ISO 9001:2008
www.tuv.com ID 9105069984

OHSAS 18001:2007 CERTIFIED
ISO 9001:2008 CERTIFIED
ISO 14001:2004 CERTIFIED
PED CERT NO 01 202 IND/Q-11-0033
GOVT. RECOGNIZED EXPORT HOUSE

Reliable Steel Distributors

AN ISO 9001:2008 CERTIFIED COMPANY

MANUFACTURER, EXPORTER & STOCKIST OF :

Stainless Steel, Carbon Steel, Nickel Alloys, Duplex, Super Duplex
& other Non-Ferrous Metals in the form of
Pipes, Tubes, Fittings, Flanges, Sheet, Plates, Coils, Rods, Angles etc.

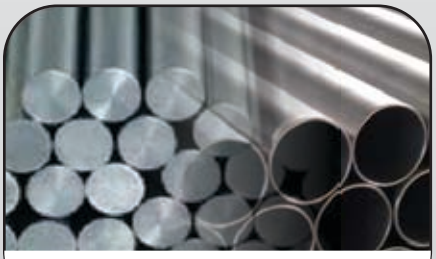
API 5L PIPES

4130 PIPES & FITTINGS

C. S. PIPES & TUBES

S. S. PIPES & TUBES

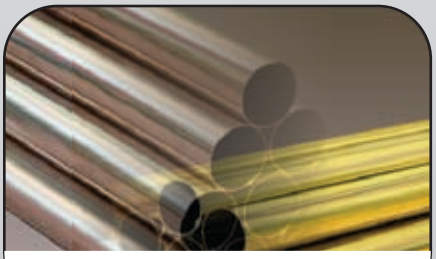
FITTINGS & FLANGES (All Grades)



TITANIUM

SPECIAL STEEL

HIGH NICKEL ALLOY



ALUMINIUM / ALU. BRASS / COPPER NICKEL

SQUARE & HOLLOW SECTION
ELECTROPOLISHED PIPES & TUBES

PERFORATED SHEET & COLOR COATED SHEET

FASTENERS

RELIABLE STEEL DISTRIBUTORS
29-B, Nakoda Bhuvan, Sindhi Lane, Mumbai - 400 004. Maharashtra, India.
Phone :+91-22-23871561 | 23829424 | 42132900 (100 Lines) | Fax : +91 22 23859458

Email : sales@reliablesteel.in
Web : www.reliablesteel.in

ORIGIN

EUROPE

JAPAN

USA

SOUTH AFRICA

KOREA

INDIA

GERMANY

CHINA

TAIWAN

TURKEY

UKRAINE

contents

THIRD PARTY INSPECECTION BY

LRIS, ABS, DNV, TUV, VELOSI, SGS, BV, GL etc. can be done.

Profile

Reliable Steel Distributors
AN ISO 9001:2000 CERTIFIED COMPANY

The Company - Reliable Steel Distributors

We are a professionally managed company and a leading manufacturer, exporter & stockist of Ferrous & Non-ferrous metal products to various core industries & projects.

Our spectrum of products & services include Stainless Steel, Carbon Steel & Alloys Steel.

Our specialization is in Duplex, Super Duplex and other Non-Ferrous Metal in the form of pipes, tubes, fittings, flanges, sheets, plates, coils, rods, strips, angles, instrumentation fittings etc.

As the name suggests our prime focus is to create " The Reliability" in the minds of our customers. Our mission is to provide the best customer service by supplying materials with the most updated technology, respecting the agreed delivery date, monitoring at every stage of sourcing & supply chain management and in order to present to customers a reference for reliability, competence and service.

No wonder we are a regular supplier to many core sector industries for the past 40 years. **(We will be highly obliged if you could enlist our name in your approved vendor list. Also send us your enquiries for your requirements so that we can submit our most competitive rates and a guarantee of reliability).**

Reliable QA Stamp of Quality

Mission

To excel in our chosen field of business and thereby realize on a long term basis a satisfactory return on investment for management, highest quality products and services for the clients and best in the industry remuneration and a stable future to the employees.

API 5L PIPES

Products : Pipes

Type :

SEAMLESS, LSAW/DSAW, HSAW, ERW / HFW

Grades :

(A) : API 5L GR B PSL1/PSL2, X42, X46, X52, X56, X60, X65, X70, X80, X100, PSL 1, PSL 2,

(B) : L245, L290, L320, L360, L415, L450, L485, L555

Sizes : (DRL/SRL)

LSAW/DSAW	- 16" OD TO 54" OD (8MM TO 50 MM THK)
HSAW	- 8" NB TO 100" NB (5MM TO 25MM THK)
SEAMLESS	- 1/2" NB TO 42" NB (SCH 40 TO SCH XXS & HEAVY THK)
ERW/HFW	- 1/2" NB TO 30" NB (3.2 MM TO 16MM THK)

Supplementary Requirement :

NACE MR0175, MR0103 / ISO 3183 / NACE TM0284
HIC & SSC TESTED PIPES
SOUR SERVICES, OFF SHORE SERVICES
WITH LOW SULPHUR <0.002%
IMPACT TEST AT -50°C
3 LAYER POLYETHYLENE COATING
3 LAYER POLYPROPYLENE COATING
EPOXY COATING

Delivery Condition

AS ROLLED
NORMALIZED
THERMOMECHANICAL ROLLED / FORMED,
NORMALIZED & TEMPERED,
QUENCHED & TEMPERED

Certificate :

EN 10204 3.1 & EN 10204 3.2

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4130 PIPES & FITTINGS

Description :

This low alloy steel containing nominally 0.3% carbon, 1% chromium and 0.2% molybdenum is used widely in oil patch applications. It is similar to 4140 which has a higher carbon level giving 4130 improved weldability in comparison to 4140, though this is achieved at the expense of through thickness strength. The hardenability limitations of this grade (depth to which it will harden / obtain the specified mechanical properties after heat treatment) must always be taken into account when designing and selecting equipment.

