



Invention with Innovation



**Work with Tarang Steel to have peace of mind
at the end of the day**

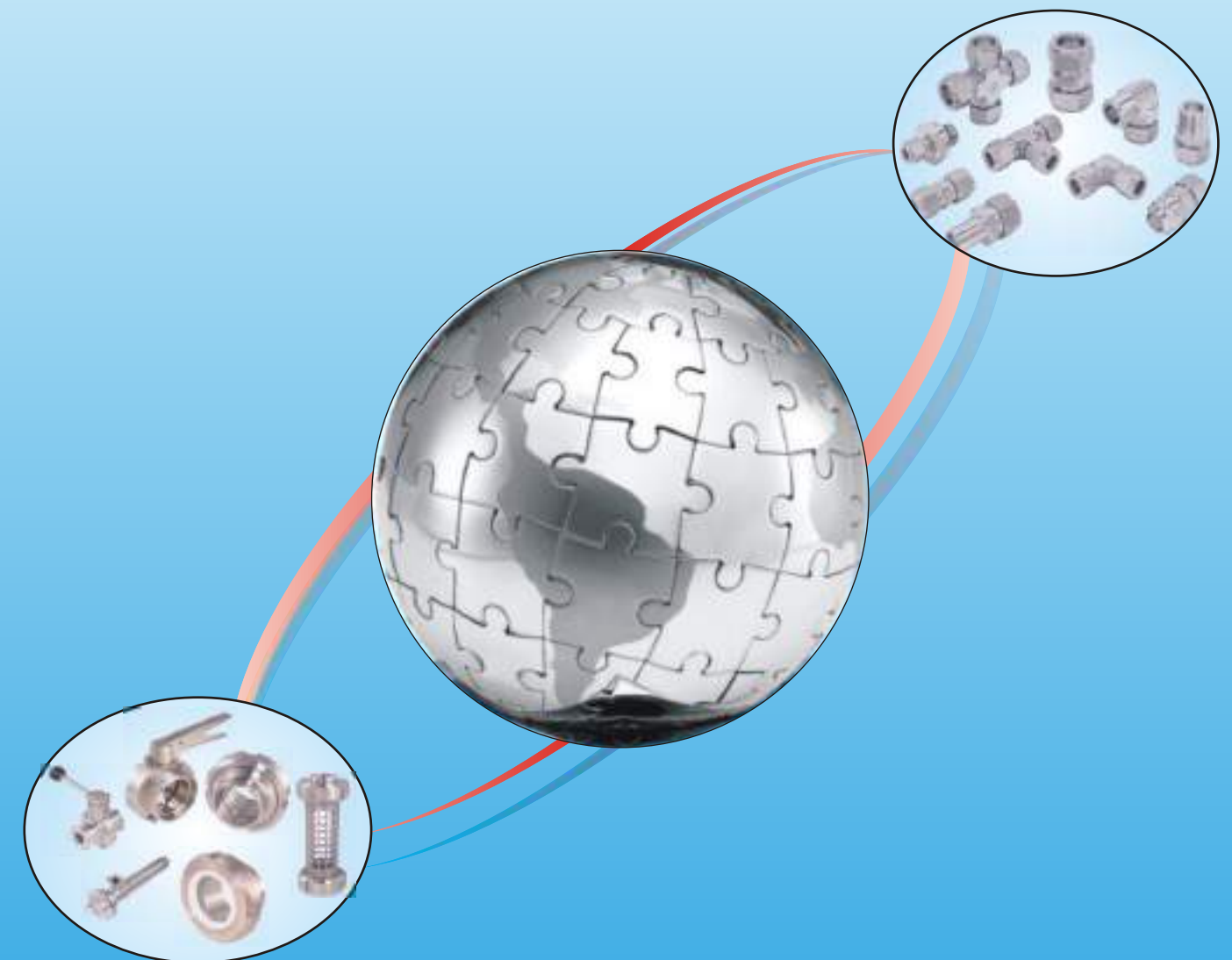
**T A R A N G
S T E E L**

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Invention with Innovation

**T A R A N G
S T E E L**



TARANG'S LOCK

We deliver only Quality Goods as we care for Nature



Invention with Innovation

SPECIALIZED IN :
Quality Steel for Industrial Projects & Maintenance

INTRODUCTION

Dear Customer,

We take privilege to introduce ourselves as one of the leading steel company for complete solution by engineering raw material & finished goods for design, fabrication, erection & expansion, and commissioning of projects. Our products are widely applied in various industries like petroleum, chemical, fertilizer, defense, electric power, automobile, shipbuilding, aviation & spacecraft, food, pharmacy & cosmetic and decoration & so on.

We are one of the quality steel Importer , Stockiest & Supplier of Engineering Raw Material like Stainless Steel, Carbon Steel, Alloy Steel, Aluminium, Brass, Copper, Monel, Inconel & Hastalloy in shape like Pipes, Tubes, Sheets, Plates, Rods, Rounds, Hex, Angles.

We are specialized in conversion of Raw Material to finish & end product such as BW/SW/SE in the form of Tee, Elbow, Reducer, Stubends, Elbowlets, Weldolets, Flanges as per customer drawing, standard & specification. We do undertake manufacturing of critical spare for high temperature & pressure application in material like Monel, Inconel & Hastalloy.

We expertise in high pressure leak proof pipe line precision instrument fittings & valves for hydraulic & instrumentation application. We have entire range of hygiene high purity electro polished sanitary grade tube, tube fittings, and gasket & valves for pharmaceuticals application. We are also dealing in filter resin bounded carriage, bag filter & hydronautics dow membrane.

We offer our material to third party such as BVIS, J & G, Lloyds, IRS, and PDIL or as per your request. Every consignment is delivered with packing list, inspection report, and manufacturing test certificate & lab check test certificate.

We are financially very much sound & robust to take care of all our client. we will be glad if you could register our name in your enlist vendor & provide us one chance to fulfill your trust & requirement with our genuine words & quality.

We hope for soon favourable reply from your end for an enquiry.

Yours truly,

Ranjeet Jain (BE - Production)

VISION : To become a front-runner in steel business by providing world class quality product & technical services & maintaining high level of customer satisfaction.

