

Integrated Piping Solutions



METAL FORGE INDIA

www.metalforgeindia.com



OSWAL GROUP





QUALITY PROFESSIONALS with complete PIPING SOLUTIONS

Metal Forge India started in 1979 by visionary par excellence Mr. Paras Doshi, today has established itself and has earned an outstanding reputation as a preferred supplier of best quality Pipe Fittings, Flanges and Pipe Spools to the discerning customers World wide.

With our relentless quest for Total Customer Satisfaction through prompt & personalised service, we guarantee utmost care and devotion in extending maximum service irrespective of the size & value of the order

Today we are optimally equipped with our state of the art manufacturing facilities , Testing equipments, Qualified & Experienced man power, ensuring best value and quality products for our customers.



ORDERS
EXECUTED FOR
PRESTIGIOUS
PROJECTS



Company name: **Air Liquide**
End User / Owner **Bhusan Steel LTD**
Contractor: **Air Liquide**
Project name: **Oxygen Plant**
Item: **60" x Sch 10 ELBOW 90 DEG**
Mat : **SA403 WP-W 304**
TPI: **ALEI**

Company name: **BPCL**
End User / Owner **BPCL**
Contractor: **BPCL**
Project name: **CEMP II BPCL**
Item: **WP 347 WX 16" x Sch XXS**
TPI: **Velosi**

Company name: **Jindal Steel & Power**
End User / **JSPL RAIGARH**
Contractor: **Air Liquide**
Project name: **Oxyegen plant revamp**
Item: **8" x 4" 300# Cupro Nickel 90/10**
Fabricated Pipe Spool
TPI: **ALEI**
Special certification: **Hydro Tested**

Company name: **Petronas Carigali SDN BHD**
End User / Owner **Petronas Carigali SDN BHD**
Contractor: **Petronas Carigali SDN BHD**
Project name: **Fuel Gas Super Heater**
Item: **Supply of fittings , flanges & fasteners**
TPI: **ISS**

Company name: **Air Liquide**
End User / Owner **Air Liquide**
Contractor: **VRV S.P.A**
Project name: **SAIL Bhillai**
Item: **Cryocyl Noozle and Cryocyl Flange**
TPI: **Self**

Company name: **BPCL**
End User / Owner **KOCHI REFINERY**
Contractor: **BPCL**
Item: **18" x 1500# BLRF A182 F22V Cladded with SS 347**
TPI: **CEIL**

Company name: **Am- tech Eng. Services**
End User / Owner **KNPC**
Contractor: **KNPC**
Item: **MONEL 400 Condensate Pots**
TPI: **Self**

Company name: **FACT ENGG WORKS**
End User / Owner **FACT LTD**
Contractor: **FEW**
Project name: **Super Critical Boiler**
Item: **REINFORCED FLANGE 24" x 600#**
TPI: **FEW**

Company name: **Turkmengas**
End User / Owner **Turkmengas**
Contractor: **Petrofac**
Project name: **Turkmengas on South Yoloten Gas Field Development**
Item: **SA266 Gr.4 18" x 900# BLRTJ**
Incoloy 825 10" x 300# BLRF
Incoloy 825 6" x 150# SORF
TPI: **TATA Projects**
Special certification: **3.2 Certification**

Company name: **ABU DHABI OIL REFINING COMPANY**
End User / Owner **ADOR COMPANY**
Contractor: **ADOR COMPANY**
Project name: **Nitrogen Electric Heater**
Item: **Supply of fittings , flanges & fasteners**
TPI: **Self**

Company name: **Sasol South Africa**
End User / Owner **Sasol South Africa**
Contractor: **Hydra Arc**
Project name: **Methanol Recovery coloumn**
Item: **Pipe Fittings**
TPI: **Self**

Company name: **SABIC & EXXON MOBILE**
End User / **SABIC & EXXON MOBILE**
Contractor: **Technip France**
Project name: **AL Jubail Petrochemical Company , Kemya , Saudi Arabia**
Item: **Supply of fittings , flanges & fasteners**
TPI: **Self**