Products :

Pipes, Fittings & Tubes - SEAMLESS

Grades :

LOW ALLOY STEEL, ASTM A 519 GR. 4130 / 4140
API 5CT L80 (MECHANICAL PROPERTIES) &
AS PER AISI 4130 / 4140 (CHEMICAL PROPERTIES)

Sizes :

PIPES - 2"NB TO 12" NB & ANY SPECIAL ODD SIZES
THICKNESS - SCH 40 TO SCH XXS ALSO HIGH THK
FITTINGS - ELBOW - 90 DEG, 45 DEG, 180 DEG, TEES, REDUCERS

Supplementary Requirement :

NACE MR0175 / MR0103 ISO 3183 / NACE TM0284
YS - MIN 85,000, UTS - 1,10,000 WITHSTANDING 15,000 PRESSURE.

Delivery Condition :

ANNEALED
NORMALIZED
STRESS RELIEVED
QUENCHED & TEMPERED

Certificate :

EN 10204 3.1 & EN 10204 3.2

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CARBON / ALLOY STEEL PIPES & TUBES

Products : Pipes, & Tubes

Type :

SEAMLESS , ERW, HFW, EFSW

Standard & Grades :

Standard : ASTM A 106, ASTM A 53, ASTM A252, ASTM A333, ASTM A 671, ASTM A 672, ASTM A 139, ASTM A335, ASTM / ASME A/SA 213

Grade : GR A / GR B / GR C, GR 3, GR 6, GR CC60 / CC65 / CC70 CLASS 10 TO CLASS 73, GR C60 / C70 CLASS 10 TO CLASS 53 / P1, P5, P9, P11, P22, P91, T9, T11,T12, T22, T91, Grade 1, Grade 2, Grade 3

Standard : DIN 1626 / 1629 / 17175 / 17179 / 17204 / 2391 / 2393 / 2394 / 17120 / 17172

Grade : St 33, St 34.2,St 35, St 35.8, St 37.0, St 37.2, St 37.4, St 44, St 44.2, St 44-3N, St 44.0, St 45.8, St 52.0, St 52.3, St 52-3N, 15 Mo 3, 13 Cr Mo 4.4, 10 Cr Mo 9.10, St 52.4, StE 290-7, StE 360-7, StE 415-7.

Standard : En 10207-1 / 10210-1 / 10216-1/2/3 / 10297-1 (Seamless), 10305-1/2/3 / 10210 (Seamless Round Pipe), 10208-1 (Class A), 10208-2 (Class B).

Grade : P 195 / 235 / 265 - TR 1/2, P 195 / 235 / 265 - GH, 16 Mo 3, 13 Cr Mo 4 5, 10 Cr Mo 9.10, P 275 - NL-1/2, P 355 - N/NH, E 155 / 195 / 215 / 220 / 235 / 260 / 275 / 320 / 355, S 235 JRH, S 275 / 355 - J2H, L 235 / 245 / 290 / 360 - GA, L245 / 290 / 360 / 415 - NB

Sizes :

SEAMLESS	- 1/4”NB TO 28” NB
THICKNESS	- SCH 40 TO SCH XXS & HIGHER
ERW/HFW	- 1/2” NB TO 30” NB
HSAW	- 8” NB TO 100”NB
EFSW	-16”NB TO 54”NB (8MM TO 50MM THK)

Supplementary Requirement :

NACE MR0175, MR0103 / ISO: 3183, NACE TM 0284, SOUR SERVICE,

HIC, SSC TESTED, IMPACT TEST AT -50°C,

3 LAYER POLYETHYLENE COATING,

3 LAYER POLYPROPYLENE COATING,

RADIOGRAPHY (X RAY), BEAD CRUSH

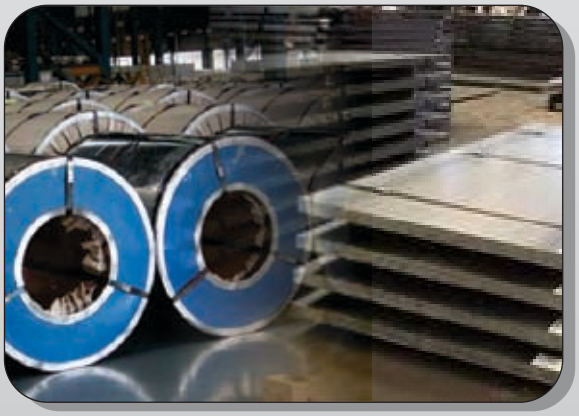
Delivery Condition :

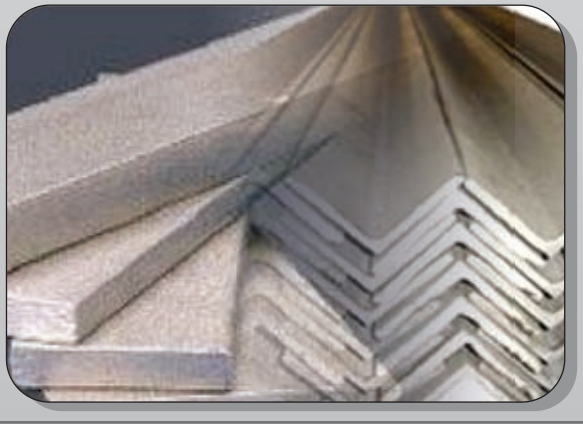
AS ROLLED / ANNEALED / NORMALIZED

STRESS RELIEVED / QUENCHED & TEMPERED.

Certificate :

STAINLESS STEEL





Products : Pipes, Tubes (SEAMLESS ,WELDED, ERW / EFW, EFSW)**, Plates, Sheets, Flats, Angles, Coil.**

Standard & Grades :

Standard : ASTM A312 / ASTM A 213 A 213M/ ASTM A249 / ASTM A358 (CLASS 1 TO CLASS 5) / ASTM A270 / ASTM A268 / ASTM A269 / ASTM A450 / ASTM 554 / ASTM A791 / ASTM A 789 / ASTM A 409

Grades : TP 304, 304L, 304H, 309S, 310S, 310H, 316, 316L, 316H, 316Ti, 317L, 321, 321H, 347.

