



MAFATLAL RAJESHKUMAR & CO.

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MRCO STEEL

- ✘ **ABOUT US:** MRCO STEEL was incorporated in 1975. we are Dealing exporting and Importing all kind of Exotic raw materials, High nickel alloys, and all kinds of Industrial Raw material (Ferrous & Non-Ferrous)
- ✘ **QUALITY POLICY:** We at MRCO STEEL tend to provide best quality raw material at highly competitive prices. We provide material that is up to Government Standards, we can Provide material as per Clients Specifications, Drawings and Other Quality measures assured.
- ✘ **WHY CHOOSE US:** We are a renowned business since more than 35 years we have excellent experience in this Field, we work closely with our clients to Get the exact Requirements fulfilled, with our vast Product Range Clients can get all the Industrial Raw material under one roof. We are approved in many government companies in India as well as around the world.

OUR PRODUCTS

PRODUCTS RANGE:	GRADES
STAINLESS STEEL	SS 202,304,316,310 ,321, 347, 309, 410, 409, 440,420, 904
TITANIUM	Grade 2, Grade 5
TANTALUM	UNS:R05400,R05200,
TUNGSTEN	ALL
COPPER & COPPER ALLOYS	Phosphorous Bronze, Zirconium Chromium Copper,Copper
NICKEL & NICKEL BASED ALLOYS	MONEL INCONEL,HASTELLOY- K500, K400, 625, 600, 718, X-750,C276
ALUMINIUM	6061,6063,T6,HE30,7075
MOLYBDENUM	VARIOUS
ALLOY STEEL & MILD STEEL	VARIOUS
NICHROME	60,80,20

ALL MATERIAL AVAILABLE IN VARIOUS FORMS:- PIPE, SHEETS, PLATES, RODS, WIRE, BLOCK, STRIPS, FLATS, COIL, FITTINGS, FLANGES, RODS & BARS

STAINLESS STEEL

- ✘ Stainless steels are steels with a minimum of 10.5% chromium. They gain their resistance to corrosion from a thin, tenacious surface layer of chromium oxide. We deal In stainless steel in various forms like SS SHEET, SS COIL, SS PLATE, SS RODS, SS PIPES, SS FLATS, SS WIRES, SS BARS, FLANGES, SS FITTINGS,SS Seamless and ERW pipes. We at MRCO STEEL offer variety of grades in stainless steel Our major Grades in Stainless steel are as below:
ss:-202,304,316,310,321,347,309,410,409,440,420,904



TANTALUM

- ✘ Tantalum is a shiny, silvery metal which is soft when is pure. It is almost immune to chemical attack at temperatures below 150 C. Tantalum is virtually resistant to corrosion due to an oxide film on its surface Tantalum finds use in four areas: high-temperature application, such as aircraft engines; electrical devices, such as capacitors; surgical implants and handling corrosive chemicals. It is rarely used as an alloying agent because it tends to make metals brittle. Tantalum resist corrosion and is almost impervious to chemical attack, for this reason it has been employed in chemical industry, e.g. for heat exchanger in boilers where strong acids are vaporized. We have various forms in tantalum available with us such as Rods, pipes, Blocks, fittings.



TITANIUM

Titanium is very well known for its properties of lightness, strength, and high-corrosion-resistance, but it is not so well known that there are other properties and what they are really capable of. We provide High quality titanium raw material. Our material is imported from different countries, we have titanium in Grade 2 and Grade 5, we have titanium in various forms like:- Ti rods, sheets, plates, coil, wire, welding rods, pipes and we also deal in titanium fabrication items like titanium tank, titanium pan, titanium vessel and other fabrication can be done on drawing basis.



TUNGSTEN

- ✘ MRCO STEEL specializes in producing high purity Tungsten Metal in a range of standard and custom dimension. MRCO STEEL imports too many standard grades when applicable, including Mil Spec (military grade); , Reagent and Technical Grade; Food, Agricultural and Pharmaceutical Grade; Optical Grade, USP and EP/BP (European Pharmacopoeia/British Pharmacopoeia) and follows applicable ASTM testing standards. We import Tungsten in various forms. We also deal in tungsten copper material as tungsten when merged with copper provide excellent resistance and soft hardness.