MISSION : Growth of the company, employees & our associates by adopting advance technology, continuous improvement & innovation.



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SPECIALIZED IN :
Quality Steel for Industrial Projects & Maintenance

APPLICATION INDUSTRIES



- Petrochemical
- Chemical
- Smelting
- Medical
- Paper
- Heat Preservation
- Oil Processing
- Refrigeration
- Food
- Power
- Aerospace
- Heat Exchanger
- Valves
- Refinery
- Construction



- Architectural
- Hardware
- Nuclear
- Fastener
- Pharmaceutical
- Engineering
- Sugar
- Automobile
- Catering
- Forging
- Textile
- Brewery
- Synthetic Fibre
- Fertilizer
- Pesticide



OUR REPUTED CLIENTS





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SPECIALIZED IN :
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THIRD PARTY INSPECTION



EIL, HGS, H&G, P&D, GLC, TUBOSCOPE, VELOSI, MOODY, VETCO, IRS, BVIS, DNV, J & HG, ABS, TCS, PDIL, TUV, etc.

NABL & Government Approved Labs



We can also supply all the materials with NABL & Government Approved Labs like :



- 1) GEO-Chem Lab
- 2) Metalurgical Services
- 3) Metallurgical Lab
- 4) TCR
- 5) Metal Analysis
- 6) Elca Lab



FORMULAE

- 1) WEIGHT OF STAINLESS STEEL PIPES & TUBES
OD (mm) - W.T. (mm) X W.T. (mm) X 0.02466 = Kg. per Mtr.
- 2) SHEET WIDTH REQUIRED FOR ROLLED AND WELDED PIPES
O.D. (mm) - THK (mm) X 3.14 = Sheet Width
- 3) WEIGHT OF STAINLESS STEEL SHEETS
Length (mtr.) x Width (mtr.) X Thk (mm) X 8 = Kg Per Sheet
- 4) WEIGHT OF STAINLESS STEEL CIRCLE & BLANKS
O.D. (mm) X O.D.> (mm) X Thk (mm) /160/1000 = Kg Per Pcs.
- 5) WEIGHT OF STAINLESS STEEL ROUNDS
Dia. (mm) X Dia. (mm) X 0.00623 = Per Mtr.
- 6) WEIGHT OF STAINLESS STEEL HEXAGONAL RODS
Dia. (mm) X Dia. (mm) X 0.00679 = Per Mtr.
- 7) WEIGHT OF STAINLESS STEEL SQUARE BARS
Dia. (mm) X Dia. (mm) X 0.00787 = Kg Per Mtr.
- 8) WEIGHT OF CARBON STEEL PIPES & TUBES
O.D. (mm) - W.T. (mm) X W.T. (mm) X 0.02466 = Kg. Per Mtr.
- 9) WEIGHT OF CARBON STEEL SHEETS - PLATES
Length (mtr.) X Width (mtr.) X Thk (mm) X 7.85 = Kg. Per Sheet
- 10) WEIGHT OF COPPER PIPES
O.D. (mm) - W.T. (mm) X W.T. (mm) X 0.0256 = Kg. Per Mtr.
- 11) WEIGHT OF LEAD PIPES (appro.)
O.D. (mm) - W.T. (mm) X W.T. (mm) X 0.0345 = Per Mtr.
- 12) WEIGHT OF LEAD SHEETS (appro.)
Length (mtr.) X Width (mtr.) X Thk (mm) X 11.2 = Kg. Per Sheet
- 13) WEIGHT OF ALLUMINIUM PIPES (appro.)
O.D. (mm) - W.T. (mm) X W.T. (mm) X 0.0082 = Kg. Per Mtr.
- 14) WEIGHT OF ALLUMINIUM SHEETS (appro.)
Length (mtr.) X Width (mtr.) X Thk (mm) X 2.66 = Kg Per Sheet



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SCOPE OF BUSINESS

IMPORT, STOCKIST & SUPPLY

Shape of Material :

Tubes, Pipes, Sheets, Plates, Coils, Rods, Rounds, Filler Wires

Material of Construction :

Stainless Steel (304/304L/316/316L/321/310S/347/317L), Nickel 200/201/205/212/222/270, Inconel 600/625/800/825, Monel 400/ 500, Duplex 2205/2705. Carbon Steel, Mild Steel, EN Series (19/24), Alloys Steel (P5, P9, P11, P22), Hast Alloys C-276. T11, T22.

Standard & Specification:

For Pipe & Tube: ASTM A 213/312/249/269/358, ASTM A 106 GR.B, IS 1239/ IS 3589, ASTM A 279, ASTM A 210, ASTM A 790 UNS S32205/322725.

For Plate: ASTM A 240/240M, ASTM A 516 GR 60/ 70, A36, IS 2062 GR.A/ B .

For Fittings: ASTM A 403, ASTM A 234 WP, ANSI B 16.9/16.11, ASTM A 182

For Flanges: ASTM A 182 ANSI B 16.5

Make:

Stainless Pipes & Tubes Indian & Imported Origin Japan/ Korea

Stainless Steel Plate Indian Jindal / Shah Alloys, Salem & Imported Areclor Mittal, Acreinox, Coloumbus, Outo Koumpu, Tisco.

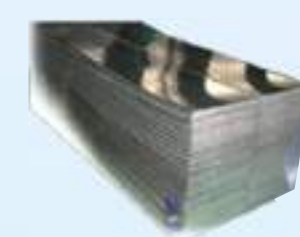
Stainless Steel Rods, Rounds R L Steel, Mukand, Sunflag, Panchmahal, Viraj, Chandan, Saarsthal

Carbon & Mild Steel Pipe MSL / ISMTL / JSW / Kalayni / Welspun / Zenith / Tata / Mahalaxmi / Heavy Metal / Ratnamani / Surya / Siddharth / Bhusan / Lotus

Carbon Steel, Mild Steel & IBR Plate & Structural Steel Lloyds, Ukraine, Sail, Tata, Jindal, Ispat

Inconel. Monel, Hast Alloys, Duplex Imported South Africa, U.K, USA,
Make: Tubacex, Hens International Co, DMV, Special Metal, Sumitomo.

