PUMPS.
B- 8312	TESTING METHODS FOR DISPLACEMENT COMPRESSORS
B-8341	TESTING METHODS FOR DISPLACEMENT COMPRESSORS.
B – 8345	TESTING METHODS OF TURBO BLOWERS COMPRESSORS FOR CASES BY LOOP ARRANGEMENT.
B- 8351	VANE PUMPS FOR HYDRAULIC USE
B- 8352	GEAR PUMPS FOR HYDRAULIC USE
B – 8355	SUBPLATE TYPE SOLENOID OPERATED 4-PORT VALVES FOR OIL HYDRAULIC USE.
B – 8356	FILTERS FOR OIL HYDRAULIC USE.
B – 8357	PRESSURE COMPENSATING TYPE FLOW CONTROL VALVES FOR OIL HYDRAULIC USE
B- 8371	FILTERS FOR PNEUMATIC USE
B- 8372	PRESSURE REDUCING VALVES FOR PNEUMATIC USE
B- 8373	2- PORT SOLENOID OPERATED VALVES FOR PNEUMATIC USE.

<u>STANDARD NO.</u>	<u>TITLE</u>
B- 8374	3- PORT SOLENOID OPERATED VALVES FOR PNEUMATIC USE.
B – 8375	4- PORT AND 5-PORT SOLENOID OPERATED VALVES FOR PNEUMATIC USE.
B- 8276	SPEED CONTROL VALVES FOR PNEUMATIC USE
B- 8377	PNEUMATIC CYLINDERS
B – 8378	LUBRICATORS FOR PNEUMATIC USE
B – 8501	WELDED STEEL TANKS FOR OIL STORAGE.
B- 8243	CONSTRUCTION OF PRESSURE VESSELS
B- 8600	STANDARD CINDITIONS OF RATING TEMPERATURE FOR REFRIGERATING COMPRESSORS.
B- 8603	PERFORMANCE INSPECTION METHODS BY AIR FOR REFRIGERATING OPEN TYPE RECIPROCATING COMPRESSORS.
B – 8606	TESTING OF REFRIGERANT COMPRESSORS
B- 8608	GENERAL RULES FOR TESTING OF REFRIGERATING SYSTEMS
B- 8801	ELECTRIC OVERHEAD TRAVELLING CRANES
B – 8802	CHAIN BLOCKS
B – 8803	ROLLERS FOR BELT CONVERYOR
B – 8804	STEEL ROLLER CONVEYORS
B – 8805	METHOD OF CALCULATIONS AND TESTS FOR RUBBER BELT CONVEYORS
B – 8806	CAST STEEL TRAVELLING WHEELS FOR ELECTRIC OVERHEAD TRAVELLING CRANES
B – 8807	ROPE SHEAVES FOR ELECTRIC OVERHEAD TRAVELLING CRONES
B - 8811	FORGED STEEL TRAVELING WHEELS FOR ELECTRIC OVERHEAD TRAVELLING CRANES.

STANDARD NO.**TITLE****ELECTRICAL ENGINEERING .GENERAL:**

C -0201	GLOSSARY OF TERMS FOR FUSES.
C- 0301	GRAPHICAL SYMBOLS FOR ELECTRICA APPARATUS
C – 0602	GENERAL RULES OF COLOUR IDENTIFICATION FOR GROUNDING CONDUCTORS AND GROUNDED CONDUCTORS.
C- 0702	GENERAL RULES FOR INSULATION CONSTRUCTION OF CLASS II ELECTRICAL APPLIANCES.
C -0801	COLOUR CODE FOR ELECTRONIC PARIS
C- 0802	COLOUR CODE FOR MINIoTURE FIXED RESISTORS.
C – 1002	GLOSSARY OF TERMS USED IN ELECTRONIC MEASURING APPARATUS.
C – 1003	TESTING METHODS FOR DIGITAL VOLTMETERS
C – 1102	ELECTRICAL INDICATING INSTRUMENTS
C- 1103	DIMENSIONS OF ELETRICAL INDICATING INSTRUMENTS FOR SWITCHBOARDS
C- 1105	DIMENSIONS OF EDGEWISE ELECTRICAL INDICATING INSTRUMENTS
C -1202	CIRCUIT TESTERS
C – 1203	DIRECT-ACTING ELECTRICAL RECORDING INSTRUMENTS
C- 1210	GENERAL RULE FOR ALTERNATING CURRENT WATT-HOUR(ELECTRICAL ENERGY)METERS.
C – 1301	INSULATION RESISTANCE TESTERS(MAGNETO GENERATOR OPERATED)
C – 1302	INSULATION RESISTANCE TESTERS(BATTERY OPERATED)
C – 1603	INSULATION RESISTANCE THERMOMETERS
C – 1607	ELECTRONIC TYPE AUTO – BALANCE RECORDING THERMOMETERS.
C – 1608	MOVING COIL TYPE POINT SYSTEM RECORDING THERMOMETERS.
C – 1610	COMPENSATING LEAD WIRES
C – 1611	THERMISTOR FOR TEMPERATURE MEASUREMENT
C- 1721	SHUNTS.
C – 1731	INSTRUMENT TRANSORMERS FOR TESTING PURPOSE AND USED WITH GENERAL INSTRUMENT.

STANDARD NO.**TITLE**

C – 1736 INSTRUMENT TRANSFORMERS FOR METERING SERVICE

ELECTRIC WIRE ,CABLE AND ELECTRIC LINE APPARATUS:

C – 3604 POLYETHYLENE INSULATED CABLES

C – 3605 600V CROSS-LINKED POLYETHYLENE INSULATED

C- 3606 HIGH –VOLTAGE CROSS –LINKED POLYETHYLENE INSULATED CABLES.

C– 3609 6600V CROP WIRES FOR POLE TRANSFORMER

C- 3610 STEEL TAPE ARMOR AND ANTI-CORROSIVE LAYER FOR CABLES

C- 3611 INSULATED WIRES FOR CUBICLE TYPE UNIT SUBSTATION FOR 6.6 KV RECEIVING

C- 3650 INSTALLATION METHOD OF CABLES EMBEDDED DIRECT IN CONCRETE

C – 3701 MATTABLE IRON CASTING CLAMPS AND ALUMINIUM ALLOY CASTING CLAMPS FOR TRANSMISSION LINE USE

C- 3801 TESTING METHOD FOR INSTALLATIONS

ELECTRIC MACHINE AND APPLIANCE:

C- 4003 CLASSIFICATION OF MATERIALS FOR INSULATION OF ELECTRICAL MACHINERY AND APPARATUS.

C – 4004 GENERAL RULES FOR ELECTRICAL ROTARY MACHINERY

C - 4201 LOW VOLTAGE THREE –PHASE INDUCTION MOTORS FOR GENERAL PURPOSE

C – 4202 HIGH- VOLTAGE (3 KV)THREE –PHASE INDUCTION MOTORS FOR GENERAL PURPOSE.

C – 4203 SINGLE PHASE INDUCTION MOTORS (FOR GENERAL PURPOSE

C – 4204 CLASSIFICATION OF STARTING KVA OF INDUCTION MOTORS

C – 4207 CALCULATING METHODS OF PHASE INDUCTION MOTORS CHARACTERISTICS.