17-4PH

(Related Specification EN/DIN1.4542 X5CrNiCuNb16.4 AFNOR Z6CNU17-O4, ASTM-A564 Grade 630 UNS S17400 JIS SUS630, AMS 5643 5604 EN10088-3)

Sizes :

SEAMLESS	- 1/8" TO 16" SCHEDULES 10S, 20S, 40S EXTRA HEAVY (XS) 80, 100, 120, 140, 160, XXS
ERW	-2" TO 24" SCHEDULE - 10S, 20S, 40S, 80S
EFSW	- 10" TO 60" (6MM TO 50MM THK)

Supplementary Requirement :

NACE MR0175 / NACE TM0284
IMPACT TEST AT -100°C
RADIOGRAPHY (X-RAY)
GRAIN SIZE : 7 OR COARSER (FOR HIGH CARBON)
INTERGRANULAR CORRISON TEST WITH PRACTICE A, B, C, D & E. TEST EXAMPLE

ASTM A262	- method A, B,C,D and E
ASTM G28	- method A
ASTM A923	- method C
ASTM G48	- method A and B

Delivery Condition :

SOLUTION ANNEALED

Certificate :

EN 10204 3.1 & EN 10204 3.2

FITTINGS

Products :

ELBOW, REDUCER, TEE, NIPPLE, HEX, COUPLINGS, FASTENERS, PLUG, CAP, OLETS, WELDOLETS, UNION, VALVE, BEND, 3D INDUCTION BEND.

Standard & Grades :

STAINLESS STEEL : - Acc ANSI B16.5

ASTM / ASME A/SA 403: WP304, WP304L, WP304H, WP304N, WP304LN, 316, 316L, 316H, 316LN, 316N, 317, 317L, 321, 321H, 347, 347H, WPS31254

ASTM/ASME A/SA 182 F304, F304L, F304H, F310S, F316L, F316H, F321, F321H, F347, F347H, F348.

ASTM A182 F1, F11, F12, F22, F5, F9, F91, F92.

CARBON STEEL & ALLOY STEEL : ANSI B16.5/9

ASTM / ASME A234: WPB, WPC, WP1, WP11, WP12, WP5, WP22, WP9, WP91.

ASTM/ASME A/SA 350 LF1, LF2

FERRITIC / AUSTENITIC STAINLESS STEEL : DUPLEX 2205, SAF2205, UNS S31803, DIN 1.4462 EN 10088 F51

Duplex SAF2205 SANMAC, URANUS 45N, DIN 1.4462

Duplex ASTM A182 Gr F60 / ASME SA182 Gr F60

Duplex-2205 UNS S31803 / UNS S32205 DIN 1.4462 EN 10088-3

Super Duplex SAF 2507 UNS S32750 DIN 1.4410 EN-10088 Uranus 47N(+) Pren=41 Min.

Super Duplex /UNS S32760 F-55 ASTM A 182 F55 DIN 1.4501 UNS 32760 F55

NICKEL / COPPER / TITANIUM : Nickel 200 (UNS NO2200), 201 (UNS NO 2201), Monel 400 (UNS NO 4400) 500 (UNS NO 5500) Inconel 800 (UNS NO8800), 825 (UNS NO 8825), 600 (UNS NO6600), 625 (UNS NO6625), 601 (UNS NO6601), Hastelloy C276 (UNS N10276), Alloy 20 (UNS N08020), Titanium Grade I & II.

Sizes :

STANLESS STEEL : SEAMLESS : 1/2 " NB - 16"NB,
WELDED : 1/2" NB - 32"NB

CARBON STEEL & ALLOY STEEL : SEAMLESS : 2"NB-24"NB, WELDED : 2"NB-48"NB

HIGH NICKEL ALLOY / SPECIAL STEEL

TITANIUM : SEAMLESS 1/2" NB - 10" NB,
WELDED : 11/2" TO 32" NB

Supplementary Requirement : NACE MR0175

Certificate : EN 10204 3.1 & EN 10204 3.2

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FLANGES

Products : FLANGES

Weldneck, Slip-On, Threaded, Blind, Socketweld, Lap-Joint, Orifice, Reducing Flange and Specials, Long Weld Neck Flange, Boss

Types : Forged & Plate

Types of Flange Faces: Raised Face, Flat Face, Ring Joint, Tongue & Groove, Male and Female.

Stainless Steel:

Standard : ASTM, A182, A240

Grade : F304, 304L, 304H, 309S, 309H, 310S, 310H, 316, 316Ti, 316H, 316L, 316N, 317, 317L, 321, 321H, 347, 347H, 904L, 201, 202

Carbon Steel:

Standard : ASTM, A105

Grade : ASTM A105 / A105N / A694F42 / 46 / 52 / 56 / 60 / 65 / 70 / A350 LF3 / A350 LF2

A234WPB, WP11/12, A333-3, A420WPL6, WPHY F52-60-65 (MSS-SP-75)

Alloy / Copper Alloy Steel:

Standard : ASTM / ASME A/SA 182, ASTM / ASME SB 61 / 62 / 151 / 152

Grade : F1, F5, F9, F11, F22, F91, UNS NO. C 92200, UNS NO C B3600, 70600, 71500, C 70600 (CU-NI-90/10), C 71500 (CU-NI-70/30), UNS NO C 10100, C 10200, C 10300, C 10800, C 12000, C 12200

Nickel Alloy Steel:

Standard : ASTM, SB564, SB160, SB472, SB162

Grade : Nickel 200 (UNS No. N02200), Nickel 201 (UNS No. N02201), Monel 400 (UNS No. N04400), Monel 500 (UNS No. N05500), Inconel 800 (UNS No. N08800), Inconel 825 (UNS No. N08825), Inconel 600 (UNS No. N06600), Inconel 625 (UNS No. N06625), Inconel 601 (UNS No. N06601), Hastelloy C 276 (UNS No. N10276), Alloy 20 (UNS No. N08020).