NICKEL ALLOY-MONEL

- ✘ Monel is a trademark name for a group of nickel alloys mostly composed of nickel and copper, with traces of iron, manganese, carbon, and silicon. Stronger than pure nickel, Monel alloys are known for their corrosion resistance to several corrosive environments. Due to fabrication by hot- and cold-working, machining, and welding, Monel is extensively used in marine and chemical processing fields, Monel is available in a pipe, fittings, plate, strip, round bar, strip, tube, sheet, and wire form. Grades available for monel are :- Monel 400 or alloy 400, Monel 401, Monel 404, Monel 405, and, Monel K-500



NICKEL ALLOY-INCONEL

- ✘ Inconel is a material that is specifically optimized for some of the toughest use conditions to be found in manufacturing. Even compared to stainless steel, Inconel® has an incredibly high tolerance for extreme heat, and doesn't lose as much tensile strength at 2,000° F as most varieties of steel. corrosion resistance, and even melt resistance can be measured. Inconel 625 has a very high tensile strength range of 103 - 160 ksi compared to the 73.2 ksi which is of stainless steel and can maintain that strength at even higher operating temperatures. Uses of inconel are Oil & Gas Extraction, Heat Treat Applications, Rapid Temperature Changes, Saltwater Applications, Jet Engines. Grades of which are Inconel 600,617,625,690,718,x 750



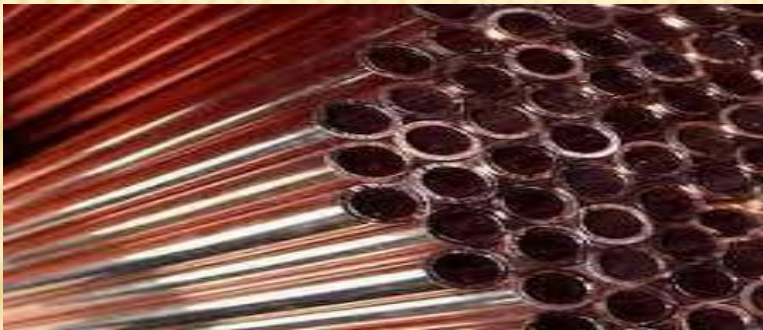
NICKEL ALLOY- HASTELLOY

- ✘ Hastelloy C-276 alloy (UNS N10276) is a nickel-chromium-molybdenum material with high resistance to chloride stress cracking and pitting corrosion types due to relatively high chromium and molybdenum contents. Hastelloy is a corrosion-resistant nickel alloy that contains other chemical elements such as chromium and molybdenum. This material has high temperature resistance and exceptional corrosion resistance. Hastelloy C276 is one of the grades of Hastelloy used in the oil and gas industry it is also used in making Hastelloy Heat Exchangers, Hastelloy Columns, Hastelloy Condensers, Hastelloy Reactors, Hastelloy Pressure Vessels, Hastelloy Piping Systems, Hastelloy Pipe.



COPPER & COPPER ALLOYS

- ✦ Copper and Copper alloys are some of the most versatile engineering material available. The combination of physical properties such as strength, conductivity, machinability and ductility ,corrosion resistance, make Copper suitable for a wide range of application. These properties are further enhanced with variations in composition and manufacturing methods. Some of its alloys that we deal in are CHROMIUM COPPER, ZIRCONIUM CHROMIUM COPPER, BERYLLIUM COPPER, TUNGSTEN COPPER. We have above material in various Grades and sizes. Available in many forms, Used for industrial material making.



MOLYBDENUM

- ✘ Molybdenum has high melting point as same as tungsten. With a variety of molybdenum metal materials that are consistently produced from raw materials, we can offer stable quality as well as finishing according to application or purpose. We also offer highly functional materials with higher temperature deformation resistance, It is a high quality molybdenum material that has overcome the disadvantages of pure molybdenum including brittleness and deformation at high temperature with the addition of a small amount of special elements. Available in various forms as sheet, rods, plates. Bar, wire etc.