<u>STANDARD NO.</u>	<u>TITLE</u>
C – 4209	STANDARD DIMENSTIONS OF LOW- VOLTAGE THREE PHASE INDUCTION MOTORS (FOR GENERAL PURPOSE)
C – 4210	LOW VOLTAGE THREE PHASE SQUIRREL –CAGE INDUCTION MOTORS FOR GENERAL PURPOSE
C – 4211	DIMENSTIONS OF LOW VOLTAGE THREE PHASE SQUIRREL CAGE INDUCTION MOTORS FOR GENERAL PURPOSE (CLASSE INSULATION)
C- 4301	3 KV DISTRIBUTION TRANSFORMERS (MEDIUM SIZE)
C – 4304	6 KV DISTRIBUTION TRANSFORMERS (SMALL SIZE)
C- 4305	6 KV DISTRIBUTION TRANSFORMERS (MEDIUM SIZE)
C – 4502	OIL SWITCHES
C- 4503	CONTROL SWITCH FOR AC MAGNETIC SWITCH
C – 4504	GENERAL RULES FOR DIRECTION LINE (FULL-VOLTAGE) A.C. STARTERS FOR INDUCTION MOTORS.
C – 4505	SENSITIVE SWITCHES
C- 4506	SMALL SWITCHES FOR SINGLE PHASE MOTORS
C – 4507	A.C. LOADBREACK SWITCHES WITH OVER CURRENT LOCK FOR 3.3 KV OR 6.6 KV
C- 4508	ENCLOSED SENSITIVE SWITCHES
C – 4509	TESTING METHODS FOR CONTROL SWITCHES
C-4510	HOOK BARS FOR DISCONNECTING SWITCH OPERATION
C – 4520	GENERAL RULES FOR CONTROL SWITCHES
C- 4521	BUTTON CONTROL SWITCHES
C – 4522	CAM OPERATED CONTROL SWITCHES
C-4551	MOTOR DRIVEN TIMER
C – 4601	GROUND RELAY SET FOR 6600V OR 3300V CONSUMER
C- 4602	INDUCTION TYPE OVERCURRENT RELAY FOR 6.6KV OR 3.3KV RECEIVING
C – 4603	AC CIRCUIT BREAKERS FOR 6.6 KV OR 3.3 KV
C – 4604	CURRENT –LIMITING FUSES FOR 6.6 KV

STANDARD NO.**TITLE**

C – 4605	AC LOAD BREAK SWITCHES FOR 6.6 KV OR 3.3 KV
C - 4606	6.6KV DISCONNECTING SWITCHES FOR INDOOR USE
C – 4607	AC LOAD BREAK SWITCHES WITH TRIPPING DEVICE
C – 4608	LIGHTNING ARRESTERS FOR 6.6KV CUBICLE TYPE UNIT SUBSTATION
C - 4620	CUBICLE TYPE UNIT SUBSTATION FOR 6.6KV RECEIVING
C – 4701	GENERAL RULES FOR MAGNETIC AMPLIFIERS
C – 4801	SERIES REACTORS FOR HIGH VOLTAGE CAPACITORS
C – 4802	DISCHARGE COILS FOR HIGH VOLTAGE POWER CAPACITORS
C – 4901	LOW – VOLTAGE POWER CAPACITORS
C – 4902	HIGH-VOLTAGE POWER CAPACITORS
C – 4905	ELECTROLYTIC CAPACITORS FOR MOTOR STARTING SYNCHROS
C – 4907	TWO – PHASE SERVOMOTORS
C – 4908	CAPACITORS FOR ELECTRICAL APPARATUS
C – 6401	POWER TYPE COATED WIRE WOUND RESISTORS
C – 6402	FIXED CARBON FILM RESISTORS
C – 6406	FIXED CARBON COMPOSITION RESISTORS

STANDARD NO.**TITLE****FERROUS MATERIALS AND METALLURGY GENERAL :**

G – 0303	GENERAL RULES FOR INSPECTION OF STEEL
G – 0306	GENERAL RULES FOR INSPECTION OF STEEL FORGINGS.
G – 0552	METHOD OF FERRITE GRAIN SIZE TEST FOR STEEL
G – 0553	MACRO – STRUCTURE DETECTING METHOD FOR STEEL
G -0555	MICROSCOPIC TESTING METHOD FOR THE NON-METALLIC INCLUSIONS IN STEEL
G-0561	METHOD OF HARDENABILITY TEST FOR STEEL (END HARDENING PROCESS)
G – 0565	METHODS FOR MAGNETIC PARTICLE TESTING OF FERROMOGNETIC MATERIALS AND CLASSIFICATION OF MAGNETIC PARRTICLE INDICATION
G – 0567	METHOD OF HIGH TEMPERATURE TENSILE TEST FOR IRON AND STEEL.
G – 0568	METHOD OF EDDY CURRENT TESTING FOR STEEL PRODUCTS.
G – 0571	METHOD OF 10 PERCENT OXALIC ACID ETCH TEST FOR STAINLESS STEELS
G – 0581	METHODS OF RADIOGREPHIC TEST AND CLASSIFICATION OF RADIOGRAPHS FOR CASTINGS.
G – 0702	METHOD OF HEAT BALANCE FOR CONTINUOUS FURNACE FOR STEEL.
G – 0703	HEAT BALANCE OF ARC FURNACE
G – 0704	HEAT BALANCE OF OPEN HEARTH FURNACE
G- 0801	ULTRASONIC EXAMINATION OF STEEL PLATES FOR PRESSURE VESSELS.

ANALYSIS METHOD:

G – 1201	GENERAL RULES FOR CHEMICAL ANALYSIS OF IRON AND STEEL .
G – 1202	GENERAL RULES ON EMISSION –SPECTROSCOPIC ANALYSIS FOR IRON AND STEEL.

STANDARD NO.**TITLE**

G- 1203	GENERAL RULES FOR PHOTOELECTRIC EMISSION SPECTROCHEMICAL ANALYSIS OF IRON AND STEEL.
G- 1211	METHODS FOR DETERMINATION OF CARBON IN IRON AND STEEL
G – 1212	METHODS FOR DETERMINATION OF SILICAN IN IRON AND STEEL
G- 1213	METHODS FOR DETERMINATION OF MANGANESE IN IRON AND STEEL
G – 1214	METHODS FOR DETERMINATION OF PHOSPHORUS IN IRON AND STEEL
G – 1215	METHODS FOR DETERMINATION OF SULFUR IN IRON AND STEEL
G – 1216	METHODS FOR DETERMINATION OF NICKEL IN IRON AND STEEL
G- 1217	METHODS FOR DETERMINATION OF CHROMIUM IN IRON AND STEEL
G – 1218	METHODS FOR DETERMINATION OF MOLYB IN IRON AND STEEL
G – 1251	EMISION –SPECTROSCOPIC ANALYSIS FOR PIG IRON AND CAST IRON
G – 1301	GENERAL RULES FOR CHEMICAL ANCLYSIS OF FERRO ALLOYSS
G – 1311	METHODS FOR CHEMICAL ANALYSIS OF FERROMENGANESE
G – 1312	METHODS FOR CHEMICAL ANALYSIS OF FERROSILICON
G – 1314	METHODS FOR CHEMICAL ANALYSIS OF SILICON MANGANESE

RAW MATERIALS :