Low Temperature Carbon Steel:

Standard : ASTM, A350

Grade : LF2, LF3

Duplex & Super Duplex Steel:

Standard : ASTM, A182, A240

Grade : UNS F 44, F45, F51, F53, F55, F60, F61

Titanium

Standard: ASTM A213, ASTM A269, ASTM A249

Grade: 2, 3, 5 and 12

Sizes :

1/2"NB to 72" NB

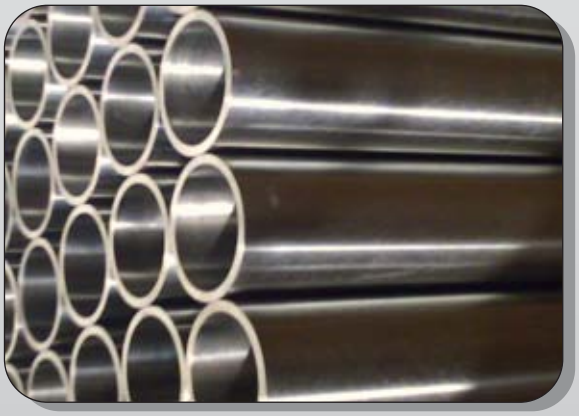
CLASS : 150 #, 300#, 400#, 600#, 900#, 1500#, 2500#

Supplementary Requirement : NACE MR0175 / MK0103 / TM028 ISO / HIC / SSC TESTED

Certificate : EN 10204 3.1 & EN 10204 3.2

Email : sales@reliablesteel.in | **Web : www.reliablesteel.in | www.reliablesteels.in**

TITANIUM



Products :

Pipes, Tubes, Fittings, Elbows, Flanges, Tee Pipes, Cross Pipes, Concentric and Eccentric Reducers, Caps, Stub Ends, Weldolets, Nipples, Forging, Bar, Billet, Plate, Sheet.

Material :

Titanium Gr1 (3.7025), Gr2 (3.7035), Gr 5 (3.7165), Gr7(3.7235), Gr12 (3.7105), Nickel UNS N02200 (2.4066), Zirconium 702 (R60702), 704 (R60704), Tantalum (R05200)

Standard & Grade :

Pipes & Tubes :

ASTM B337, ASME SB337, ASME SB338, ASTM B338, ASTM B861

Gr1, Gr3, Gr3, Gr9, Gr11, Gr12, Gr16, Gr17

For Cold Rolled :

OD 10mm - 114mm

Wall Thickness : 0.5 mm - 5.5 mm

OD over 15 mm 12.000 thk Max.

For Finish Cold Rolled & Annealed :

OD 25mm - 210mm

Wall Thickness : 4 mm - 30 mm

Length : 1000 - 10000 mm

Plate & Sheet

C.P.Ti., Ti-6Al-4V, Ti-6Al-4V ELL, Ti-3Al-2.5V, Ti-0.2Pd, Ti-0.3Mo-0.8Ni according to ASTM, AMS, ASME, MLL, DMS, JIS.

Size :

Thickness	Width	Length
0.6-<0.8	600max, Ti-6Al-4V	2000max
	800max, C.P.Ti	
0.8-<5.0	1000 max	3048 max
5.0-<8.0	2000 max	4000 max
8.0-<50.0	2500 max	5000 max Ti-6Al-4V
		7000 max

Billets & Bars :

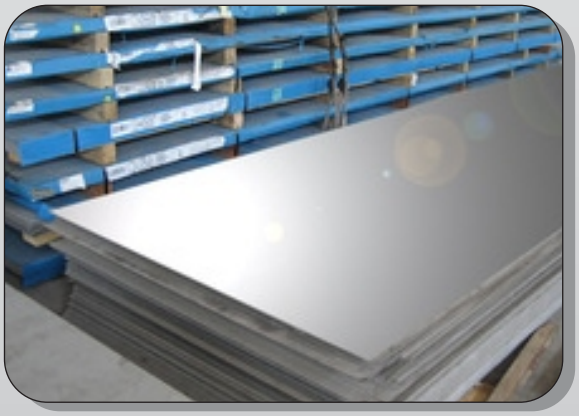
C.P. Ti, Ti-6Al-4V ELL, Ti-5AL-2.5Sn, Ti-3Al2.5V, Ti-15333, Ti-38644, Ti6Al-7Nb, Ti-662, Ti-6242, Ti-1023, Ti-4322, Ti-0.2Pd according to ASTM, ASME, AMS, MLL.

Size : 8mm - 300 mm

Finish : As forged/sand blasted/pickled/machined.

Certificate : EN 10204 3.1 & EN 10204 3.2

SPECIAL STEEL



Products :
Pipes, Tubes, Sheets, Bar, Plate.

Standard :
UNS S31803 (ASTM A 182 / A 790 / A 815 / A 928),
UNS S32750 (ASTM A 182 / 790 / A815 / A 928)
UNS S 32760 (ASTM A 182 / 790 / A815 / A 928)
SMO 254, 17-4 PH, 6MO, UNS S32550, ASTM A 240 / 312 / 358 / 403

Grades :
Gr F51, Gr F53, Gr F55, Material No. 1.4410/1.4501 /1.4565

ALL GRADES CAN BE SUPPLIED AS BAR, PLATE, SHEET OR CUT FROM BLOCK. NON STANDARD SIZES CAN BE PRODUCED AS STEEL FORGINGS.

Sizes :
Pipes & Tubes :
1/2" NB to 24" NB
3 mm to 20 mm

Plate & Sheet : 1mm to 24 mm
Width : 1000 / 1250 / 1500 x 6000

Bar : 5 mm to 100mm

Supplementary Requirement :
NACE MR0175

Certificate : EN 10204 3.1 & EN 10204 3.2

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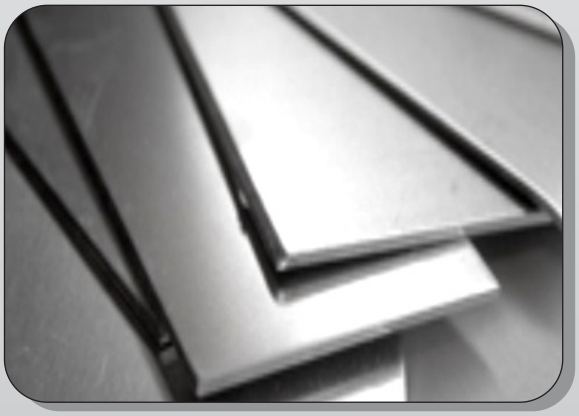
HIGH NICKEL ALLOY



Products :

Pipes, Tubes, Forging, Bar, Plate.