Company name: **Petronas**
End User / Owner **Petronas**
Contractor: **ISS Malaysia**
Project name: **Yetagun North Development Project , Myanmar**
Item: **Supply of fittings , flanges & fasteners**
TPI: **L&T**

Company name: **Marathon Oil Company**
End User / Owner **Marathon Oil Company**
Contractor: **ESCHER Process Modules**
Project name: **Alba Compression Platform Project**
Item: **12" x 2500# WNRTJ & BLRTJ in SA 350 GR. LF2**
TPI: **Escher**

Company name: **Oman refinery & petrochemicals Co.LLC**
End User / Owner **Oman refinery & petrochemicals Co.LLC**
Contractor: **FEW**
Project name: Contractor : **Daelim –Petrofac SRIP Joint Venture IOT INFRASTRUCTURE LTD**
Item: **2" x Sch 160 Return Bends A234 Gr.WPB SMLS**
TPI: **IOT INFRASTRUCURE LTD**
Special certification: **3.2 Certification**

Company name: **CB&I**
End User / Owner **CB&I**
Contractor: **CB&I**
Project name: **Freeport LNG Project**
Item: **48" x 1.375 " THK Elbow 90 DEG Sa420 WPL6**
TPI: **Self**
Special certification: **Hydro Testing**

QUALITY THAT INSPIRES CUSTOMER CONFIDENCE



Our design and manufacturing is supported by advance technology which enable us to meet not only the requirements of Internationally accepted manufacturing & Quality standards but also to cope with growing demand for special fittings that meets safety.

Our Heat treatment facilities are equipped with high precision temperature control, which permits to achieve an optimal adjustment of material properties.

Our Quality Assurance System is documented in an approved Quality Assurance Manual and covers all production processes. Severe control of dimensions and of mechanical properties starting from the raw material and following right through all production steps to laboratory tests on the finished product is exercised in order to maintain the high quality level of Metal Forge products



We offer our products with various ISO testing option like :

- Hydro Test
- Radiography
- NACE
- HIC Testing
- Impact Testing
- Hardness Testing
- Magnetic Particle Test
- Dye penetrant Test
- Bend test
- Eddy Current Test
- In-situ Test
- PMI



Situated in Chattral Gujarat India, our manufacturing plant is equipped with sophisticated infrastructure facilities. We have all the latest machines and technology to manufacture high quality butt-weld pipe fittings, like elbow , Tee, coupling, weldolets, sockelets, nippolets, thredolets, forged steel flanges, socket weld & threaded etc.

Our production facilities employ new generation technologies & processes to ensure production of high performance zero-defect products and components. From design and development to implementation, from testing to packaging, each and every stage of our production process is conducted using cutting edge machinery & trained personnel. Our manufacturing facilities are divided into two units for smooth functioning.

Our manufacturing process is highly sophisticated and is divided into various departments supervised by experienced industry experts. We use only quality raw materials that are procured from only established and reliable vendors. We have adopted rigorous quality control practices and procedures to ensure the production of only quality products matching industry standards and parameters.