G – 2201	RIG IRON FOR STEEL MAKING
G - 2202	FOUDRY PIG IRON
G – 2301	FERROMANGANESE
G – 2302	FERROSILICON

STANDARD NO.**TITLE****CARBON AND ALLOY STEELS :**

G – 3101	ROLLES STEEL FOR GENERAL STRUCTURE
G – 3103	CARBON STEEL AND MOLYBDENUM ALLOY STEEL PLATES FOR BOILERS AND OTHER PRESSURE VESSELS.
G – 3106	ROLLED STEELS FOR WELDED STRUCTURD
G – 3111	REROLLED CARBON STEEL
G – 3113	HOT ROLLED STEEL PLATES.SHEETS AND STRIP FOR AUTOMOBILE STRUCLURAL USES.
G- 3114	HOT ROLLED ATMOSPHERIC CORROSION RESISTING STEELS FOR WELDED STRUCTURE.
G – 3115	STEEL PLATES FOR PRESSURE VESSELS FOR INTERMEDIATE AND MODERATE TEMPERATURE SERVICE
G – 3118	MANGANESE MOLYBDEM AND MANGANESE MOLYBDENUM NICKEL ALLOY STEEL PLATES FOR BOILERS AND OTHER PRESSURE VESSELS
G – 3119	MANGANESE MOLYBDEM AND MANGANESE MOLYBDENUM NICKEL ALLOY STEEL PLATES FOR BOILERS AND OTHER PRESSURE VESSELS
G – 3120	MANGANESE MOLYBDEM AND MANGANESE MOLYBDENUM NICKEL ALLOY STEEL PLATES QUENCHED AND TEMPERED FOR PRESSURE VESSELS
G – 3125	SUPERIOR ATMOSPHERIC CORROSIAN RESISTING ROLLED STEELS
G – 3126	CARBON STEEL PLATES FOR PRESSURE VASSELS FOR LOW TEMPERATURE SERVICE
G – 3131	HOT – ROLLED MILD STEEL PLATES.SHEETS AND STRIP
G – 3132	HOT –ROLLED CARBON STEEL STRIP FOR PIPES AND TUBES
G – 3141	COLD ROLLED CARBON STEEL SHEETS AND STRIP
G – 3201	CARBON STEEL FORGINGS
G – 3212	QUENCHED AND TEMPERED VACUUM TREATED CARBONAND LOW ALLOY STEEL FORGINGS FOR PRESSURE VESSELS
G – 3213	FORGED ALLOY STEEL FLANGES,FITTING VALVES AND PARTS OF PRESSURE VESSEL FOR HIGH-TEMPERATURE

<u>STANDARD NO.</u>	<u>TITLE</u>
G – 3214	FORGED STAINLESS STEEL FLANGES, FITTINGS, VALVES AND PARTS OF PRESSURE VESSEL FOR HIGH TEMPERATURE SERVICE.
G – 3251	CARBON STEEL BLOOM AND BILLET FOR FORGINGS
G – 3442	GALVANIZED STEEL PIPES FOR WATER SERVICE
G – 3454	CARBON STEEL PIPES FOR PRESSURE SERVICE
G – 3455	CARBON STEEL PIPES FOR HIGH PRESSURE SERVICE
G – 3456	CARBON STEEL PIPES FOR HIGH TEMPERATURE SERVICE
G – 3457	ELECTRIC ARC WELDED CARBON STEEL PIPES
G – 3458	ALLOY STEEL PIPE
G – 3459	STAINLESS STEEL PIPES
G – 3460	STEEL PIPES FOR LOW TEMPERATURE SERVICE
G – 3461	CARBON STEEL BOILER AND HEAT EXCHANGER TUBES
G – 3462	ALLOY STEEL BOILER AND HEAT EXCHANGER TUBES
G – 3463	STAINLESS STEEL BOILER AND HEAT EXCHANGER TUBES
G – 3464	STEEL HEAT EXCHANGER TUBES FOR LOW TEMPERATURE SERVICE
G – 3491	ADPHALL PROTECTIVE COATING FOR STEEL WATER PIPE
G – 3492	COAL – TAR ENAMEL PROTECTIVE COATINGS FOR STEEL WATER PIPE
G – 3503	WIRE ROD FOR CORE WIRE OF ARC COATED ELECTRODES
G – 3525	WIRE ROPE
G – 4102	NICKEL CHROMIUM STEELS
G – 4103	NICKEL CHROMIUM MOLYBDENUM STEEL
G – 4109	CHROMIUM MOLYBDENUM ALLOY STEEL PLATES FOR PRESSURE VESSELS
G – 4903	SEAM LESS NICKEL-CHROMIUM-IRON ALLOY PIPES

STANDARD NO.**TITLE**

G – 5101	CARBON STEEL CASTINGS
G – 5102	STEEL CASTINGS FOR WELDED STRUCTURE
G – 5111	HIGH TENSILE STRENGTH CARBON STEEL CASTINGS AND LOW ALLOY STEEL CASTINGS FOR STRUCTURAL PURPOSES
G – 5121	STAINLESS STEEL CASTINGS
G – 5122	HEAT RESISTING STEEL CASTINGS
G – 5131	HEAT MANGANESE STEEL CASTINGS
G – 5151	STEEL CASTINGS FOR HIGH TEMPERATURE AND HIGH PRESSURE SERVICE
G – 5152	STEEL CASTINGS FOR HIGH TEMPERATURE AND HIGH PRESSURE SERVICE
G – 5201	CENTRIFUGALLY CAST STEEL PIPE FOR WELDED STRUCTURE
G – 5202	CENTRIFUGALLY CAST STEEL PIPE FOR HIGH TEMPERATURE AND HIGH PRESSURE SERVICE.
G – 5501	GREY IRON CASTINGS
G – 5502	SPHROIDAL GRAPHITE IRON CASTING
G – 9071	RECOMMENDED PRACTICE FOR MELTING OF MALLEABLE IRON CASTING
G – 9072	RECOMMENDED PRACTICE FOR HEAT TREATMENT OF MALLEABLE IRON CASTING

NON – FERROUS METALS AND METALLURGY COPPER:

H – 3603	PHOSPHORUS –DEOXIDIZED COPPER SEAMLESS PIPES AND TUBES
H – 3606	TOUGH- PITCH COPPER SEAMLESS PIPES AND TUBES
H – 3611	OXYGEN-FREE COPPER SEAMLESS PIPES AND TUBES

OTHER METAL THAN COPPER AND ITS ALLOY :

H – 4000	ALUMINIUM AND ALUMINIUM ALLOY SHEETS AND PLATES,STRIP AND COILED SHEETS.
H – 4080	ALUMINIUM AND ALUMINIUM ALLOY SEAMLESS PIPE AND TUBES.

STANDARD NO.**TITLE**

H – 4090

ALUMINIUM AND ALUMINIUM ALLOY WELDED PIPES AND TUBES.