Material

Alloy 200 / 201 / 400, Alloy K-500, Alloy 600, Alloy 601, Alloy 625, Alloy 718, Alloy 800, Alloy 800H, Alloy 800HT, Alloy 825, Alloy C-276, Alloy C-4, Alloy C-22, Alloy B-2, Alloy 20, Alloy 904L

Trademark

Nickel 200 / 201, Monel 400, Monel K-500, Inconel 601 / 625 / 718, Incoloy 800 / 800H / 800HT / 825, Hastelloy C-276 / C-4 /C-22 / B-2, Uranus B-6

UNS :

NO2200, N02201, N04400, N05500, N06600, N06601, N06625, N07718, NO8800, N08810, N08811, N08825, N010276, N06455, N06022, N10665, N08020, N08904

Standard :

Pipe : SMLS / Welded

B161 / B725 / B167 / 517 B444/B705, B407 / B514 / B423 / B622 / B619 / B729 / B464 / B677 / B673

Tube : SMLS / Welded

B163 / B730 / B444 / B704 / B516 / B515 / B622 / B626 / B729 / B468 / B677 / B674

Bar :

B160 / B164 / B865 / B166 / B446 / B637 / B408 / B425 / B574 / B335 / B473 / B649

Plate :

B162 / B127 / B168 / B443 / B670 / B409 / B424 / B575 / B333 / B463 / B625

Forging

B564 / B865 / B637 / B462 / B459

Size :

Seamless : 1/2" - 12" Sch 10 - Sch 160
Welded : 4" - 24" (3mm to 20mm)
Round: - 3 mm - 100 mm
Sheet : 0.5 mm - 50mm
Width : 1000/1250 / 1500 x 6000 mm

Supplementary Requirement :

NACE MR0175

Certificate : EN 10204 3.1 & EN 10204 3.2

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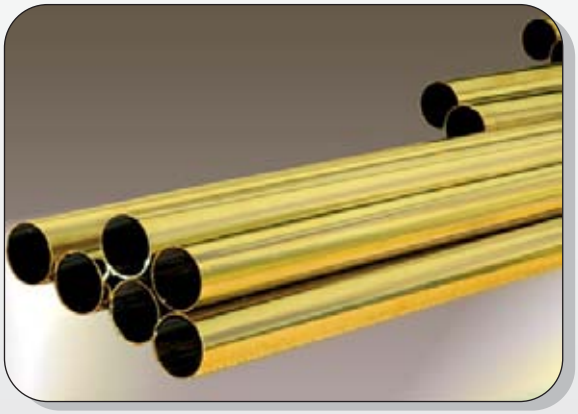
ALUMINUM / ALUMINUM BRASS / COPPER NICKEL TUBES



ALUMINUM

Standard & Grade : Aluminum & Plate
6061, 7050, 7075, 2024, 2219, UNS A96061, ASTM-B-316, MIL-A-46118, MIL-A-46808, MIL-A-8920, ASTM-B-209, ASTM-B-221

Temper : 6061-0, T4, T6, T451, T651 / 7050-0, T451, T7651, 7075-0, T6, T73, T76, T651, T7351, T7651 / 2024-0, T3, T81, T851 / 2219-0, T31, T81, T37, T87, T351, T851.
Bare : QQ-A-250/11, AMS 4025, AMS 4026, AMS 4027, ASTM-B-209, AMS 4050, AMS4201, DMS-2233, BMS 7-323, QQ-A-250/12, QQ-A-250/24, AMS 4044, AMS 4055, AMS 4078, QQ-A-250/4, AMS 4035, AMS 4037, FMS 10101, QQ-A-250/30, AMS 4031
Clad : QQ-A-250/13, QQ-250/25, AMS 4088, AMS 4049, BMS 7-302, QQ-A-250/5, AMS 4040, AMS 4041, BMS 7-305, AMS 4094, AMS 4095, AMS 4096, DMS-1719, BMS-7-110.

Dimensional Range
Tube : 6 mm to 304.8 mm
Thk : 0.036" - 1.5"
Sheet : 0.1 mm to 50 mm
Plate : 1000 / 1200 / 1500 & Coil - 6000

ALUMINUM BRASS TUBE

Standard Grade for Aluminum Brass - C68700/ Admirality Brass Tube - C44300 / Arsenical Brass Tube - C26130
T8890 / ASTM B111 / JIS H3300 EN 12451

Dimensional Range
Out Diameter : 5.0 mm - 350 mm
Wall thickness : 0.5 mm - 50 mm

COPPER NICKEL TUBES

Standard Grade for Copper Nickel 90/10 & Copper Nickel 70/30
BS2871 / ASTM B-11 / IS 1545 / JIS H 3300 / NFA 51 102

Dimensional Range
Out Diameter : 5.0 mm - 350 mm
Wall thickness : 0.5 mm - 50 mm

SQUARE & HOLLOW SECTION

PRODUCTS : Hollow Section

MATERIAL : SS & CS

TYPES : SQUARE & RECTANGULAR

Grade:
204Cu, 304, 304L, 316, 316L, 316Ti, 321, 409, 430, 2101, S235 JRH, S275 JOH, J2H, NH, NLH, MH, MLH, S355 JOH, J2H, NH, NLH, MH, MLH, G1+N, G13+N/+Q, S460 MH, MLH, NH, NLH, A554
Steel Grade Available : YST 210 / 240 / 310

Size :
Square : Imperial Sizes are also available from 1" x 1" to 20" x 20"
Thickness is available from 0.047" to 1"
Specific dimension and thickness is also available
Length : 12000mm

Rectangular : Imperial Sizes are also available from 1.5" x 1" to 100" x 20"
Thickness is available from 0.047" to 1"

Delivery Condition
NORMALIZED
ANNEALED,
QUENCHED & TEMPERED

Finish
Finish (S.S), Bright,
Mirror Grade 180, 360, 610
Matt - 2B, 2D
Bead Crush

ELECTROPOLISHED Tubes/Pipes/Fittings

PRODUCTS :
Stainless steel pipes, fittings, flanges, fasteners, strips, plates and other products. Seamless & welded pipes as per the requirements of varied industries.