Aluminum: Hindalco / Balco



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ASTM	Grade	Chemical requirements percent (%)										Mechanical requirements				
		C Max	MN max	P max	S max	Si max	Ni	Cr	Mo	Cu	Others	Tensile Strength mini- Mpa	Yield Strength mini-MPa	Elong. mini %	Impact test at C F	
A53	A B	0.25	0.95	0.05	0.06		0.40max	0.40max	0.15max	0.40max	0.08max	330	205	36		
		0.30	1.20	0.05	0.06		0.40max	0.40max	0.15max	0.40max	0.08max	415	240	29.5		
A106	A B C	0.25	0.27-0.93	0.035	0.035	0.10min	0.40max	0.40max	0.15max	0.40max	0.08max	330	205	L35-T25		
		0.30	0.29-1.06	0.035	0.035	0.10min	0.40max	0.40max	0.15max	0.40max	0.08max	415	240	L30-T16.5		
		0.35	0.29-1.06	0.035	0.035	0.10min	0.40max	0.40max	0.15max	0.40max	0.08max	485	275	L30-T16.5		
A312	TP 304	0.08	2.00	0.040	0.030	0.75	8.00-11.0	18.0-20.0				515	205	L35-T25		
	TP 304L	0.035	2.00	0.040	0.030	0.75	8.00-13.0	18.0-20.0				485	170	L35-T25		
	TP 310S	0.08	2.00	0.045	0.030	0.75	19.0-22.0	24.0-26.0	0.75 max			515	205	L35-T25		
	TP 316	0.08	2.00	0.040	0.030	0.75	11.0-14.0	16.0-18.0	2.00-3.00			515	205	L35-T25		
	TP316L	0.035	2.00	0.040	0.030	0.75	10.0-15.0	16.0-18.0	2.00-3.00			485	170	L35-T25		
	TP317L	0.035	2.00	0.040	0.030	0.75	11.0-15.0	18.0-20.0	3.00-4.00			515	205	L35-T25		
	TP 321	0.08	2.00	0.040	0.030	0.75	9.00-13.0	17.0-20.0		Ti >5xC < 0.70 Cb + Ta > 10XC < 1.10		515	205	L35-T25		
TP 347	0.08	2.00	0.040	0.030	0.75	9.00-13.0	17.0-20.0				515	205	L35-T25			
A333	3	0.19	0.31-0.64	0.025	0.025	0.18-0.37	3.18-3.82					450	240	L30-T20	-100 -150	
	4	0.12	0.50-1.05	0.025	0.025	0.08-0.37	0.47-0.98	0.44-1.01		0.40-0.75	Al 0.40-0.30	415	240	L30-T16.5	-100 -150	
	6	0.30	0.29-1.06	0.025	0.025	0.10 min						415	240	L30-T16.5	- 45 - 50	
	7	0.19	0.90	0.025	0.025	0.13-0.32	2.03-2.57					450	240	L30-T22	- 75 - 100	
	8	0.13	0.90	0.025	0.025	0.13-0.32	8.40-9.60					690	515	L22	-195 -320	
9	0.20	0.40-1.06	0.025	0.025		1.60-2.24			0.75-1.25			435	315	L28	- 75 - 100	
A335	P1	0.10-0.20	0.30-0.80	0.025	0.025	0.10-0.05			0.44-0.65			380	205	L30-T20		
	P2	0.10-0.20	0.30-0.61	0.025	0.025	0.10-0.30		0.50-0.81	0.44-0.65			380	205	L30-T20		
	P5	0.15	0.30-0.60	0.025	0.025	0.50		4.00-6.00	0.45-0.65			415	205	L30-T20		
	P9	0.15	0.30-0.60	0.025	0.025	0.25-1.00		8.00-10.0	0.90-1.10			415	205	L30-T20		
	P11	0.05-0.15	0.30-0.60	0.025	0.025	0.50-1.00		1.00-1.50	0.44-0.65			415	205	L30-T20		
	P12	0.05-0.15	0.30-0.61	0.025	0.025	0.50		0.80-1.25	0.44-0.65			415	220	L30-T20		
	P15	0.05-0.15	0.30-0.60	0.025	0.025	1.15-1.65		-	0.44-0.65			415	205	L30-T20		
	P21	0.05-0.15	0.30-0.60	0.025	0.025	0.50		2.65-3.35	0.80-1.06			415	205	L30-T20		
	P22	0.05-0.15	0.30-0.60	0.025	0.025	0.50		1.90-2.60	0.87-1.13		Cb+0.08-0.10, V< 0.18-0.25, N<0.030-0.070 Al<0.40 max	415	205	L30-T20		
	P91	0.08-0.12	0.30-0.60	0.025	0.025	0.20-0.50	0.40max	8.00-9.50	0.85-1.05			585	415	L20		
A358	TP304	0.08	2.00	0.045	0.030	0.75	8.0-10.50	18.0-20.0	-			Class 1 : Double welded pipes & full Radiography				
	TP310	0.08	2.00	0.045	0.030	0.50	19.0-22.0	24.0-26.0	-			Class 2 : Double welded no Radiography				
	TP316	0.08	2.00	0.045	0.030	0.75	10.0-14.0	16.0-18.0	2.0-3.0			Class 3 : Single welded full Radiography				
	TP316L	0.08	2.00	0.045	0.030	0.75	10.0-14.0	16.0-18.0	2.0-3.0			Class 4 : Single welded full Radiography root pass				
	TP317L	0.030	2.00	0.045	0.030	0.75	11.0-15.0	18.0-20.0	3.0-4.0			without addition of filler				
	TP321	0.08	2.00	0.045	0.030	0.75	9.0-12.0	17.0-19.0	-		Ti >5xC < 0.70 Cb + Ta > 10XC < 1.10	Class 5 : Double Welded spot Radiography				
	TP 347	0.08	2.00	0.045	0.030	0.75	9.0-13.0	17.0-19.0	-							
Formula - Sheet Width Required for Rolled & Welded Pipes - O. D. (mm) - Thickness (mm) x 3.14 = Sheet Widthth.																
L- Longitudinal T- Transverse																

QUALITY CONTROL POLICY

Quality Assurance at Tarang starts with understanding the Customers Requirement and continues till the customer is completely satisfied with the delivery of products and services. Quality Control procedures are well defined and thoroughly implemented.