The various machines available in our production facility includes

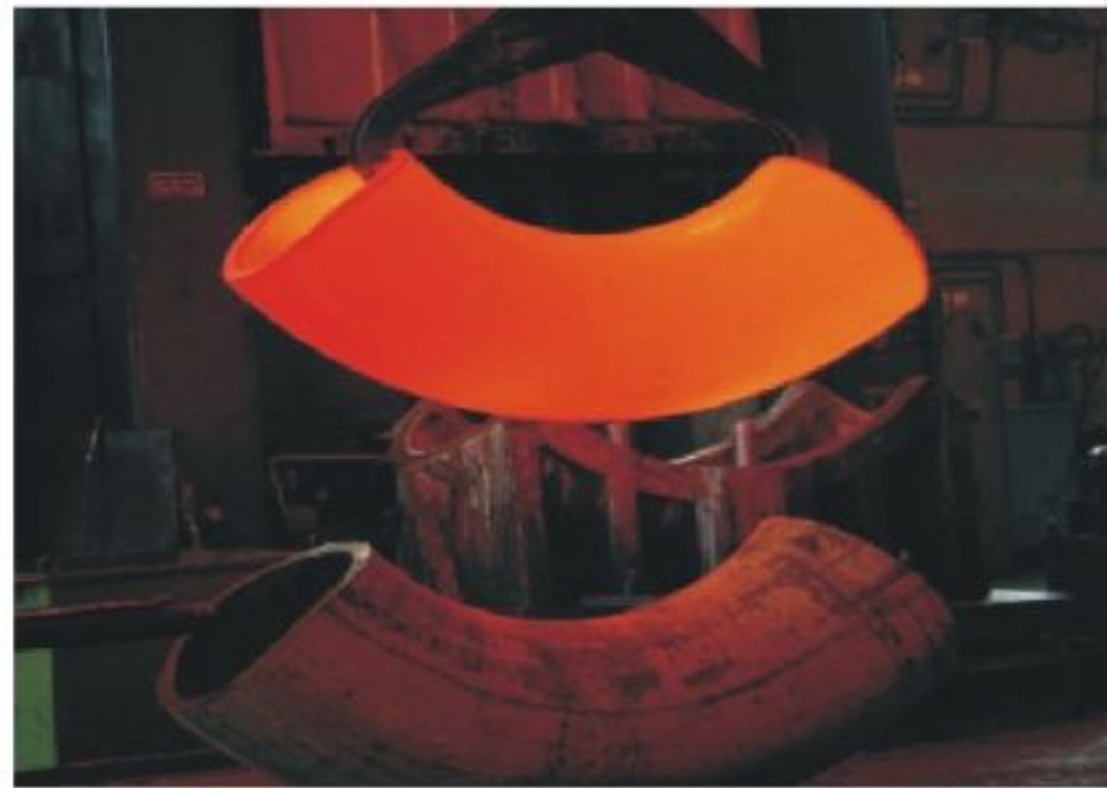
List of Machineries :

- 1) Mandrel Machine with LPG Furnace
- 2) Hydraulic Presses
- 3) CNC Machine
- 4) Lathe Machine
- 5) Heat treatment Furnaces
- 6) Oil Fired Furnace
- 7) Gas Fired Furnace
- 8) Plasma Cutting Machine
- 9) Dies & Tools
- 10) Cold Forming Press For Elbows.

Testing Equipments

- 1) PMI Machine
- 2) Spectro Analyzer
- 3) Ultra sonic Testing Machine
- 4) Digital Hardness Tester
- 5) X-Ray Film Viewer
- 6) Universal Tensile Testing
- 7) Dye Penetrant Test Kit

**STATE OF THE ART
MANUFACTURING THAT IS AT PAR
WITH THE BEST IN INDUSTRY.**



FITTINGS THAT FITS EVERY NEED

Standards :

ASME B16.9, B16.28 & MSS SP-95 - 43

Stainless Steel & Duplex Steel Fittings

Size : Seamless Upto 16" NB / Welded Upto 48"

Schedule : 10S/40S/80S/160S/XXS

Stainless Steel : ASTM A 403 WP - TP 304/304L/304H/316/316L/ 316H / 316Ti /
309 / 310 / 317L / 321 / 347/904L

Duplex Steel : ASTM A 815- UNS S31803, S32750, S32760, S32205

Alloy Steel, Carbon Steel & LTCS Fittings

Size : Seamless Upto 24" NB / Welded Upto 48"

Schedule : 10/40/60/XS/80/100/120/140/160/XXS

Alloy Steel : ASTM A 234 WPB - WP5, WP9, WP11, WP12, WP22,WP91

Carbon Steel : ASTM A234 WPB / A420 WPL3/A420 WPL6/MSS SP-75 WPHY
42/46/52/56/60/65/70/A53 Gr. B/A106 Gr.B/ASM 192/A179 etc.