Standard
ASTM A 182 F304 / ASTM A213 & A240

Grade
TP 304, 304H, 309, 310, 316, 316L, 317L, 321, 347, 904L

Elbow
Size : 1/2" NB - 4"NB
Class : 3000 LBS, 6000 LBS, 9000 LBS
Type : Socket Weld & Screwed - NPT, BSP, BSPT
Form : 45°, 90°

Tee
Size : 1/2" NB - 8"NB
Thk : 2 mm - 25 mm
Class : 3000 LBS, 6000 LBS, 9000 LBS
Type : Socket Weld & Screwed - NPT, BSP, BSPT
Form : Reducing, Unequal, Equal

Tubes
Size : 1/2" NB - 4"NB
Class : 3000 LBS, 6000 LBS, 9000 LBS
Type : Electro Polish Tube, Capillary Tube, Precision Tube

Other types of Abnormality pipe is customized

Surface: Grit polish (180 / 360), bright etc.

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STUDDED PIPE

Product :

Materials: Carbon Steel, Stainless Steel, Duplex & Super Duplex Steel, Alloy Steels (P5,P9,P11, P22), Inconel, High Chrome High Nickle & Incolloy Etc. (any Ferrous Material)

Pipe Diameter: Min 2” Nb To Max 8” Nb Pipe

Stud Details

Stud Height: Min 0.5” (12.7 Mm) To Max – 2.5” (63.5MM)

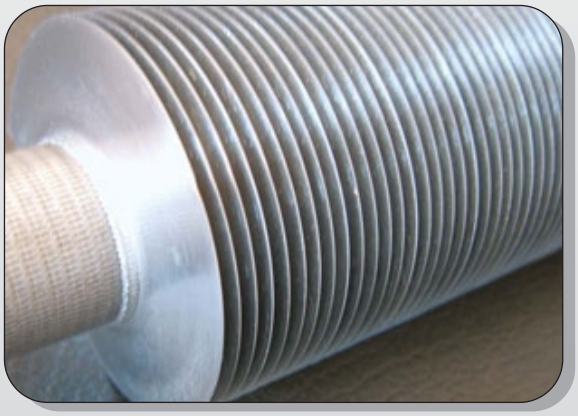
Stud Diameter: Standard Size Is Circular For Extended Portion 0.5” (12.7MM) (can Be Changed As Per Customer Requirement)

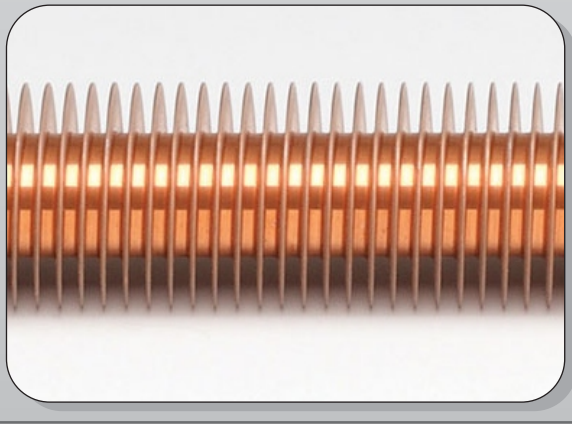
Stud Spacing: 0.625” (15.875 Mm) Or 63 Studs Per Plane Per Meter (can Be Changed As Per Customer Requirement)

Stud Materials: Carbon Steel, Stainless Steel And Alloy Steel (Any Ferrous Material)

Certificate : EN 10204 3.1 & EN 10204 3.2

FIN TUBES





Material : Carbon & Carbon Alloy, Stainless & Duplex Alloy, Copper & Copper Alloy, Titanium & Titanium Alloy, Nickel Alloy.

LOW FIN TUBE
Bare Tube Diameter : 12.7 mm - 38.1 mm
Pitch : 19 ~ 36 FPI
Fin Height : 0.7mm ~ 1.588mm
Length : 20,000mm (Max)

Standard : ASTM A496 / ASTM A1012 / ASTM B359 / ASME SB359 / ASTM B891 / ASTM B924

HIGH FIN TUBES
ALUMINUM FIN
Bare Tube Diameter : 15.88mm~50.8 mm
Fin Pitch : 7 ~ 12 FPI
Fin Height : 6.35mm ~25.4mm
Fin Thickness : 0.3mm~0.75mm
Fin Material : Aluminum or Copper

COPPER & COPPER ALLOY HIGH FIN
Bare Tube Diameter : 19mm ~ 25mm
Pitch : 5~9 FPI
Fin Height : 7mm ~11mm
Length : 10,000 mm (Max.)

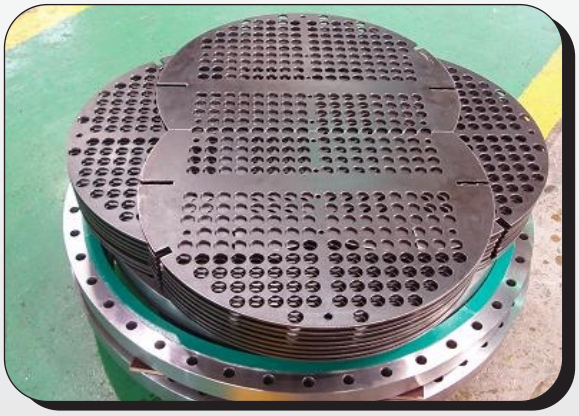
HIGH FREQUENCY FIN TUBE
Tube Outside Diameter : 3/8 inch ~ 8 inch
Fin Thickness : 0.8mm ~3.2mm
Fin Height : 9mm ~ 38mm
Fin Pitch : 60FPM ~ 315FPM
Finning LEngth : 24,000mm (Max.)