Incoming Inspection : Incoming Raw Materials are the foundation for the final product. We make sure that we start with the best raw materials. Our suppliers are well-informed with our quality requirements.

Raw Materials are inspected for:

- Chemical & Mechanical Properties
- Surface Quality

In-Process Inspection : In-Process Quality Control Procedures are defined to the minutest details. These procedures enable operators, supervisors and quality control inspectors to produce the best quality products. Our Production team is at the core of the quality assurance system.

In-process Materials are inspected for :

- Dimensional properties such as tolerance, lobing, ut-of-roundness, length, straightness
- Inprocess Mechanical Properties such as Tensile, Elongation, Yield, Reduction of Area, Hardness at Core.
- Surface Finish

Finished Goods Inspection : The quality assurance team in the finished goods department - we call them "Tarang's Internal Customer". They inspect materials from the customer's perspective. Our products comply with relative international standards such as ASTM, DIN, EN, BS, AMS, ASME, QQS, MIL, JIS, NACE and others. Some of the related specifications are ASTM A193 / A276 / A320 / A479 / A582 & EN 10088-3. Test certifications comply with Euronorm EN 10204 3.1B / DIN 50049 3.1B.

Finished Goods are inspected for :

- Surface Finish
- Final Mechanical Properties
- Mercury Contamination, Macro and Micro Properties, Inter Granular and Corrosion Properties
- Packing, Color Coding, Marking