ALLOY STEEL & MILD STEEL

- ✘ A high alloy steel has alloying elements (not including carbon or iron) that make up more than 8% of its composition. These alloys are less common, because most steel only dedicates a few percent to the additional., Mild steel is actually also known as “low carbon steel.” Although ranges vary depending on the source, the amount of carbon typically found in mild steel is 0.05% to 0.25% by weight, whereas higher carbon steels are typically described as having a carbon content from 0.30% to 2.0%. If any more carbon than that is added, the steel would be classified as cast iron. I elements.



CHEMICAL COMPOSITION OF STAINLESS STEEL

AISI	% C	% Mn	% Si	% S	% P	% Cr	% Ni	%Mo	Other	EN	IS
201	.15 max	7.5 max	1.0 max	.03 max	.06 max	16.0/ 18.0	3.5/ 5.5				
202	.15 max	10.0 max	1.0 max	.03 max	.06 max	17.0/ 19.0	4.0/ 6.0				
302	.15 max	2.0 max	1.0 max	.03 max	.45 max	17.0/ 19.0	8.0/ 10.0			En-58A	07CR18NI9
304	.08 max	2.0 max	1.0 max	.03 max	.45 max	18.0/ 20.0	8.0/ 10.0			En-58E	04CR18NI10
304L	.03 max	2.0 max	1.0 max	.03 max	.45 max	18.0/ 20.0	8.0/ 10.0				02CR18NI11
316	.08 max	2.0 max	1.0 max	.03 max	.45 max	16.0/ 18.0	10.0/ 14.0	2.0/ 3.0		En-58H	04CR17NI12MO2
316L	.03 max	2.0 max	1.0 max	.03 max	.45 max	16.0/ 18.0	12.0/ 14.0	2.0/ 3.0			03CR17NI12MO2
321	.08 max	2.0 max	1.0 max	.03 max	.45 max	17.0/ 19.0	9.0/ 12.0		Ti5xCm in	En-58C	04CR18NI10TI20
310	.25 max	2.0 max	1.0 max	.03 max	.45 max	24.0/ 26.0	19.0/ 22.0				10CR25NI12
309	.20 max	2.0 max	1.0 max	.03 max	.45 max	22.0/ 24.0	12.0/ 15.0				20CR24NI12
347	.08 max	2.0 max	1.0 max	.03 max	.45 max	17.0/ 19.0	9.0/ 12.0		Nb/Ta1 0xCmin	En-58G	04CR18NI10NB40
410	.15 max	1.0 max	1.0 max	.03 max	.40 max	11.5/ 13.5	.60			En-56A	12CR13
420	.15 min	1.0 max	1.0 max	.03 max	.40 max	12.0/ 14.0	.60			En- 56C&D	22CR13
430	.12 max	1.0 max	.75 max	.03 max	.40 max	14.0/ 18.0	.60			En-60	07CR17

NICKEL ALLOY COMPARISON CHART

NICKEL BASE ALLOYS

NOMINAL CHEMICAL COMPOSITION, % (not for specification purposes)