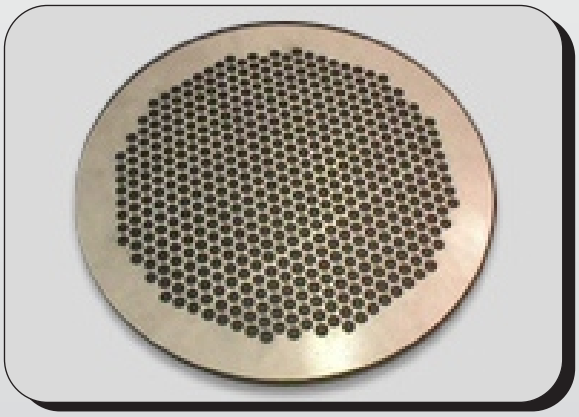
TYPES OF FIN TUBES :

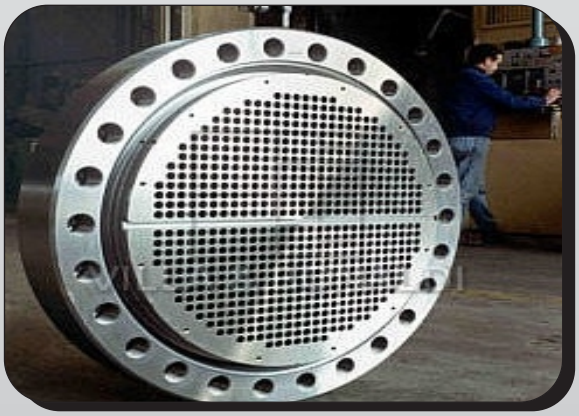
Type L	: Temperature 130°C (270°F)
Type KL	: Temperature 250°C (480°F)
Type LL (double L)	: Temperature 165°C (330°F)
Type G (Embedded)	: Temperature 400°C (750°F)
Type Extruded	: Temperature 310°C (590°F)
Type Low Fin	: Temperature depends on the base tube material

Certificate : EN 10204 3.1 & EN 10204 3.2

BAFFLE PLATE / TUBE SHEET







BAFFLE PLATE :

Baffles serve three functions: 1) support the tube; 2) maintain the tube spacing; and 3) direct the flow of fluid in the desired pattern through the shell side.

A segment, called the baffle cut, is cut away to permit the fluid to flow parallel to the tube axis as it flows from one baffle space to another. Segmental cuts with the height of the segment approximately 25 percent of the shell diameter are normally the optimum. Baffle cuts larger or smaller than the optimum typically result in poorly distributed shell side flow with large eddies, dead zones behind the baffles and pressure drops higher than expected.

The spacing between segmental baffles is called the baffle pitch. The baffle pitch and the baffle cut determine the cross flow velocity and hence the rate of heat transfer and the pressure drop. The baffle pitch and baffle cut are selected during the heat exchanger design to yield the highest fluid velocity and heat transfer rate while respecting the allowable pressure drop.

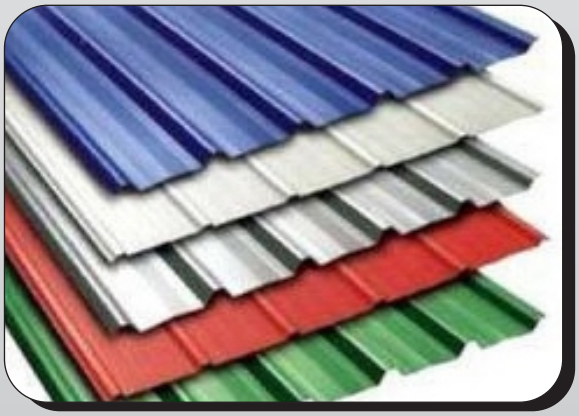
Other types of baffles are sometimes used such as: double segmental, triple segmental, helical baffle, EM baffle and ROD baffle. Most of these types of baffles are designed to provide fluid flow paths other than cross flow. These baffle types are typically used for unusual design conditions. Longitudinal baffles are sometimes provided to divide the shell creating multiple passes on the shell side. This type of heat exchangers is sometimes useful in heat recovery applications when several shell side passes allow to achieve a severe temperature cross.

TUBE SHEET

Tube-sheets in Carbon Steel, Stainless steels or alloy steels, non ferrous alloy: cladded or Integral. Both the cladding (weld overlay) and the Machining are made in our shops. The maximum working diameter is 1500 mm. GBM makes tube-sheets with standard machining with or without grooves in holes or special preparation, beveling or facing. Fascia a Sinistra Inserire le Foto di Macro di saldature tubo-piastra accoppiandole al relativo sketch (non è necessaria la legenda) Legenda: “Macro on Tube to tube-sheet weld”

Tubesheets are plates or forgings drilled to provide holes through which tubes are inserted. Tubes are appropriately secured to the tubesheet so that the fluid on the shell side is prevented from mixing with the fluid on the tube side. Holes are drilled in the tubesheet normally in either of two patterns, triangular or square.

PERFORATED SHEETS / COLOR COATED SHEETS



PERFORATED SHEETS

Products : Sheet, Panels, Metal Screen, Plate, Mesh, Louvers Ducting, Chequer Plates, Architectural Mesh, Security Screen, Filter Tube, Stainless Steel Sheet, Copper Perforated Mesh, Aluminum Sheet, Steel Sheet .

Perforated metal products from stainless steel, galvanized steel and cold-rolled carbon steel. Perforated sheets can be produced from sheets providing options that include margins and blank areas, along with full perforation. A common way to produce perforated sheets is using coils. This method provides great flexibility in both design and handling. Perforated coils can be produced from coils, as well, which is generally faster than perforating sheets.

Standard Size 1000 x2000 mm,

Thicknesses from 0,3 mm up to 10 mm

Perforation from 0,3 mm up to 100 mm.

Perforation range: round, square and rectangular holes.

Usually holes diameter can not be lower than thickness. Usually the round holes layout is at 60°. Squared and rectangular holes, instead, are aligned.