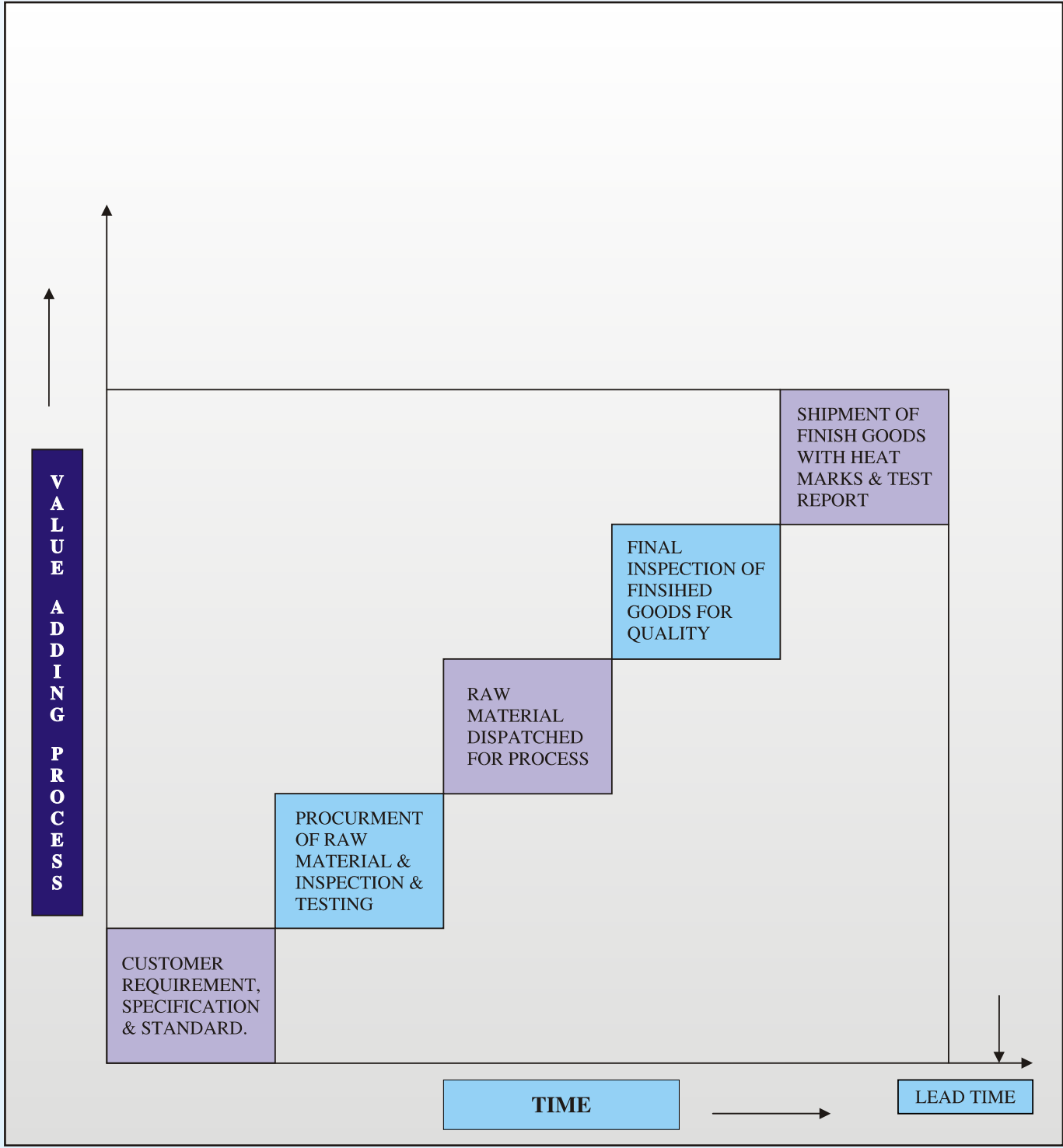
TARANG
STEEL

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CONTRACT MANUFACTURING



SUMMARY OF THE MAIN ASTM STANDARDS GENERALLY USED FOR SHEETS / PLATES

ASTM		Grade	Chemical requirements percent (%)										Mechanical requirements					
			C max	Mn max	P max	S max	Si max	Ni	Cr	Mo		Others	Tensile Strength mini-MPa	Yield Strength mini-MPa	Elong mini %	Hardness Brinell	Rockwell	
A240	304	0.08	2.00	0.045	0.030	0.75	8.00-10.5	18.00-20.0					515	205	40	201	92	
	304L	0.03	2.00	0.045	0.030	0.75	8.00-12.0	18.00-20.0					485	170	40	201	92	
	310	0.08	2.00	0.045	0.030	1.50	19.0-22.0	24.0-26.0					515	205	40	217	95	
	316	0.08	2.00	0.045	0.030	0.75	10.0-14.0	16.0-18.0	2.00-3.00				515	205	40	217	95	
	316L	0.03	2.00	0.045	0.030	0.75	10.0-14.0	16.0-18.0	2.00-3.00				485	170	40	217	95	
	317L	0.03	2.00	0.045	0.030	0.75	11.0-15.0	18.0-20.0	3.00-4.00				515	205	40	217	95	
	321	0.08	2.00	0.045	0.030	0.75	9.00-12.0	17.0-19.0			Ti>50C<0.70 Cb+Ta>100C<1.10		205	40	217	95		
A 387 Class1 Class2	347	0.08	2.00	0.045	0.030	0.75	9.00-13.0	17.0-19.0				Class 1	Class 2	205	40	201	92	
	2	0.05-0.21	0.55-0.80	0.035	0.040	0.15-0.40		0.50-0.80	0.45-0.60			Class 1	Class 2	205	40	201	92	
	5	0.15	0.30-0.60	0.04	0.030	0.050		4.00-6.00	0.45-0.65			380	486	230	310	22	max201HB	max92HRB
	7	0.15	0.30-0.60	0.030	0.030	1.00		6.00-8.00	0.45-0.65			415	515	205	310	18	max202HB	max92HRB
	9	0.15	0.30-0.60	0.030	0.030	1.00		8.00-10.0	0.90-1.10			415	515	205	310	18	max217HB	max95HRB
	11	0.04-0.17	0.40-0.65	0.035	0.04	0.50-0.80		1.00-1.50	0.45-0.65			415	515	205	310	18	max217HB	max95HRB
	12	0.04-0.17	0.40-0.65	0.035	0.04	0.15-0.40		0.80-1.15	0.45-0.60			415	515	240	310	22	max217HB	max95HRB
A 515	21	0.04-0.17	0.30-0.60	0.035	0.035	0.50		2.75-3.25	0.90-1.10			380	450	230	275	22	max217HB	max95HRB
	22	0.05-0.17	0.30-0.60	0.035	0.035	0.50		2.00-2.50	0.90-1.10			415	515	205	310	18	max201HB	max92HRB
	55	0.22	0.90	0.035	0.04	0.15-0.40						415	515	205	310	18	max201HB	max92HRB
	60	0.27	0.90	0.035	0.04	0.15-0.40						380-515	205	205	27			
	65	0.31	0.90	0.035	0.04	0.15-0.40						415-550	220	220	25			
A 516	70	0.33	1.20	0.035	0.04	0.15-0.40						450-585	240	240	23			
	55	0.20	0.60-1.20	0.035	0.04	0.15-0.40						485-620	260	260	21			
	60	0.23	0.85-1.20	0.035	0.04	0.15-0.40						380-515	205	205	27			
A 516	65	0.26	0.85-1.20	0.035	0.04	0.15-0.40						415-550	202	202	25			
	70	0.28	0.85-1.20	0.035	0.04	0.15-0.40						450-585	240	240	23			
A 516	Class 1	0.24	0.70-1.35	0.035	0.040	0.15-0.40	0.25 max	0.80 max	0.35 max			485-620	260	260	21			
	Class 2	0.24	0.70-1.35	0.035	0.040	0.15-0.40	0.25 max	0.80 max	0.35 max			485-620	345	345	22			
A 537	Class 1	0.24	0.70-1.35	0.035	0.040	0.15-0.40	0.25 max	0.80 max	0.35 max			550-690	415	415	22			
	Class 2	0.24	0.70-1.35	0.035	0.040	0.15-0.40	0.25 max	0.80 max	0.35 max			550-690	415	415	22			

IS-2062-92 STEEL FOR GENERAL STRUCTURAL PURPOSES											IS-2002-62 STEEL PLATES FOR BOILERS									
Grade	Designation	% Chemical Composition						Tensile strength (Min) Kg/mm ²	Yield Strength (Min) Mpa			%Elon gauge length 5.660So	Bend Test	Std.test Piece Charpy V Notch Impact Energy Joule min						
		C max	MN max	S max	P max	Si max	C.E.I max		<20 min	>20-40 min	>40min									
A	FE410 WA	0.23	1.5	0.050	0.050	-	0.42	41.8	250	240	230	23	3t	-						
B	FE410 WB	0.22	1.5	0.045	0.045	0.40	0.41	41.8	250	250	230	23	t<25mm	2t for 27 3t for t>25mm						
C	FE410 WC	0.20	1.5	0.040	0.040	0.40	0.36	41.8	250	250	230	23	2t	27						

Chemical Composition										Tensile Test			Elongation	
Designation	C max	Si max	P max	S max	Tensile strength Mpa	Yield Strength Mpa	Test Piece	%min						
IS 2002-1	0.18	0.10-0.35	0.040	0.040	362-442	540	5.650So 40So	26						
IS 2002-2A	0.20	0.10-0.35	0.050	00.50	412-491	491	5.600So 40So	25						
IS 2002-2B	0.22	0.10-0.35	0.050	0.050	510-608	491	5.650So 40So	20						

Formula - Weight of Stainless Steel Sheets/Plates = Length (mm) x Width (mm) x Thickness (mm) x 7.86 = Kg./Sheet.