Duplex Steel : ASTM A815 - UNS S31803, S32750, S32760, S32205

Copper & Nickel Alloys Fittings

Size : ½"NB to 24" NB seamless & Welded

Schedule : 10S/40S/80S

CuproNickel : C70600(90:10), C71500 (70:30), C71640

Nickel : UNS N02200, N02201

Monel : UNS N04400, N05500, Alloy 20

Inconel : UNS N06600, N06601, N06625, N08800, N08810

Hastelloy : UNS N10276, N06022, N10665, N06455

Types: Elbow (45Deg., 90 Deg., 180 Deg.)/Tee (Barred, Equal, reducing) /Reducer (Concentric & Eccentric) Coupling / Stubend /U bend / End Cap / Laterals





FITTINGS THAT CAN WITHSTAND HIGH PRESSURE

Stainless Steel & duplex Steel forged Fittings

Standard : ANSI B16.11, MSS SP - 97, BS 3799

Size : ½"NB to 3" NB, (Socketweld & Threaded)

Class : 3000#, 6000#, 9000#

Stainless Steel : ASTM A TP 304/304L/304H/316/316L/ 316H / 316Ti / 309 / 310 /317L/321/347/904L

Duplex Steel : ASTM A 815- UNS S31803, S32750, S32760, S32205

Alloy Steel, Carbon Steel & LTCS Forged Fittings

Size : ½"NB to 3" NB, (Socketweld & Threaded)

Class : 3000#, 6000#, 9000#

Alloy Steel : ASTM A 182-F5, F9, F11, F12, F22 & F91

Carbon Steel : ASTM A 105

Low temp. CS : A 350 LF2

Copper & Nickel Alloys Fittings

Size : ½"NB to 3" NB, ANSI B 16.11

Schedule : 3000#, 6000#, 9000#

CuproNickel : C70600(90:10), C71500 (70:30), C71640

Nickel : UNS N02200, N02201

Monel : UNS N04400, N05500, Alloy 20

Inconel : UNS N06600, N06601, N06625, N08800, N08810

Hastelloy : UNS N10276, N06022, N10665, N06455

Types: Elbow (45Deg., 90 Deg.) /Tee / Union / Cross / Swage Nipple / Coupling

FLANGES THAT CONNECTS EVERY PIPELINE

Stainless Steel & duplex Steel Flanges Fittings

Size : ½" NB to 72" NB, ANSI B 16.5

Class : 150#, 300#, 600#, 900#, 1500#, 2500#

Stainless Steel : ASTM A TP 304/304L/304H/316/316L/ 316H / 316Ti / 309 / 310 / 317L / 321/347/904L

Duplex Steel : ASTM A 815- UNS S31803, S32750, S32760, S32205

Alloy Steel, Carbon Steel & LTCS Flanges Fittings

Size : ½" NB to 72" NB, ANSI B 16.5

Class : 150#, 300#, 600#, 900#, 1500#, 2500#

Alloy Steel : ASTM A 182-F5, F9, F11, F12, F22 & F91

Carbon Steel : ASTM A 105 ASTM A 694 F42, F46, F52, F60, F65, F70

Low temp. AS : A 350 LF3.