COLOR COATED SHEETS

Base Metal	Coil Rolled. Galvanized, galvanized aluminum stainless and Aluminium
Thickness	0.15 to 1.25mm *
Width	600 to 1250mm
Coil ID	508 and 610 mm
Coil OD	1650 mm max
Coil weight	10mt max
Hardness (HRB)	35 - 99
UTS (MPA)	240 - 550
PAINT Systems	Primers: Epoxy , polyester & poly urethane
Top coat :	regular modified polyester (RMP) Silicon modified , polyester (SMP), super durable polyester (SDP), poly vinyldene fluoride (PVDF), Polyurethane , acrylics ,plastisol, Metallics ,
Back coat :	epoxy polyester
Colors	As per RAL shades / customer requirements
Guard film	40 micron +/- 5 microns (optional)
Cut to length	500 mm - 4000mm
Slits coils	28mm and above
Standards	JIS G 3312, ASTM, A 755, EN 10169-1, IS 14246 & AS 2728

Note: 0.15 - 0.20 mm to be processed only Full Hard.
Above 1.25 mm can be processed in specific grades/width combination which needs to be discussed and mutually agreed.

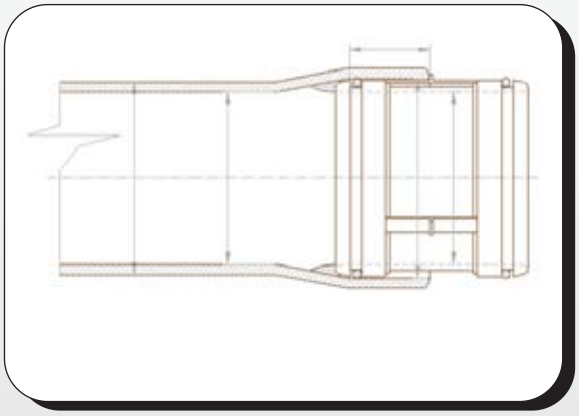
Colour Coated Profile Sheets

Thk (mm)	Width (mm)	Cover Width After Profile (mm)	Length (mm)	Pkt. Weight (MT)
0.40 - 1.00	1220	1000 & 1060	10,000 Max	5 Max

Colour Coated Plain Sheets

Thk (mm)	Width (mm)	Cover Width After Profile (mm)	Length (mm)	Pkt. Weight (MT)
0.15-1.25	1250 max	N.A.	4,000 Max	5 Max

PIPE SLEEVE - THROUGH COAT



Pipe sleeve and fitting systems allow for continuous coating throughout a pipeline by isolating the internal coating from the welding process.

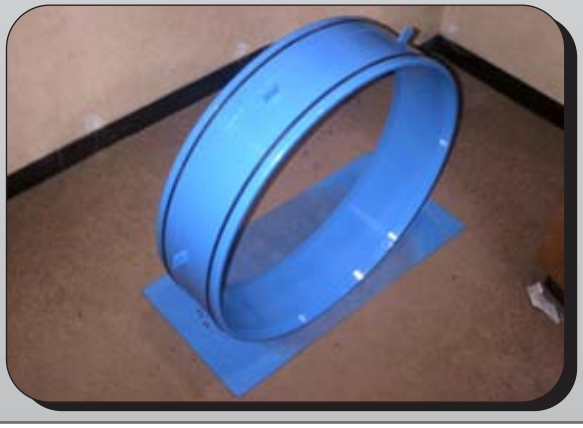
These products can be used in both onshore and offshore applications and constructed to accommodate any size, grade or configuration of piping system. The sleeves and fittings are compatible with liquid or powder coatings, which are chosen based on operating environment specifics.

Problem Solvers

During the welding process, heat generated within the pipe will burn back the internal plastic coating approximately 1-2 inches from the welding seam. This sleeves and fittings are designed to isolate the burn-back of the coating and protect the steel substrate.

Other benefits include:
Backing ring and heat tape to reduce excessive temperatures
Holiday-free connection area
X-ray compatible with API and ASME
Fast and flexible method of field construction

Configurations
Sleeve is an unbelled connection system designed to protect internal coatings during welding.
It is a belled connection system allowing for a non-restricted I.D
The insert fittings are fabricated for multiple configurations that help in modifications or repairs: tie-ins, terminations, flanges and elbows.



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FASTENERS

BOLTS

Material Grade	A2-70, A4-70, A2-80, A4-80
Size Range	M4 to M16
Length	M4 – M5 (up to 70mm) M6 – M16 (Up to 160mm)

SCREWS & RIVETS

Material Grade	A2-70, A4-70
Size Range	M3 to M10 (#4 to #14)
Length	M5 (up to 50mm) M6 – M10 (up to 80mm)
Thread Type	Fine Thread (AB Type), Coarse Thread (A Type)
Drive	Phillip, Pozzi, Slotted, Torx
End Point	Cone Point “C”, Flat Point “F”

NUTS

Material Grade	A2-70, A4-70, A2-80, A4-80
Size Range	M4 to M12

THREADED RODS

Material Grade	A2, A4, A2-80, A4-80, 304, 316 B8 (class 1 & 2), B8M (class 1 & 2)
Size Range	From M3 to M24, 1/4" to 1"
Length	1mts., 3 mts., 6 mts., 3 feet, 12 feet or any special length
Thread Type	Metric (DIN 13-15 & ANSI B1.13M) UNC (ANSI B1.1)
End	Type A and Type B (Chamfered)

WIRE NAILS

Grade	AISI 304, AISI 316, Aluminum, Copper
Head Type	Full Round/Flat Head | CSK Head Clouts / Roofing Nails(Large Head) Lost Head / Bullet Head Nails / Lense Head / Decking Nails
Upper surface	Chequered (Diamond) or plain
End Point	Diamond Point / Blunt Point
Type of Shank	Smooth/Plain | Barbed | Annular / Ring | Screw / Helical
Shank Dia (Nail Dia.)	1.6mm to 6.00mm [16 Gauge (0.0625”) to 3 Gauge (0.2437”)]
Length of Nails	20mm to 150mm (1" to 6")

THIRD PARTY INSPECTION CERTIFICATE


Lloyd's Register

Inspection Release Note


RELEASE NOTE N°


Velosi Certification Services (I) Pvt. Ltd.

VELOSI

INSPECTION RELEASE CERTIFICATE


GL

Inspection Release Note


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SGS


TUV INDIA PVT. LTD.

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TÜV


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