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TOLERANCE

DIMENSIONAL VARIATION AS PER ASTM SPECIFICATIONS FOR TUBES

Tube Specification	Out Side Diameter (mm)	Permissible variations in Outside Diameter (mm)				Permissible variations in Wall Thickness (mm)												Under All THK. HFS/ CFS/ WLD
		Over		Under		Over												
						2.4 Wt.			>2.4 to 3.8 Ind.			>3.8-4.6 Ind.			>4.6			
		HFS	CFS	WLD	HFS	CFS	WLD	HFS	CFS	WLD	HFS	CFS	WLD	HFS	CFS	WLD		
ASTM		HF Seamless	CFS and Welded	HFS	CFS and Welded													
A-213 Seamless Ferritic& Austenitic Tube A 249 Welded Heat Ex. & Condenser Tube A 269 Seamless & Welded Austenitic S. S. Tubes	Under 25.4	0.4	0.10		0.10		20%			20%			20%			20%		
	25.4 to 38.1Incl.		0.15		0.15													
	Over 38.1 to 50.8 Excl.		0.20		0.20	40%		18%	35%		18%	33%		18%	28%		18%	
	Over 50.8 to 63.5 Excl.		0.25	0.8	0.25													
	Over 63.5 to 76.2 Excl.		0.30		0.30		22%			22%			22%			22%		
	Over 76.2 to 101.6 Incl.		0.38		0.38													
	Over 101.6 to 190.5 Incl.		0.38	1.2	0.64													

DIMENSIONAL VARIATION AS PER ASTM SPECIFICATIONS FOR PIPES

Tubes Specification ASTM	Nominal Pipe Size (mm)	Permissible variations in Outside Diameter (mm)		Permissible variations in THK	Permissible variations in Length (mm)		Straight tolerance
		Over	Under		Over	Under	
A 106 CS Seamless Pipe for High Temp.	3 to 40 Incl	0.4	0.8	-12.5%	6	0	Up to 125 mm O/D & 12 mm THK Pipe -0.76 mm
	Over 40 to 100 Incl.	0.8	0.8				
A 312 Seamless & Welded Austenitic SS Pipes	Over 100 to 200 Incl.	1.6	0.8				
	Over 200 to 450 Incl.	2.4	0.8				Over 125 mm O/D to 200 mm O/D Incl. -1.15 mm
A333 Seamless & Welded pipe for LT Service	Over 450 to 650 Incl.	3.2	0.8				Over 200 mm O/D to 324 mm O/D Inclusive -1.52 mm
A 335 Seamless Ferritic Alloy Steel Pipe for High Temp. Service	Over 650 to 850 Incl.	4.0	0.8				
	Over 850 to 1200	4.8	0.8				
A 358 ERW Austenitic Cr-NiAs pipe for High Temp.serv.	All Sizes (upto 200 NB)	+0.5% (Based on Circum- ferential Measurement)	-0.5%	-0.3 mm			3 mm 3/metres
A409 ERW Large Dia Austenitic Steel Pipes	450 to 750 (SCH 5 S & 10 S)	+0.2% +0.4% Based on Circumferential Measurement	+0.2% (For T < 4.8 mm) -0.4% (For T 4.8 mm)	-0.46 mm			4.8mm/3 metres



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IBR FITTINGS IN CARBON STEEL

IBR Fittings as per Indian boiler regulation in shape of elbow (90°, 60°, 45°, 30°), Tee (Equal Tee & Unequal Tee), Reducer (Concentric & Eccentric), Weldolets, Sockolets, Flanges (Sorf, WNRF), and nipple is our speciality. The generally all IBR Fittings are manufactured from IBR Pipes of well reputed manufacturer with Form III-A like MSL, ISMTL, Mahalxmi, Kalyani, JSW. Forged material is well checked for leak, pressure & performance before dispatched. The heat no & test certificate are cross verified for endorsement & punch.



HIGH TEMPERATURE FITTINGS & FLANGES

Generally for furnace equipment, heat treatment equipment, chemical plant, vitreous enameling equipment, valve spindle, doctor blade & high temperature equipment require the material which can withstand high temperature as well as tough, acid & alkalis corrosive. So the fittings & flanges are design as per requirement only.

Generally used material is Nickel 200/201/205/212/222/270, Inconel 600/625/800/825, Monel 400/ 500, Duplex 2205/2705.





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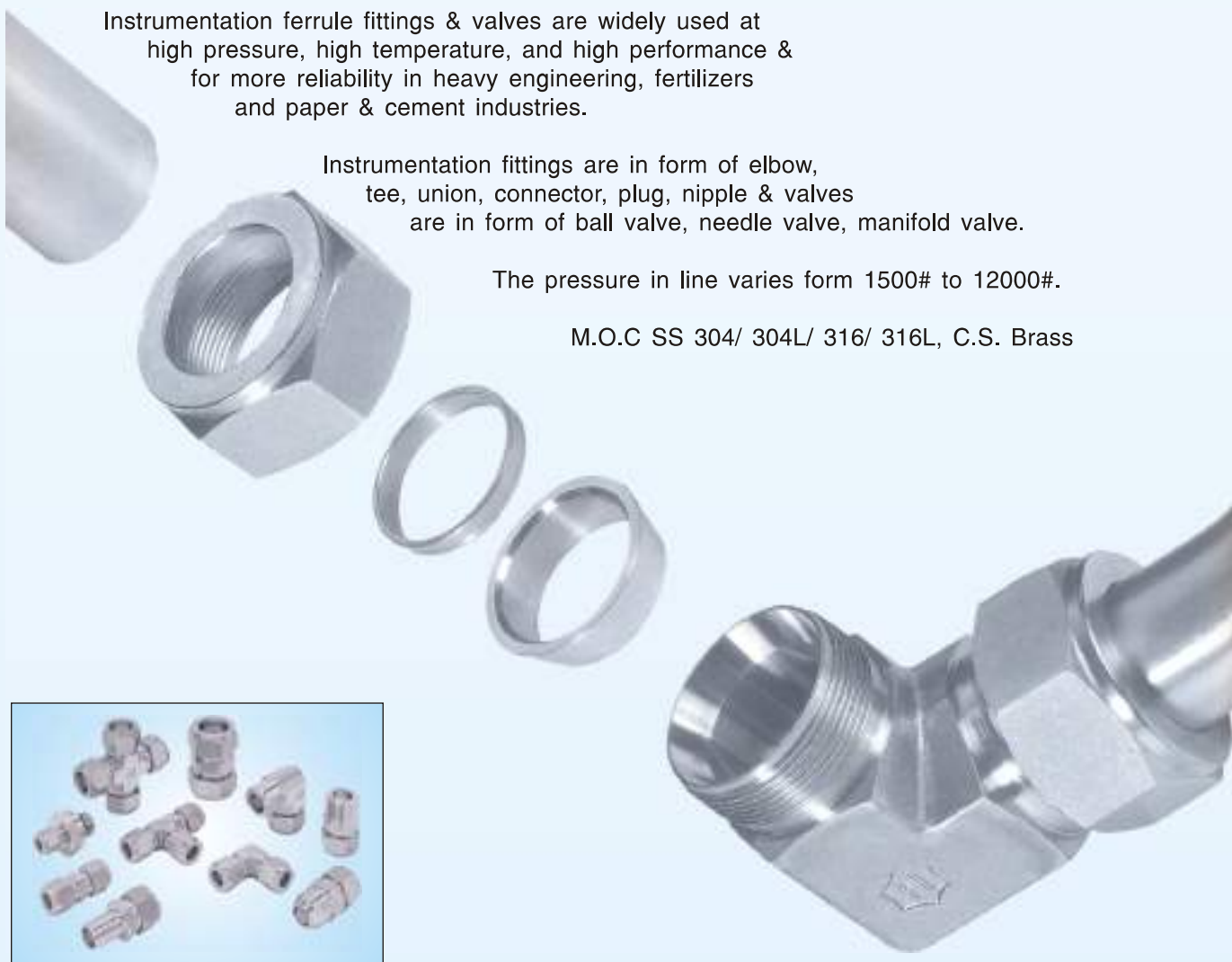
HIGH PRESSURE INSTRUMENTATION FITTINGS