FUNDAMENTAL AND GENERAL WELDING:

Z – 3001

WELDING TERMS

Z – 3002

USABILITY OF COVERD ELECTRODES FOR MILD STEEL

Z – 3003

DEFINITION OF WELDING POSITION

Z – 3021

GRAPHICAL SYMBOLS FOR WELDING

Z – 3060

METHOD OF UL TRASONIC MANUAL TESTING AND CLASSIFICATION
OF TEST RESULT FOR STEEL WELDS

Z – 3080

METHOD OF UL TRASONIC ANGLE BEAM TESTING AND
CLASSIFICATION OF TEST RESULTS FOR ALUMINIUM WELDS

Z – 3101

TESTING METHOD OF MAXIMUM HARDNESS OF WELDS

Z – 3103

TENSILE FATIGUE TESTING METHOD OF WELDS

Z – 3104

METHODS OF RADIOGRAPHIC TEST AND CLASSIFICATION OF
RADIOGRAPHS FOR STEEL WELDS

Z – 3105

METHODS OF RADIOGRAPHIC TEST AND CLASSIFICATION OF
RADIOGRAPHS FOR ALUMINIUM WELDS

Z – 3106

METHODS OF RADIOGRAPHIC TEST AND CLASSIFICATION OF
RADIOGRAPHS FOR STAINLESS STEEL WELDS

Z – 3108

METHODS OF RADIOGRAPHIC TEST FOR CIRCUMFERENT BUTT WELDS
OF ALUMINIUM PIPES AND TUBES

Z – 3111

METHOD OF TENSION TEST FOR DEPOSITED METAL

Z -3112

METHOD OF IMPACT TEST FOR DEPOSITED METAL

Z – 3113

METHOD FOR MEASUREMENT OF HYDROGEN EVOLVED FROM
DEPOSITED METAL

Z – 3114

METHOD OF HARDNESS TEST FOR DEPOSITED METAL

Z – 3115

METHOD OF TAPER HARDNESS TEST IN WELD HEAT AFFECTED ZONE

Z – 3121

METHOD TENSION TEST WELDED BUTT JOINT

Z – 3122

METHOD OF GUIDED BEND TEST FOR WELDED BUTT JOINT

STANDARD NO.**TITLE**

Z – 3123	METHOD OF FREE BEND TEST FOR WELDED BUT JOINT
Z – 3124	METHOD OF ROLLER BEND TEST FOR BUTT WELDED JOINT
Z – 3125	METHOD OF NOTCHED BEND TEST FOR BUTT WELDED JOINT
Z – 3126	REVERSE BEND TESTING BUTT WELDED JOINT
Z – 3131	METHOD OF TENSION TEST FOR FRONT FILLET WELDED JOINT
Z – 3132	METHOD OF SHEAR TEST FOR FRONT FILLET WELDED GOINT
Z – 3133	METHOD OF BREAK TEST FOR FILLET WELDS
Z – 3134	METHOD OF BEND TEST FOR TYPE FILLET WELDED JOINT
Z – 3135	METHOD OF SOUNDNESS TEST FOR FILLET WELDS
Z – 3136	METHOD OF TENSION SHEAR TEST FOR SPOT WELDED JOINT
Z – 3137	METHOD OF TENSION TEST FOR SPOT WELDED JOINT
Z – 3138	VISUAL EXAMINATION OF SPOT WELDED JOINT
Z – 3141	METHOD OF INSPECTION FOR SEAM WELDING PROCEDURES
Z – 3143	INSPECTION FOR FLASH WELD (STEEL)
Z -3146	METHODS OF TEST FOR SEMI –AUTOMATIC , ARC WELDED JOINT
Z – 3151	SLIT TYPE CARCKING TEST
Z - 3152	BAR TYPE CRACKING TEST
Z – 3153	METHOD OF CRACKING TEST FOR FILLET WELD BY WELDED TEE JOINT
Z – 3191	METHOD OF SPREADING TEST FOR BRAZING
Z – 3193	METHOD OF TENSION TEST FOR BRAZED JOINT
Z – 3194	TENSIONTEST PIECE OF BRAZED JOINT
Z – 3195	METHOD OF WET CORROSION TEST FOR BRAZED JOINT
Z – 3202	BARE WELDING ROD FOR COPPER AND COPPER ALLOYS
Z – 3210	COVERD ELECTRODES FOR MILD STEEL SHEET

<u>STANDARD NO.</u>	<u>TITLE</u>
Z – 3211	COVERED ELECTRODES FOR MILD STEEL
Z – 3212	COVERED ELECTRODES FOR HIGH TENSION STRENGTH STEEL
Z- 3221	STAINLESS STEEL COVERED ELECTRODES
Z – 3223	ALUMINIUM AND ALUMINIUM ALLOY WELDING RODS AND ELECTRODE WIRES
Z – 3233	TUNGSTEN ELECTRODES FOR TIG ARC WELDING
Z – 3241	COVERED ELECTRODES FOR STEEL FOR LOW TEMPERATURE SERVICE
Z – 3252	COVERED ELECTRODES FOR CAST IRON
Z – 3261	SILVER BRAZING FILLER METAL
Z – 3263	ALUMINIUM ALLOY BRAZING FILLER METALS AND BRAZING SHEETS
Z – 3264	COPPER PHOSPHORUS BRAZING FILLER METAL
Z – 3321	STAINLESS STEEL WELDING RODS AND WIRES
Z – 3621	RECOMMENDED PRACTICE FOR BRAZING
Z – 3702	LOCAL HEAT TREATMENT FOR STRESS RELIEVING OF WELDMENT
Z – 3801	STANDARD QUALIFICATION PROCEDURE FOR WELDING TECHNIQUE
Z – 3811	STANDARD QUALIFICATION PROCEDURE FOR WELDING TECHNIQUE OF ALUMINIUM AND ALUMINIUM ALLOY
Z – 3821	STANDARD QUALIFICATION PROCEDURE FOR WELDING TECHNIQUE OF STAINLESS STEEL
Z – 3861	STANDARD QUALIFICATION PROCEDURE FOR RADIOGRAPHIC TESTING TECHNIQUE OF ALUMINIUM WELDS

RADIOACTIVITY:

Z – 4301	FILM BADGE CASES FOR X – RAY
Z – 4302	FILM BADGE CASES FOR Y-RAY AND HARD X-RAY
Z – 4310	GEIGER-MULLER COUNTER TUBE TYPE RADIATION SURVEY METERS.

STANDARD NO.**TITLE**

Z – 4311	EXPOSURE DOSE ALARM
Z – 4323	FILM BADGE CASES FOR Z AND GAMMA RAYS
Z – 4502	METHOD OF HANDLING Z-RAY FILM BADGE
Z – 4503	METHOD FOR DEALING WITH THE Y-RAY AND HARD X-RAY FILM BADGE
Z – 4505	TEST METHOD OF LEAKAGE RADIATION FROM X-RAY TUBE ASSEMBLY
Z – 4511	METHODS OF CALIBRATION FOR RADIATION EXPOUSURE METERS
Z – 4602	SHIELDING CONTAINERS OF RADIOACTIVE MATERIALS
Z – 4606	PORTABLE X-RAY APPARATUS FOR INDUSTRIAL USE

فعالیت این موسسه عمدتاً شامل هماهنگی و ایجاد ارتباط بین مراکز ملی استاندارد کشورهای مختلف جهان به منظور گسترش فعالیت در زمینه تهیه استانداردهای قابل استفاده در سطح بین المللی می باشد. استانداردهای تهیه شده توسط این موسسه غالباً با استانداردهای مشابه دیگر مراکز مهم استاندارد عضو این موسسه می باشند، (استانداردهای آلمانی، انگلیسی، آمریکایی که لیست آنها در بخش های قبلی ارائه گردیده اند) مطابقت دارند. بخشی از استانداردهای منتشره توسط این موسسه به شرح زیر اند. این لیست مطابق فهرست منتشره سال 1985 موسسه می باشد.

STANDARD NO.