Nickel	Ni	C	Mn	Fe	S	Si	Cu	Cr	Co	Mo	Al	Ti	Other
Nickel	99.5	0.08	0.018	0.2	0.005	0.18	0.13	-	-	-	-	-	-
Nickel201	99.5	0.01	0.018	0.2	0.005	0.18	0.13	-	-	-	-	-	-
Nickel205	99.5	0.08	0.018	0.010	0.004	0.08	0.08	-	-	-	-	0.03 Mg	0.05
Nickel212	97.7	0.010	2.0	0.05	0.005	0.05	0.03	-	-	-	-	-	-
Nickel222	99.5	0.01	0.02	0.04	0.0025	0.01	0.01	0.01	0.06	0.01	0.01	Mg0.08	-
Nickel270	99.98	0.01	0.003	<0.001	<0.001	<0.001	<0.001	<0.001	-	-	<0.001	Mg<0.001	-
	Ni	C	Mn	Fe	S	Si	Cu	Cr	Co	Mo	Al	Ti	Other
MONEL alloy 400	63.0 min	0.15	1.0	25max	0.024max	0.05max	31.0	-	-	-	-	-	-
MONEL alloy 500	63.0 min	0.015	1.5 max	2.0max	0.010max	0.5	30.0	-	-	-	2.9	0.6	-
Cast MONEL alloy	63.0 min	0.07	0.75	2.5max	0.02 max	0.04max	30.0	0.10max	-	0.20max	0.05max	0.01max	-
Cast MONEL alloy	63.0 min	0.03max	0.020max	2.5max	0.02max	0.04max	30.0	0.10	-	0.20max	0.05max	0.01max	-
INCONEL alloy 600	72.0MIN	0.15MAX	1.0MAX	8.0	0.015 max	0.05max	0.05 max	15.5	-	-	-	-	Nb + Ta
INCONEL alloy 625	60.5	0.10max	0.25	5.0max	0.015max	0.5 max	-	21.5	-	9.0	0.25	0.25	3.65
INCOLOY alloy 800	32.5	0.10max	1.5max	Bal.	0.015max	1.0max	0.75 max	21.0	-	-	0.38	0.38	-
INCOLOY alloy 825	42.0	0.05max	1.0max	Bal.	0.03 max	0.5max	2.25	21.5	-	3.0	0.20max	0.9	-
INCOLOY alloy 904	32.5	0.025	0.025	Bal.	0.015	0.25	0.25	-	14.5	-	0.1	1.6	-
INCOLOY alloy DS	37.0	1.2	1.2	Bal.	-	2.3 max	2.3 max	18.0	-	-	-	0.20	-
Hastalloy B	Rest/Bal	0.10	0.80	5.58	0.7	-	0.6	1.25	28	-	-	-	-
Hastalloy C	Rest/Bal	0.07	0.80	5.75	0.7	-	16.0	1.25	17 -	-	-	-	-
Hastalloy G Alloy	Rest/Bal	0.05	1.0-2.0	18.0-21.0	0.7	-	1.5 21-23.5	1.25	5.575	-	-	-	-

PIPE SIZE CHART

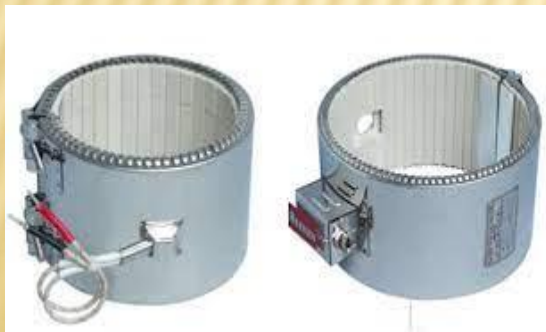
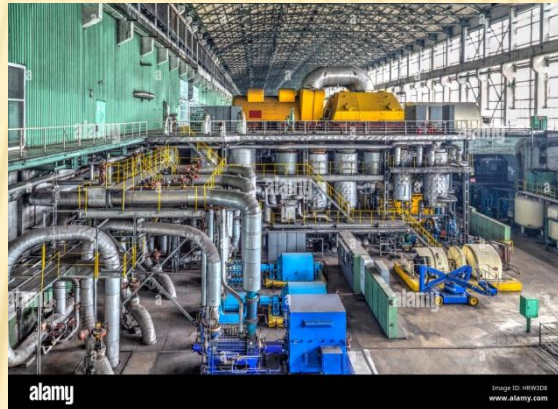
THE DIFFERENT NAMES USED IN PIPE SIZES