Instrumentation ferrule fittings & valves are widely used at high pressure, high temperature, and high performance & for more reliability in heavy engineering, fertilizers and paper & cement industries.

Instrumentation fittings are in form of elbow, tee, union, connector, plug, nipple & valves are in form of ball valve, needle valve, manifold valve.

The pressure in line varies form 1500# to 12000#.

M.O.C SS 304/ 304L/ 316/ 316L, C.S. Brass



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CARBON STEEL & STAINLESS STEEL WEIGHT PER KG/MTR.

Nominal pipe size	O. D mm													Nominal pipe size	FIGURES BASED ON AUSTENITIC STEEL				SHIPPING Vol/m ³
		10	20	30	STD	40	60	XS	80	100	120	140	160	XXS	5S	10S	40S	80S	
1/8	10,30				1,73 0,37	1,73 0,37		2,41 0,47	2,41 0,47					1/8		1,24 0,28	1,73 0,36	2,41 0,48	0,0001
1/4	13,70				2,24 0,63	2,24 0,63		3,02 0,80	3,02 0,80					1/4		1,65 0,51	2,24 0,64	3,02 0,82	0,0002
3/8	17,10				2,31 0,84	2,31 0,84		3,20 1,10	3,20 1,10					3/8		1,65 0,64	2,31 0,86	3,20 1,12	0,0003
1/2	21,30				2,77 1,27	2,77 1,27		3,73 1,62	3,73 1,62				4,78 1,95	1/2	1,65 0,82	2,11 1,01	2,77 1,30	3,73 1,65	0,0004
3/4	26,70				2,87 1,69	2,87 1,69		3,91 2,20	3,91 2,20				5,56 2,90	3/4	1,65 1,04	2,11 1,31	2,87 1,71	3,91 2,24	0,0007
1	33,40				3,38 2,50	3,38 2,50		4,55 3,24	4,55 3,24				6,35 4,24	1	1,65 1,33	2,77 2,13	3,38 2,55	4,55 3,29	0,0011
1 1/4	42,20				3,56 3,39	3,56 3,39		4,85 4,47	4,85 4,47				6,35 5,61	1 1/4	1,65 1,68	2,77 2,76	3,56 3,46	4,85 4,56	0,0018
1 1/2	48,30				3,68 4,05	3,68 4,05		5,08 5,41	5,08 5,41				7,14 7,25	1 1/2	1,65 1,95	2,77 3,17	3,68 4,13	5,08 5,51	0,0023
2	60,30				3,91 5,44	3,91 5,44		5,54 7,48	5,54 7,48				8,74 11,11	2	1,65 2,24	2,77 4,01	3,91 5,54	5,54 7,63	0,0036
2 1/2	73,00				5,16 8,63	5,16 8,63		7,01 11,41	7,01 11,41				9,53 14,92	2 1/2	2,11 3,77	3,05 5,36	5,16 8,81	7,01 11,64	0,0053
3	88,90				5,49 11,29	5,49 11,29		7,62 15,27	7,62 15,27				11,13 21,35	3	2,11 4,60	3,05 6,59	5,49 11,52	7,62 15,59	0,0079
3 1/2	101,60				5,74 13,57	5,74 13,57		8,08 18,63	8,08 18,63				-	3 1/2	2,11 5,29	3,05 7,55	5,74 13,84	8,08 19,01	0,0103
4	114,30				6,02 16,07	6,02 16,07		8,56 22,32	8,56 22,32		11,13 28,32		13,49 33,54	4	2,11 5,96	3,05 8,52	6,02 16,40	8,56 22,77	0,0130
5	141,30				6,55 21,77	6,55 21,77		9,53 30,97	9,53 30,97		12,70 40,28		15,88 49,11	5	2,77 9,67	3,40 11,82	6,55 22,20	9,53 31,59	0,0199
6	168,30				7,11 28,26	7,11 28,26		10,97 42,56	10,97 42,56		14,27 54,20		18,26 67,56	6	2,77 11,55	3,40 14,13	7,11 28,83	10,97 43,42	0,028
8	219,10		6,35 33,31	7,04 36,81	8,18 42,55	8,18 42,55	10,30 53,10	12,70 64,64	12,70 64,64	15,09 75,92	18,26 90,44	20,62 100,92	23,01 111,27	8	2,77 15,09	3,76 20,37	8,18 43,39	12,70 65,95	0,048
10	273,10		6,35 41,77	7,80 51,03	9,27 60,31	9,27 60,31	12,70 81,50	12,70 81,55	15,09 96,01	18,26 114,75	21,44 133,06	25,40 155,15	28,58 172,33	10	3,40 23,08	4,19 28,34	9,27 61,52	12,70 83,19	0,074
12	323,90		6,35 49,73	8,38 65,20	9,53 73,88	10,31 79,73	14,30 109,00	12,70 97,46	17,48 132,08	21,44 159,91	25,40 186,97	28,58 208,14	33,32 238,76	12	3,96 31,89	4,57 36,73	9,53 75,32	12,70 99,43	0,104
14	355,60	6,35 54,69	7,92 67,90	9,53 81,33	9,53 81,33	11,13 94,55	15,10 126,40	12,70 107,39	19,05 158,10	23,83 194,96	27,79 224,65	31,75 253,56	35,71 281,70	14	3,96 35,06	4,78 42,14			0,126
16	406,40	6,35 62,64	7,92 77,83	9,53 93,27	9,53 93,27	12,70 123,30	16,70 160,00	12,70 123,30	21,44 203,53	26,19 245,56	30,96 286,64	36,33 333,19	40,49 365,35	16	4,19 42,41	4,78 48,26			0,165
18	457,00	6,35 70,57	7,92 87,71	11,13 122,38	9,53 105,16	14,27 155,80	19,00 206,00	12,70 139,15	23,83 254,55	29,36 309,62	34,93 363,56	39,67 408,26	45,24 459,37	18	4,19 47,77	4,78 54,36			0,208
20	508,00	6,35 78,55	9,53 117,15	12,70 155,12	9,53 117,15	15,09 183,42	20,60 248,5	12,70 155,12	26,19 311,17	32,54 381,53	38,10 441,49	44,45 508,11	50,01 564,81	20	4,78 60,46	5,54 70,00			0,258
22	559,00	6,35 86,54	9,53 129,13	12,70 171,09	9,53 129,13	-	22,20 294,00	12,70 171,09	28,58 373,83	34,93 451,42	41,28 527,02	47,63 600,63	53,98 672,26	22	4,78 66,57	5,54 77,06			0,312
24	610,00	6,35 94,53	9,53 141,12	14,27 209,64	9,53 141,12	17,48 255,41	24,60 355,00	12,70 187,06	30,96 442,08	38,89 547,71	46,02 640,03	52,37 720,15	59,54 808,22	24	5,54 84,16	6,35 96,37			0,372
26	660,00	7,92 127,36	12,70 202,72	-	9,53 152,87	-		12,70 202,72						26					0,435
28	711,00	7,92 137,32	12,70 218,69	15,88 271,21	9,53 164,85	-		12,70 218,69						28					0,505
30	762,00	7,92 147,28	12,70 234,67	15,88 292,18	9,53 176,84	-		12,70 234,67						30	6,35 120,72	7,92 150,36			0,580
32	813,00	7,92 157,24	12,70 250,64	15,88 312,15	9,53 188,82	17,48 342,91		12,70 250,64						32					0,660
34	864,00	7,92 167,20	12,70 266,61	15,88 332,12	9,53 200,31	17,48 364,90		12,70 266,61						34					0,746
36	914,00	7,92 176,96	12,70 282,27	15,88 351,70	9,53 212,56	19,05 420,42		12,70 282,27						36					0,835
38	965,00				9,53 224,54			12,70 298,24						38					0,931
40	1016,00				9,53 236,53			12,70 314,22						40					1,032
42	1067,00				9,53 248,52			12,70 330,19						42					1,138
44	1118,00				9,53 260,50			12,70 346,16						44					1,249
46	1168,00				9,53 272,25			12,70 351,82						46					1,364
48	1219,00				9,53 284,24			12,70 377,79						48					1,485