Copper & Nickel Alloys Flanges

Size : ½" NB to 72" NB, ANSI B 16.5

Class : 150#, 300#, 600#, 900#, 1500#, 2500#

CuproNickel : C70600(90:10), C71500 (70:30), C71640

Nickel : UNS N02200, N02201

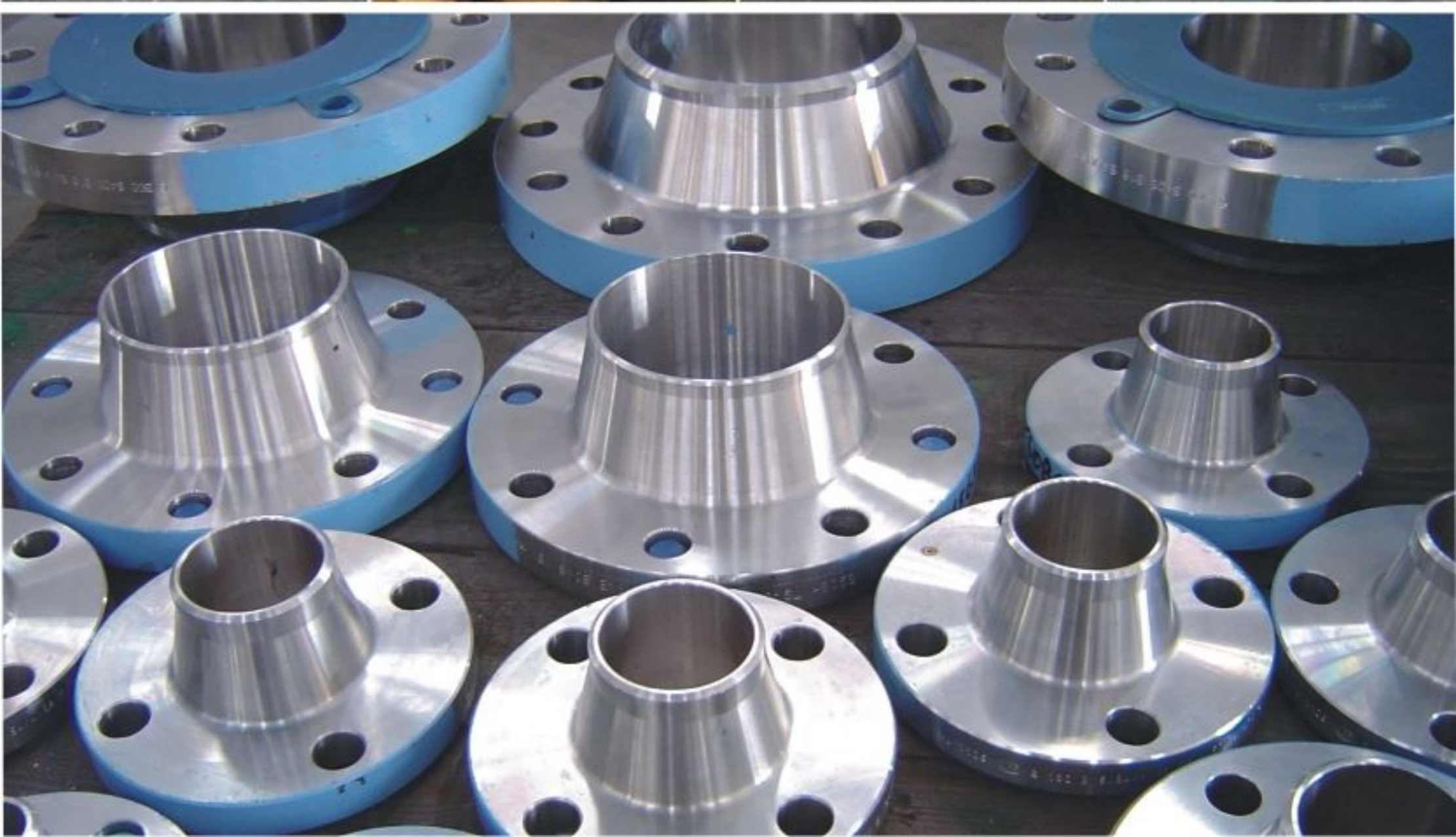
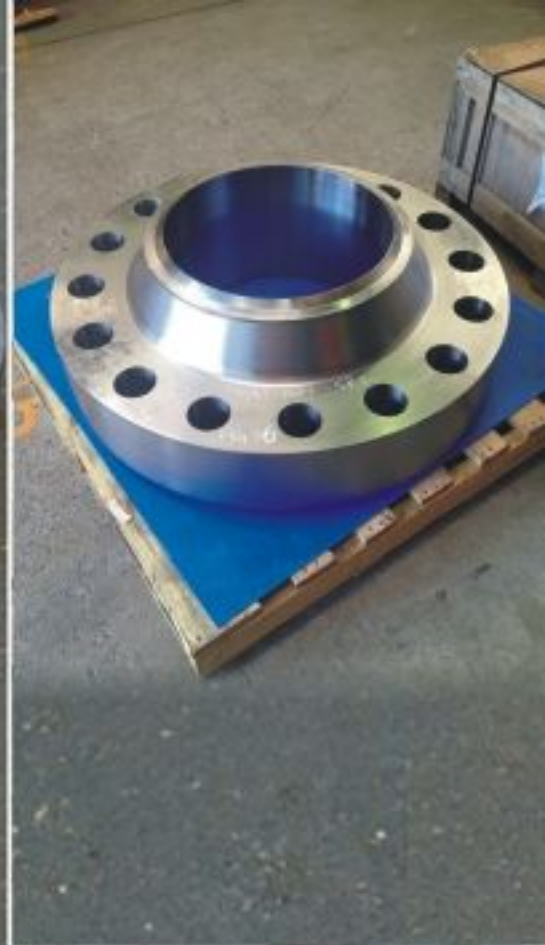
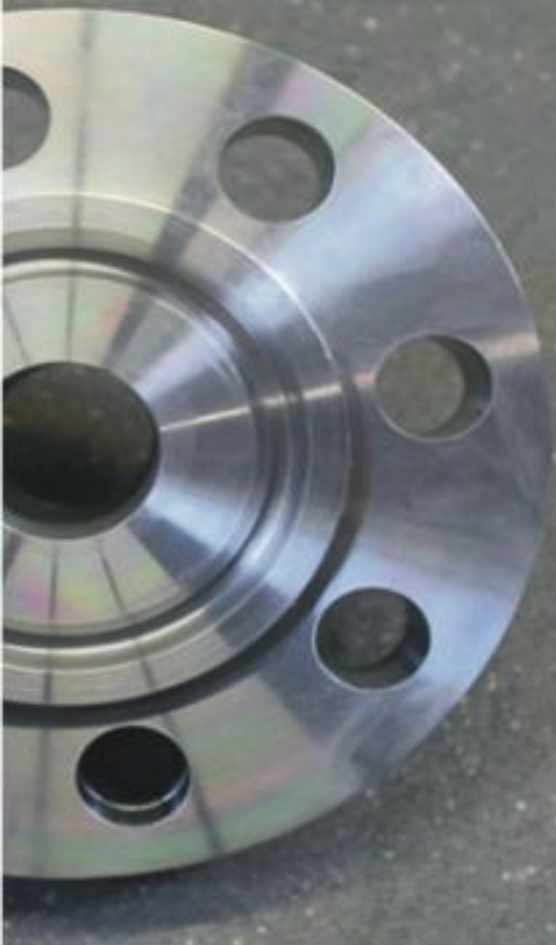
Monel : UNS N04400, N05500, Alloy 20