DN DIAMETER NOMINAL	NPS NOMINAL PIPE SIZE	NB NOMINAL BORE	OD OUTSIDE DIAMETER
15	1/2 INCH	15	21.3
20	3/4 inch	20	26.7
25	1 inch	25	33.4
40	1.5 inch	40	48.26
50	2 inch	50	60.3
80	3 inch	80	88.9
100	4 inch	100	114.3
125	5 inch	125	141.3
150	6 inch	150	168.2
200	8 inch	200	219
250	10 inch	250	273
300	12 inch	300	323.8
350	14 inch	350	355.6
400	16 inch	400	406.4
450	18 inch	450	457.2
500	20 inch	500	508
600	24 inch	600	609.6

FITTINGS SIZE CHART

Nominal Size	Outside Diameter OD	Slip-on Bore ID	Drilling			Hub Diminsions			Thickness Blind TB	Weight (Lbs)	
			No of Holes	Hole Diameter	Circle BC	T	L	E		Hub	Blind
4	9.00	4.57	8	0.750	7.50	0.500	0.875	5.312	0.625	8	11
5	10.00	5.66	8	0.875	8.50	0.562	1.250	6.312	0.625	9	13
6	11.00	6.72	8	0.875	9.50	0.562	1.250	7.562	0.688	11	18
8	13.50	8.72	8	0.875	11.75	0.562	1.250	9.688	0.688	15	27
10	16.00	10.88	12	1.000	14.25	0.688	1.250	12.000	0.688	19	37
12	19.00	12.88	12	1.000	17.00	0.688	1.250	14.375	0.719	28	56
14	21.00	14.19	12	1.125	18.75	0.750	1.250	15.750	0.719	34	75
16	23.50	16.19	16	1.125	21.25	0.750	1.250	18.000	0.892	41	106
18	25.00	18.19	16	1.250	22.75	0.750	1.250	19.875	0.950	42	127
20	27.50	20.19	20	1.250	25.00	0.750	1.250	22.000	1.040	49	168
22	29.50	22.19	20	1.375	27.25	1.000	1.750	24.250	1.132	57	210
24	32.00	24.19	20	1.375	29.50	1.000	1.750	26.125	1.216	67	267
26	34.25	26.19	24	1.375	31.75	1.000	1.750	28.500	1.307	79	328
28	36.50	28.19	28	1.375	34.00	1.000	1.750	30.500	1.398	94	398
30	38.75	30.19	28	1.375	36.00	1.000	1.750	32.500	1.477	104	476
32	41.75	32.19	28	1.625	38.50	1.125	1.750	34.750	1.581	131	587
34	43.75	34.19	32	1.625	40.50	1.125	1.750	36.750	1.661	137	676
36	46.00	36.19	32	1.625	42.75	1.125	1.750	38.750	1.751	160	792
38	48.75	38.19	32	1.625	45.25	1.125	1.750	40.750	1.853	185	945
40	50.75	40.19	36	1.625	47.25	1.125	1.750	43.000	1.933	192	1067

INDUSTRIAL APPLICATION OF OUR PRODUCTS



QUALITY POLICY

- ✘ Inspection and Documentation Records, QCP
- ✘ All raw material are purchased initially from reputed vendor with correlated test certificates.
- ✘ After arriving the material at our shop they are cross check with the TC given by the vendor and sample from above lot is sent for check testing at reputed Lab. Heat No. are punched on confirmation of Lab. Report.
- ✘ Prior to manufacturing each item is stamped with the related Heat No. and the amt. of pipes or raw materials debited from the stock book.
- ✘ Dies are checked from time to time if the dies are over sized rectification is arrived prior to Mfg. All internal inspection stage wise book is maintained. Where in day to day progress of manufacturing dimensions are noted and seen that they are within permissible limits.
- ✘ During the mfg. inspection is carried out to check if the cracks or deformities are present and if found then the material is rejected.
- ✘ After the product is manufactured, 100% dimensional check is carried out.
- ✘ The samples of the batch are sent for testing for Micro and chemicals analysis and on receiving satisfaction report then only items are etched and stored in a proper location of finish goods.
- ✘ we have more than 35 years of experience quality is our prime concern.

THANK YOU

MAFATLAL RAJESHKUMAR AND CO.

If You Have Any Other Query Related Any Kind Of Metals Do Get In Touch With Us.

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