Value for information only



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EXPERTISE & SPECIALIZED

FLANGES & FITTINGS FOR GENERAL ENGINEERING & PROJECTS

A) FLANGES

A means of connection between to pipes with help of nut, bolt, and washer & gasket is called as flange. The gasket is applied to avoid any kind of leakage. A flange varies in size from ½" NB to 48" NB & in class 150# to 1500#. Flanges can be made for forging or plates. A forging grade are ASTM A 182 (for S.S.) & ASTM A 105 (for C.S) with hub & weldneck. Plate made flanges are generally without hub & weldneck. The flanges are silp on raised face (SORF), slipon raised flat face (SOFF), weld neck raised face (WNRF), tongue & groove, spectacle blind, blind raised face (BLRF).

M.O.C GENERALLY USED

SS 304/ 304L/ 316/ 316L/ 321/ 310/ / Duplex/ Hast Alloy C-276/ Alloy 20/ Inconel/ Monel/ C.S/M.S & A.S.



B) FITTINGS:

A means of change in direction, reduction & expansion in flow media is called as fittings. They are mainly of 3 types as follows.



1) BUTT WELD:

A face of fitting can be directly weld to the face of pipe. The fittings in butt weld are ERW or seamless & varies according to pipe & thickness.



2) SOCKET WELD FITTINGS.

As the name suggests a socket is available in all fittings & pipe can be inserting into the slot & welding can be done. This type of fittings can be used at high pressure & high performance. The pressure rating changes from 150# to 1500#.



3) SCREWED FITTINGS:

To avoid the expense, welding & permanent joint screwed is the cheapest way of joining the two lines. This are generally used for moderate pressure.

SHAPE OF FITTINGS:

Elbow (90°, 60°, 45°, 30°), tee (equal tee & unequal tee), reducer (concentric & eccentric), weldolets, sockolets, long stub end, collar.

M.O.C. GENERALLY USED:

SS 304 / 304L / 316 / 316L / 321 / 310 / Duplex / Hast Alloy C-276 / Alloy 20 / Inconel / Monel / C.S. / M.S. & A.S.



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SANITARY HIGH PURITY FLOW COMPONENTS & VALVES



Sanitary grade tube, flow components, tank & cleaning equipment & valves are the back bone of pharmaceuticals & dairy industries. All the tube shall be well electro polished inside & outside mechanical polished. The triclover clamp, equal Tee, Bend, 'Y' loop, Diaphragm Valve, Sanitary Grade ASTM A 269 Tube, Triclover Gasket, SMS Union, clamp for Triclover, Pipe Holding Clamp, Butterfly Valves are some of the accessories used in pharmaceuticals. The generally used M.O.C. is SS 304/ 304L/ 316/ 316L.

Food Grade Gasket, 'O' Ring & Chord are widely used with Equipment & Fittings to avoid any kind of Leakage. The material videley used as Silicone, Nitrile, Natural, Epdm, and Teflon