Inconel : UNS N06600, N06601, N06625, N08800, N08810

Hastelloy : UNS N10276, N06022, N10665, N06455

Titanium : Gr. 2 & 5, DTH 3.7025, DTH 3.7055

Types: Weldneck / Socketweld / Slip on / Blind / Threaded / Long Weldneck / Lap Joint
/ Spectacle blind / Orifice / Heavy Barrel Flange / Reinforced Nozzle Flanges.





PRODUCTS THAT COMPLETE OUR TOTAL PIPING PACKAGE

Pipes / Tubes

Stainless Steel Seamless & ERW Tubes for Boilers, Super Heaters, Heat Exchangers and Condensers as per ASTM A 213, A 249, A 271 & A 688 Gr. TP 304, 304L, 310S, 310H, 316, 316L, 316H, 316LN, 317, 317L, 321, 321H, 347, 347H, etc.

Stainless Steel ERW Large Diameter Pipes as per ASTM A 358 and A 409 Gr. TP 304, 304L, 304H, 304LN, 309, 309S, 309H, 310S, 310H, 316, 316L, 316H, 316LN, 316TI, 317, 317L, 321, 321H, 347, 347H, 348, 348H etc.

Alloy Steel Seamless Pipes & Tubes for High Temperature/Pressure services as per ASTM A 335 Gr. P1, P2, P5, P9, P11, P12, P22, P91; ASTM A 213 Gr. T2, T5, T11, T12 & T22 with IBR Test Certificate.

Carbon Steel Seamless Pipes as per ASTM A 106 Gr. B, A 53 Gr. B, API 5L Gr. A, B, X42, X46, X52, X56 & X60 with IBR Test Certificate.

LTCS Pipes : As per ASTM A333Gr.3 & Gr.6 with IBR TC.

High Nickel Alloys : Nickel 200, Inconel, monel, hastelloy, Alloy 20, SMO 254

Drip Ring : ½" to 24" 150# to 2500#
Grade: A182, F304, 321, 316, Duplex Incoloy etc.