TITLE

FERROUS METAL PIPES AND METALLIC FITTINGS:

ISO -7/1	PIPE THREADS WHERE PRESSURE-TIGHT JOINTS ARE MADE ON THE THREADS: PART 1 : DESIGNATION ,DIMENSIONS AND TOLERANCES.
ISO -7/2	PART 2 ; VERIFICATION BY MEANS OF LIMIT GAUGES
ISO -13	GREY IRON PIPES, SPECIAL CASTINGS AND GREY IRON PARTS FOR PRESSURE MAIN LINES.
ISO -49	MALLEABLE CAST IRON FITTINGS THREADED TO ISO 7/1.
ISO -50	METAL PIPES-STEEL SOCKETS SCRVED ACCORDING TO ISO -7
ISO -1129	STEEL TUBES FOR BOILERS , SUPERHEATERS AND HEAT EXCHANGERS.DIMENSIONS, TOLERHEATERS AND HEAT EXCHANGERS.DIMENSIONS, TOLERANCES AND CONVENTIONAL MASSES PER UNIT LENGTH.
ISO – 2084	PIPELINE FLANGES FOR GENERAL USE-METRIC SERIES-MATING DIMENSIONS.
ISO – 2441	PIPE LINE FLANGES FOR GENERAL USE-SHPES AND DIMENSIONS OF PRESSURE-TIGHT SURFACES.
ISO – 2531	DUCTILE IRON PIPES, FITTINGS AND ACCESSORIES FOR PRESSURE PIPE –LINES.
ISO -6758	WELDED STEEL TUBES FOR HEAT EXCHANGERS.
ISO – 6759	SEAMLESS STEEL TUBES FOR HEAT EXCHANGERS.

STANDARD NO.**TITLE**

<u>STANDARD NO.</u>	<u>TITLE</u>
ISO -2604/1	<u>STEEL:</u> STEEL PRODUCTS FOR PRESSURE PURPOSES QUALITY REQUIREMENTS: PART 1 : FORGINGS.
ISO – 2604/2	PART 2 : WROUGHT SEAMLESS TUBES.
ISO – 2604/3	PART 3 : ELECTRIC RESISTANCE AND INDUCTION-WELDED TUBES.
ISO – 2604/4	PART 4 : PLATES
ISO - 2604/5	PART 5 : LONGITUDINALLY WELDED AUSTENITIC STAINLESS STEEL TUBES.
ISO – 2604/6	PART 6 :SUBMERGED ARC LONGITUDINALL OR SPIRALLY WELDED STEEL TUBES.
ISO -3755	CAST STEELS FOR GENERAL ENGINEERING PURPOSES.

CAST IRON AND PIG IRON :

ISO - 945	CAST IRON-DESIGNATION OF MICROSTRUCTURE OF GRAPHITE.
ISO – 946	GREY CAST IRON-BEAM UNNOTCHED IMPACT TEST.
ISO – 1083	SPHEROIDAL GRAPHIT OR NODULAR GRAPHIT CAST IRON
ISO – 2892	AUSTENITIC CAST IRON
ISO – 5922	MALLEABLE CAST IRON

WELDING :

ISO -544	ELECTRODES FOR MANUAL ARC WELDING AND FILLER METALS FOR GAS WELDING –DIAMETERS AND TOLERANCES
ISO -547	ELECTRODES FOR THE WELDING OF MID STEEL AND LOW ALLOY HIGH TENSILE STEEL LENGTHS AND TOLERANCE.
ISO -1027	RADIOGRAPHIC IMAGE QUALITY INDICATORS FOR NON-DESTRUCTIVE TESTING –PRINCIPLES AND IDENTIFICATION.

<u>STANDARD NO.</u>	<u>TITLE</u>
ISO -1071	COVERED ELECTRODES FOR MANUAL ARC WELDING OF CAST IRON-SYMBOLIZATION.
ISO – 1106/1	RECOMMENDED PRACTICE FOR RADIOGRAPHIC EXAMINATION OF FUSION WELDED JOINTS: PART 1 : FUSION WELDED BUTT JOINTS IN STEEL PLATES UP TO 50 MM THICK.
ISO -1106/3	PART 3 : FUSION WELDED CIRCUMFERENTIAL JOINTS IN STEEL PIPES OF UP 50 MM WALL THICKNESS.
ISO -2400	WELDS IN STEEL –REFERENCE BLOCK FOR THE CLIBRATION OF EQUIPMENT FOR ULTRASONIC EXAMINATION.
ISO – 2405	RECOMMENDED PRACTICE FOR RADIGRAPHIC INSPECTION OF FUSION WELDED BUTT JOINTS FOR STEEL PLATES 50 TO 200 MM THICK.
ISO -2504	RADIOGRAPHY OF WELDS AND VIEWING CONDITIONS FOR FILMS-UTLIZATION OF RECOMMENDED PATTERNS OF IMAGE QUALITY INDICATORS.
ISO -2553	WELDS-SYMBOLIC REPRESENTATION ON DRAWINGS.
ISO – 2560	COVERED ELECTRODES FOR MANUAL ARC WELDING OF MILD STEEL AND LOW ALLOY STEEL-CODE OF SYMBOLS FOR IDENTIFICATION.
ISO -6947	FUNDAMENTAL WELDING POSITIONS-DEFINITIONS AND VALUES OF ANGLES OF SLOPE AND ROTATION FOR STRAIGHT WELDS FOR THESE POSITIONS.
ISO -448	GAS CYLINDERS FOR INDUSTRIAL USE –MARKING FOR IDENTIFICATION OF CONTENT.

LIFTING APPLIANCES PUMPS.VALVES:

ISO – 4301	LIFTING APPLIANCES –CLASSIFICATION.
ISO -4302	CRANES –WIND LOAD ASSESSMENT.
ISO -4308	CRANES-SELECTION OF WIRE ROPES.
ISO -4305	MOBILE CRANE- DETERMINATION OF STABILITY.

STANDARD NO.**TITLE**

ISO – 4309	WIRE POPE FOR LIFTING APPLIANCES-CODE OF PRACTICE FOR EXAMINATION AND DISCARD.
ISO – 4310	CRANES-TEST CODE AND PROCEDURES.
ISO -2548	CENTRIFUGAL ,MIXED FLOW AND AXIAL PUMPS-CODE FOR ACCEPTANCE TEST-CLASS C .
ISO – 3555	CENTRIFUGAL,MIXED FLOW AND AXIAL PUMPS-CODE FOR ACCEPTANCE TEST-CLASS B .
ISO – 1217	DISPLACEMENT COMPRESSORS-ACCEPTANCE TESTS.
ISO -4126	SAFETY VALVES-GENERAL REQUIREMENTS.
ISO – 5208	INDUSTRIAL VALVES-PRESSURE TESTING FOR VALVES.
ISO – 5209	GENERAL PURPOSE INDUSTRIAL VALVES-MARKING.
ISO-5702	METAL VALVES FOR USE IN FLANGED PIPE SYSTEMS FACE-TO FACE AND CENTRE-TO – FACE DIMENSIONS.

LIFTING APPLIANCES PUMPS.VALVES:

ISO -3057	NON-DESTRUCTIVE TESTING –METALLOGRAPHIC REPLICA TECHNIQUES OF SURFACE EXAMINATION.
ISO – 3059	NON- DESTRUCTIVE TESTING –METHOD FOR INDIRECT ASSESSMENT OF BLACK LIGHT SOURCES
ISO – 3452	NON – DESTRUCTIVE TESTING –PENETRANT INSPECTION GENERAL PRINCIPLES.
ISO – 3453	NON – DESTRUCTIVE TESTING-LIQUID PENETRANT INSPECTION MEANS OF VERIFICATION.

MECHANICAL TESTING OF METALS :

ISO - R 80	ROCKWELL HARDNESS TEST (B AND C SCALES) FOR STEEL
ISO -83	STEEL –CHARPY IMPACT TEST (U-NOTCH)
ISO – R85	BEND TEST FOR STEEL
ISO – 146	METALLIC MATERIALS-HARDNESS TEST VERIFICATION OF VICKERS HARDNESS TESTING MACHINES HV 0.2 TO HV 100 .

STANDARD NO.**TITLE**

ISO – 148	STEEL –CHRPY IMPACT TEST (V-NOTCH)
ISO -159	METALLIC MATERIALS – HARDNESS TEST. VERIFICATION OF BRINELL HARDNESS TESTING MACHINES.
ISO -409/1	METALLIC MATERIALS – HARDNESS TEST-TABLES OF VICKERS HARDNESS VALUES FOR USE IN TESTS MADE ON FLAT SURFACES. PART 1 : HV 5 TO HV 100
ISO – 410	METALLIC MATERIALS –HARDNESS TEST-TABLES OF BRINELL HARDNESS VALUES FOR USE IN TESTS MADE ON FLAT SURFACES.
ISO – R674	CALIBRATION OF STANDARDIZED BLOCKS TO BE USED FOR ROCKWELL B AND C SCALE HARDNESS TESTING MACHINES.
ISO –R716	VERIFICATION OF ROCKWELL B AND C SCALE HARDNESS TESTING MACHINES.

2-10 استانداردهای منتشره توسط " انجمن مهندسين برق و الكترونيك آمريكا " (IEEE):

ليست استانداردهای منتشره توسط اين انجمن كه دارای کاربرد در بازرسی فنی هستند ، به شرح زیراند.
این لیست مطابق فهرست منتشره سال 1984 انجمن می باشد.

<u>STANDARD NO.</u>	<u>TITLE</u>
3-83	REFERENCE AMBIENT CONDITIONS FOR TEST MEASUREMENTS OF ELECTRICAL APPARATUS RECOMMENDED PRACTICE FOR THE SELECTION OF (SH 08425)
4- 78	STANDARD TECHNIQUES FOR HIGH VOLTAGE TESTING (SUPERSEDES IEEE STD 29- 1941 ANSI C 68.7-1969, AND ANSI/IEEE STD 332-1972)(SH 06965)
43-74	(REAFF 1981) TESTING INSULATION RESISTANCE OF ROTATING MACHINERY, RECOMMENDED PRACTICE FOR (SH20438)
48-75	HIGH- VOLTAGE AC CABLE TERMINATION,TEST PROCEDURES AND REQUIREMENTS FOR (SH 10488)
56-77	(REAFF 1982)INSULATION MAINTENANCE OF LARGE AC ROTATING MACHINERY (10000KVA AND LARGER), GUIDE FOR (SH06478)
62-78	FIELD TESTING POWER APPARATUS INSULATION ,
62-79	GUIDE FOR (SH 07203)
76-74	TRANSFORMER ASKAREL IN EQUIPMENT,GUIDE FOR ACCEPTANCE AND MAINTENANCE OF (SH 10769)
81-83	MEASURING EARTH RESISTIVITY,GROUND IMPEDENCE,AND EARTH SURFACE POTENTIALS OF A GROUND SYSTEM , GUID FOR (SH08904)
85-63	(REAFF 1971) IMPULSE VOLTAGE TESTS ON INSULATED CONDUCTORS,TEST PROCEDURE FOR (SH00299)
85-73	(REAFF 1980) AIRBORNE SOUND MEASUREMENTS ON ROTATING ELECTRIC MACHINERY ,TEST PROCEDURE FOR (SH00851)
95-77	(REAFF 1982) INSULATION TESTING OF LARGE AC ROTATING MACHINERY WITH HIGH DIRECT VOLTAGE,RECOMMENDED PRACTICE FOR (SH 06080)
100-77	STANDARD DICONARY OF ELECTRICAL & ELECTRONICS TERMS (SH 07088)

STANDARD NO.**TITLE**

112-83	POLYPHASE INDUCTION MOTORS AND GENERATORS ,STANDARD TEST PROCEDURE FOR (SH09258)
113-73	DC MACHINES,STANDARD TEST CODE FOR (SH 11130)
116-75	CARBON BRUSHES ,STANDARD TEST PROCEDURE FOR (SH 11163)
119-74	TEMPERATURE MEASUREMENT AS APPLIED TO ELECTRICAL APPARATUS, RECOMMENDED PRACTICE GENERAL PRINCIPLES OF (SH 11197)
142-82	GROUNDING OF INDUSTRIAL AND COMMERCIAL POWER SYSTEMS,RECOMMENDED PRACTICE FOR (IEEE GREEN BOOK)(SH08797)
251-63	(REAFF 1972) DC TACHOMETER GENERATORS,TEST PROCEDURE FOR (SH 01404)
271-66	(REAFF 1977) EXTRA-HIGH-VOLTAGE SWITCHES,SWITCHING SURGE TESTING OF (SH 01602)
286-75	(REAFF 1981)MEASURMENT OF POWER –FACTOR HIP-UP OF ROTATING MACHINERY STATOR INSULATION,RECOMMENDED PRACTICE FOR (SH 02865)
484-81	INSTALLATION DESIGN AND INSTALLATION OF LARGER LEAD STORAGE BATTERIES FOR GENERATING STATIONS AND SUBSTATIONS,RECOMMENDED PRACTICE FOR (SH 08383)

ANSI/IEEE:

C37.010-79	AC HIGH-VOLTAGE CIRCUIT BRAEKERS RATED ON A SYMMETRICAL CURRENT BASIS ,APPLICATION GUIDE FOR (SH 06569)
C 37.14-79	LOW – VOLTAGE DC POWER CIRCUIT BREAKERS USED IN ENCLOSURES (SH 06866)
C37.12.90.80	LIQUID –IMMERSED DISTRIBUTION ,POWER ,AND REGULATING TRANSFORMERS AND GUIDE FOR SHORT-CIRCUIT TESTING OF DISTRIBUTION AND POWER TRANSFORMERS (SH 08102)
C 37.13.1-81	FIELD TESTING OF RELAYING CURRENT TRANSFORMERS,GUIDE FOR (SH 07393)

2-11 استانداردهای منتشره توسط "انجمن سازندگان ادوات و ماشین آلات برقی"
:(NEMA)

لیست استاندارد های منتشره توسط این انجمن که دارای کاربرد بیشتری هستند، به شرح زیراند. این لیست مطابق فهرست منتشره سال 1977 انجمن می باشد. سفارش برای خرید این استانداردها می باید بر طبق آخرین چاپها صورت پذیرد.

<u>STANDARD NO.</u>	<u>TITLE</u>
IB – 1	DEFINITIONS FOR LEA-ACID STORAGE BATTERIES
CB -1	BRUSHES FOR ELECTRICAL MACHINES
SG – 4	A-C HIGH-VOLTAGE POWER CIRCUIT BREAKERS
SG – 3	LOW –VOLTAGE POWER CIRCUIT BREAKERS
AB - 1	MOLDED CASE CIRUIT BREAKERS
AB – 2	PROCEDURES FOR VERIFYING PERFORMANCE MOLDED CASE CIRCUIT BREAKERS
FB – 1	FITTINGS AND SUPPORT FOR CODUIT AND CABLE ASSEMBLES
IS – 1	MAINTENANCE OF MOTOR CONTROLERS AFTER A FAULT CONDITION.
FU – 1	CARTRIDGE,LOW –VOLTAGE FUSES
SG – 2	HIGH VOLTAGE FUSES
MG – 3	SOUND LEVEL PREDICTION FOR INSTALLED ROTATING ELECTRICAL MACHINES
PB – 1	PANEL BOARDS
PB- 1.1	INSTRUCTION FOR INSTALLATION,OPERATION AND MAINTENANCE(PANEL BOARDS)
PV – 5	CONSTANT-POTENTIAL –TYPE ELECTRIC UTILITY BATTER CHARGERS
LA – 1	SURGE ARRESTERS
TR – 27	DRY – TYPE,COMMERICAL,INSTITUTIONAL AND INDUSTRIAL TRANSFORMERS.