Pipe Spools : We manufacture Pipe Spools as per Client Drawings and specification in various grades
Such as : Carbon Steel, Alloy Steel, Stainless Steel & high Nickel Alloys.

Size Range : ½ To 72"
Class : 150# to 2500#
Schedule : 5S to XXS

Fasteners

Stainless Steel & duplex Steel fasteners

Stainless Steel : A193 B8 - B8A/ A193 B8-B8MA / A193 B8T / B8TA / A193 B8C-B8CA / A193 B6-B6X

Duplex Steel : AISI - UNS S31803, S32205

Alloy Steel & Carbon Steel Fasteners

Alloy Steel : EN-8/EN-8D/EN-9/EN-15/EN-16/EN-18/EN-24/EN-25/EN- 31/EN-36B/EN-41B/EN-42/EN-45A/EN-47/A193/ B7-B7M

Carbon Steel : 4.6, 8.8, 10.9, 12.9

Aluminum Bronze Fasteners

Thermowell :-

Flanges size : ½" to 4"

Pressure ratings : 150 class, 300 class, 600 class, 900 class, 1500 class material

Well Flange : SS 304, 316, 304L, 316L, 310, 321, 446
Inconel 600* or Equi., Inconel 800* or Equi. Nickel, Monel* or Equi. Titanium, Hastelloy 'B', 'C'* or Equivalent.



SPECIAL PRODUCTS



LATERAL TEE



**FORGED TEE WITH
Extended Length A182 f91**



**180 DEGREE RETURN BENDS
A234 WP22**



TRANSITION NOZZLE



MONEL 400 Fabricated Spool



CRYOGENIC NOZZLES





3.5 D BENDS



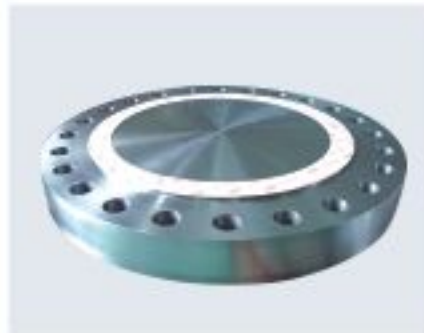
**SQUARE FLANGES FOR
CRYO SERVICE**



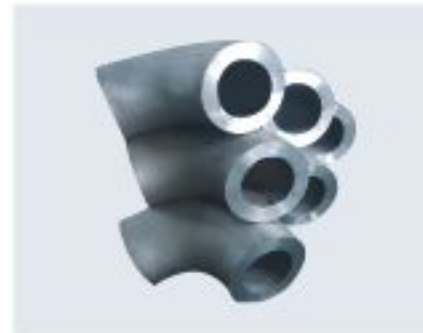
HYDRO TESTED FITTINGS



THERMOWELLS



CLADDED FLANGE



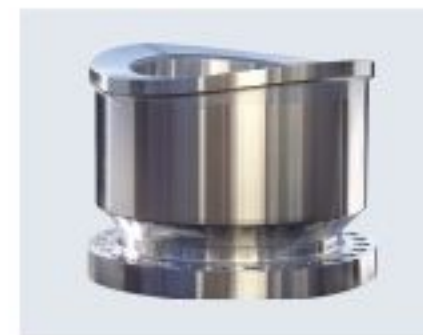
10" x 50 MM THK Elbow 90 DEG



WELDNECK WITH SMALL NOZZLE



**REINFORCED HEAVY
BARREL FLANGE**



REINFORCED NOZZEL FLANGES



Fittings | Flanges | Pipe Spools



METAL FORGE INDIA

3rd Floor, Kartar Mansion Tribhuvan Road, Off Lamington Rd, Mumbai – 400004, INDIA

Tel : +91 22 61448000 • Direct : +91 22 61448011 • Mobile : +91 98675 46511

E-mail : info@metalforgeindia.com / mfi@metalforgeindia.in

Italy Office : S.R.L. Via Gondar, 51 20900 Monza (M B) Italy • E-mail : italy@metalforgeindia.com

www.metalforgeindia.com

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