STANDARD NO.

TITLE

ST -1	TRANSFORMERS SPECIALTY (ANSI C 89.1)
WC -7	CROSS - LINKED -THRMOSETTING - POLYETHYLENE-INSULATED WIRES AND CABLES
HP -1	HIGH - TEMPERATURE INSULATED WIRE. (IMPULSE DIELECTRIC TESTING)
WC	RUBBER-INSULATED WIRES AND LABLES (IPCEA S - 19)

آدرس موسسات استاندارد که فهرست استانداردهای آنها در این مجموعه ارائه گردیده است , به شرح زیر می باشند. این موسسات اغلب ناشرین استانداردها نیز بوده می توان سفارش خرید استانداردهای مورد نیاز را از طریق دریافت " پیش فاکتور " از آنها انجام داد.

1- BRITISH STANDARDS INSTITUTE
2PARK STREET
LONDON W 1 A 28 S
ENGLAND.

2- AMERICAN SOCIETY FOR TESTING AND MATERIALS.
1916 RACE STREET
PHILADELPHIA,PA 19103
U.S.A

3- AMERICAN NATIONAL STANDARD INSTITUTE
UNITED ENGINEERS CENTER
345 EAST 47 TH STREET
NEW YORK N.Y. 10017
U.S.A

4- THE AMERICAN SOCIETY OF MECHANICAL ENGINEERS.
UNITED ENGINEERS CENTER
345 EAST 47 TH STREET
NEW YORK N.Y. 10017
U.S.A

5- AMERICAN PETROLEUM INSTITUTE.
2101 L STREET,NORTH WEST
WASHINGTON, D.C. 20037
U.S.A

6- TUBULAR EXCHANGERS MANUFACTURERS ASSOCIATION
25 N . BROADWAY.
TARRYTOWN,NEW YORK 10591
U.S.A

7- ENGLISH TRANSLATION OF DIN STANDARDS
BEUTH VERLAG GMBH
BURGGRAFENSTRASSE 4-10
D – 1000 BERLIN 30

8- INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS
SEVICE CENTER
445 HOSE LANE
PISCATAWAY, NEWJERSEY 08854
U.S.A

9- NATIONAL ELECTRICAL MANUFACTURES ASSOCIATION
155 EAST 44 STREET
NEW YORK,N.Y. 10017
U.S.A

تذکر:

موسسه استاندارد و تحقیقات صنعتی ایران نمایندگی فروش اغلب استانداردهای مذکور فوق را عهده دار می باشد
توصیه می شود قبل از هرگونه اقدام در جهت سفارش و خرید استانداردهای مورد نیاز با موسسه یاد شده به آدرس زیر
تماس حاصل گردد .

تهران : میدان ولی عصر کوچه هروی پلاک 14
صندوق پستی شماره 7594-11365
تلفن 9-899308

4- کتاب ها :

در این بخش از این مجموعه ، فهرست برخی از کتابها یی که جهت استفاده بازرسان فنی مفید بوده و محتوی آنها بنحوی در ارتباط با " بازرسی فنی " دستگاهها و ماشین آلات می باشند ، ذکر گردیده است .
کتابهای این بخش به دو قسمت به شرح زیر تفکیک گردیده اند:

4-1 کتاب مرجع : (REFERENCE BOOKS)

از این کتاب به عنوان مرجع قابل قبول بین المللی پیرامون مسائل فنی می توان استفاده به عمل آورد .

4-2 کتاب فنی متفرقه :

این کتابها جنبه اطلاعات عمومی داشته و جهت استفاده بازرسان فن مفید هستند .

بدیهی است کتب و نشریات فراوانی که قابل استفاده برای بازرسان فنی باشد ، تا کنون تدوین و منتشر شده اند که تنها قسمتی از آنها در این بخش ذکر گردیده است .

AMERICAN SOCIETY FOR METALS (HAND BOOKS)

ITEM	TITLE OF BOOK	AUTHOR	PUBLISHER
NO.			AND ADDRESS
1	A.S.M METALS HAND BOOK , VOLUM 1 PROPERTIES AND SELECTION OF METALS	A.S.M AUTHORS COMMITTEE	A.S.M METALS PARK OHIO 44073 U.S.A
2	A.S.M METALS HAND BOOK,VOLUME 2 HEAT TREATING,CLEANING & FINISHING	SAME AS ITEM 1	SAME AS ITEM 1
3	A.S.M METALS HAND BOOK,VOLUM 3 MACHINING	SAME AS ITEM 1	SEAM AS ITEM1
4	A.S.M METALS HAND BOOK,VOLUME 4 FORMING	SAME AS ITEM 1	SEAM AS ITEM1
5	A.S.M METALS HAND BOOK, VOLUME 5 PART A FORGING PART B MELTING AND CASTING	SAME AS ITEM 1	SAME AS ITEM1
6	A.S.M METALS HAND BOOK, VOLUME 6 WELDING & BRAZING	SAME AS ITEM 1	SAME AS ITEM1
7	A.S.M METALS HAND BOOK .VOLUME 7 ATLAS OF MICROSTRUCTURES ON IN DUSTRIAL ALLOYS	SAME AS ITEM 1	SAME AS ITEM1
8	A.S.M METALS HAND BOOK,VOLUME 8 METALLOGRAPHY,STRUCTURES AND PHASE DIAGRAMS	SAME AS ITEM 1	SAME AS ITEM1
9	A.S.M METALS HAND BOOK, VOLUME 9 FRACTOGRAPHY AND ATLAS OF FRACTOGRAPHS	SAME AS ITEM 1	SAME AS ITEM1
10	A.S.M METALS HAND BOOK,VOLUME 10 FAILURE ANALYSIS AND PREVENTION	SAME AS ITEM 1	SAME AS ITEM1
11	A.S.M METALS HAND BOOK,VOLUME 11 NON DESTRUCTIVE AND QUALITY CONTROL	SAME AS ITEM 1	SAME AS ITEM1

AMERICAN WELDING SOCIETY

4-1 کتاب های مرجع :

ITEM NO.	CODE NO.	TITLE OF PUBLICATION	PUBLISHER AND ADDRESS
1	D1.1-85	STRUCTURE WELDING CODE	AMERICAN WELDING SOCIETY 550 NW LEJEUNE ROAD P.O.BOX 351040 MIAMI,FLORIDA33135 U.S.A
2	D 10.4	RECOMMENDED PRACTICES FOR WELDING AUSTENITIC CHROMIUM NICKEL STAINLESS STEEL PIPING AND TUBING	SAME AS ABOVE
3	D 10.4	RECOMMENDED PRACTICES FOR GAS SHIELDED ARC WELDING OF ALUMINIUM AND ALUMINIUM ALLOY PIPE	SAME AS ABOVE
4	D 10.10	LOCAL HEAT TREATMENT OF WELDS IN PIPING AND TUBING	SAME AS ABOVE
5	D 10.11	RECOMMENDED PRACTICES FOR ROOT PASS WELDING AND GAS PURGING	SAME AS ABOVE
6	D 10.12	RECOMMENDED PRACTICES FOR ROOT PASS WELDING AND GAS PURGING	SAME AS ABOVE
7	D14.6	SPECIFICATION FOR ROTATING ELEMENTS OF EQUIPMENT	SAME AS ABOVE
8	B2.1	STANDARD FOR WELDING PROCEDURE AND PERFORMANCE QUALIFICATION	SAME AS ABOVE
9	WI	WELDING INSPECTION	SAME AS ABOVE
10	FWI-TA TB,TC,M	FUNDAMENTALS OF WELDING INSPECTION	SAME AS ABOVE
11	PWI	PIPELINE WELDING AND INSPECTION	SAME AS ABOVE

ITEM NO.	SERIAL NO.	PUBLICATION NO.	TITLE OF PUBLICATION	AUTHORS	PUBLISHER
1	852-22010	2201	PROCEDURE FOR WELDING OR HOT TAPPING ON EQUIPMENT CONTAINING FLAMMABLES.	A.P.I SAFETY & FIRE PROTECTION GROUP	HOWELL IRANING 5201 LANGIELD ROAD,HOUSTON,TEX AS,77040 U.S.A
2	852-22060	PSD 2206	IDENTIFICATION OF COMPRESSED GASSES IN CYLINDERS.	SAME AS ITEM NO.1	SAME AS ITEM NO.1
3	852-22070	PUBL 2207	PREPARING TANK BOTTOMS FOR HOT WORK	SAME AS ITEM NO.1	SAME AS ITEM NO.1
4	852-22090	PUBL 22090	PIPE PLUGGING PRACTICES	SAME AS ITEM NO.1	SAME AS ITEM NO.1
5	831-11070	RP 1107	RECOMMENDED PIPE LINE MAINTENANCE WELDING PRACTICE	A.P.I TRANSPORTATION GROUP	AMERICAN PETROLEUM INSTITUTE,PUBLICAT IONS& DISTIBUTION SECTION 2101 L STREET NORTHWEST WASHINGTON D.C 20037 U.S.A
6	831-11100	RP 1110	RECOMMENDED PRACTICE FOR THE PRESSURE TESTING OF PIPE LINES	SAME AS ITEM NO.5	SAME AS ITEM NO.5
7	831-11110	RP 1111	RECOMMENDED PRACTICE FOR DESIGN ,CONSTRUCTION OPERATION & MAINTENANCE OF PIPE	SAME AS ITEM NO. 5	SAME AS ITEM NO.5

ITEM NO.	TITLE OF BOOK	AUTHOR	PUBLISHER AND ADDRESS
1	PHYSICAL METALLURGY OF ENGINEERING MATERIALS	E.R. PETTY	LONDON : GEORGE AND UNWIN LTD.
2	DEFECTS AND FAILURES IN PRESSURE VESSELS AND PIPING	HELMUT THIELSCH	REINHOLD ,PUBLISHING CORPORATION,NEWYORK CHAPMAN & HALL LTD,LONDON
3	THE METALLURGY OF WELDING & BRAZING & SOLDERING	J.F.LANCASTER	GEORGE ALLEN AND UNWIN LTD,LONDON-ENGLAND.
4	THE PROCEDURE HANDBOOK OF ARC WELDING	LINCOLN ELECTRIC COMP.	LINCOLN ELECTRIC CO., CLEVELAND,OHIO U.S.A
5	CLASS ROOM TRAINING HANDBOOK NON-DESTRUCTIVE TESTING , RADIOGRAPHIC TESTING	GENERAL DYNAMICS	KODAK LIMITED KODAK HOUSE,KINGSWAY,LONDON WC 2 ENGLAND.
6	INDUSTRIAL RADIOGRAPHY	KODAK LIMITED	THE JAMES F.LINCOLN ARC WELDING FOUNDATION ,CLEVELAND.OHIO, U . S
7	DESIGN OF WELDED STRUCTURES	OMER.W.BLODGETT	NEWYORK: JOHN WILEY & SONS INC.
8	HANDBOOK OF ENGINEERING FUNDAMENTALS	OVID.W.ESHBACH WILEY ENGINEERING HANDBOOK SERIES	LONDON :CHAPMAN & HALL ,LIMITED
9	WELDING HANDBOOK VOLUME ONE FUNDAMENTALS OF WELDING	CHARLOTE WEISHMAN	AMERICAN WELDING SOCIETY,2501 NORTHWEST 7 TH STREET MIAMI,FLORIDA,33125 U.S.A
10	WELDING HANDBOOK,VOLUME 2,WELDING PROCESS ARC AND GAS WELDING AND CUTTING ,BRAZING AND SOLDERING .	SAME AS ITEM NO.9	SAME AS ITEM NO.9
11	WELDING HANDBOOK,VOLUME 3 , RESISTANCE AND SOLID STATE WELDING AND OTHER JOINING PROCESSES	SAME AS ITEM NO.9	SAME AS ITEM NO.9

ITEM NO.	TITLE OF BOOK	AUTHOR	PUBLISHER AND ADDRESS
12	WELDING HANDBOOK.VOLUME 4 ,METALS AND THEIR WELDABILITY.	SAME AS ITEM NO.9	SAM SAME AS ITEM NO.9
13	WELDING HANDBOOK.VOLUME 5 , ENGINEERING COSTS,QUALITY AND SAFETY	SAME AS ITEM NO.9	SAME AS ITEM NO.9
14	STP 767 / AIMOSPHERIC CORROSION OF METAL	DEAN,JR./RHEA	ASTM 1916 RACE STREET PHILADELPHIA, PA 19103 U.S.A
15	STP 71/UNDERGROUND CORROSION	E . ESCALANTE	SAME AS ITEM NO.14
16	STP 665/STRESS CORROSION CRACKING,THE SLOW STRAIN-RATE TECHNIQUE.	UGIANSKY	SAME AS ITEM NO.14
17	PIPING HAND BOOK	REND C.KING	M GRAW-HIL COMPANY NEW YORK-LONDON
18	TEMPERATURE MEASUREMENT	---	SAME AS ITEM NO.14
19	THERMAL INSULATING MATERIALS (C 450 ADJUNCT)	---	SAME AS ITEM NO.14
20	STP 841/COATING	BERGER/WINT	SAME AS ITEM NO.14
21	STP 656/INTERGRANULAR CORROSION OF STAINLESS ALLOYS	R.STEIGERWALD	SAME AS ITEM NO.14
22	STP 567/EROSION,WEAR,AND INTERFACES WITH CORROSION	---	SAME AS ITEM NO.14
23	STP 770/LOW-CYCLE FATIGUE AND LIFE PREDICTION	AMZALLAG	SAME AS ITEM NO.14
24	STP 748/METHODS AND MODELS FOR PREDICTING FATIGUE CRACK GROWTH UNDER RANDOM LOADING	CHANG/HUDSON	SAME AS ITEM NO.14
25	STP 675 /FATIGUE MECHANISMS	J.FONG	SAME AS ITEM NO.14
26	STP 833/FRACTURE MECHANICS	R.J.SANFORD	SAME AS ITEM NO.14
27	STP 803/ELASTIC-PLASTIC FRACTURE	SHIH/GUDAS	SAME AS ITEM NO.14
28	STP 781/PERMANENACE OF ORGANIC COATINGS	--	SAME AS ITEM NO.14
29	STP 818/CORROSION OF METALS IN ASSOCIATION WITH CONCRETE	JOHN SLATER	SAME AS ITEM NO.14
30	STP 610/STRESS CORROSION	H.CRAIG	SAME AS ITEM NO.14
31	STP 671/SERVICE FATIGUE LOAD	ABELKIS	SAME AS ITEM NO.14