

Ferro Alloys (Odisha)						
	Cr	Mn (Min)	P (Max)	S (Max)	Si	C
Ferro Chrome	57-64%		0.03%		2.5-3.5% ^m	6-8%
Ferro Manganese		75%	0.2%	0.05%	1.5% Max.	6-8%
		70%	0.25%	0.03%	1.5% Max.	7.5% Max.
HC Silico Manganese		60%	0.3%	0.02%	14%Min.	2% Max.
		65%	0.15%	0.02%	16% Min.	2% Max.
MC Silico Manganese		56%	0.14%	0.01%	23% Min.	0.46% Max.
LC Silico Manganese		56%	0.14%	0.01%	23% Min.	< 0.1%

Metallurgical Coke (Odisha)

Met Coke	CSR: > 64%	CRI 20-25%	M40: 92%	M10: 10%	ASH: 9-13%	VM < 1%
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Stainless Steel - Dimensions

Products	Max Width (mm)	Thickness (mm)	
		Min	Max
Indonesia			
CRAP	1250	0.4	3
Odisha			
Slab	1650	160	250
Hot Rolled Coil	1650	2	12.7
Plates	1650	12.7	80
HRAP Coil/2E Coil	1650	1.4	10
CRAP Coil	1600	0.3	5

. In case the product is supplied in Mill Edge, the tolerance on width may go up +50 / -0 mm

. Other Sizes / Thicknesses can also be supplied by mutual agreement

Stainless Steel - Finishes

Surface Finish	Definition	Applications
No.1	Hot rolled annealed, shot blasted and pickled.	Pipes, Tubing , chemical tank, general fabrication
No.2	Dull Cold rolled annealed and pickled.	Deep drawn utensils, heat exchanger, exhaust pipe
No. 2B	Cold rolled annealed and pickled and skin passed; given an appropriate luster by again cold rolling.	Food industry, kitchen utensils, medical equipment, construction material
BA	Bright annealed finish; processed with bright heat treatment after cold rolling.	Decorative usage, kitchen utensils, electric equipment, building construction
No. 3	Cold rolled annealed and pickled and polished with 100 to 120 grit.	Kitchen utensils, building construction, medical equipment
No. 4	Cold rolled annealed and pickled and polished with	kitchen utensils, Architectural purposes, railway
Scotch Brite	Very fine hairline finish generated by polishing with rolls made out of scotch brite material.	

. Other Sizes / Finishes can also be supplied by mutual agreement

CHEMICAL COMPOSITION												MECHANICAL PROPERTIES			
JSL Designation / Grade	%C (Max)	%Mn (Max)	%P (Max)	%S (Max)	%Si (Max)	%Cr	%Ni	%Mo	N PRM (Max)	% OTHERS	Tensile Strength Mpa(min)	Yield Strength Mpa(min)	%Elongation (min)	Hardness Rockwell B (max)	
Austenitic Cr-Mn*	J-201#	0.15	5.5-7.5	0.060	0.030	1.00	16.00-18.00	3.50-5.50	-	2500		655	310	40	100
	J-201 L	0.030	5.5-7.5	0.045	0.030	0.75	16.00-18.00	3.50-5.50	-	2500		655	260	40	95
	J-201 LN	0.030	6.4-7.5	0.045	0.015	0.75	16.00-17.50	4.00-5.00	-	1000-2500	Cu = 1.0 Max	655	310	45	100
	J-202	0.15	7.5-10.0	0.060	0.030	1.00	17.00-19.00	4.00-6.00	-	2500		620	260	40	100
	J-204 Cu	0.10	6.5-9.0	0.060	0.010	0.75	16.00-17.50	1.50-3.50	-	1000-2500	Cu = 2.0-4.0	620	310	40	100
	JSLAUS (J1)	0.08	6.0-8.0	0.070	0.010	0.75	16.00-18.00	4.00-6.00	-	1000	Cu = 1.5-2.0	550	205	40	95
	J-4	0.10	8.50-10.0	0.080	0.010	0.75	15.00-16.00	1.00-2.00	-	2000	Cu = 1.5-2.0	650	325	40	100
	JSL U DD	0.15	9.7-10.7	0.1	0.030	0.75	15.00-16.00	0.45-0.60	-	-	Cu - 1.9-2.2 / N=0.2	700	350	40	100
	JSL U SD	0.15	9.7-10.7	0.1	0.030	0.75	13.25-14.25	0.4-0.5	-	-	Cu = 1.25-1.75 / N=0.1-0.2	700	350	40	100
	JT	0.11	9.8-10.8	0.1	0.010	0.75	14.0-15.25	0.35	-	-	Cu = 0.60-1.00 / N=2000	700	350	40	100
Austenitic Cr-Ni	J-301	0.15	2.00	0.045	0.030	1.00	16.00-18.00	6.00-8.00	-	1000		515	205	40	95
	J-301 L	0.030	2.00	0.045	0.030	1.00	16.00-18.00	6.00-8.00	-	2000		550	220	45	100
	J-301 LN	0.030	2.00	0.045	0.030	1.00	16.00-18.00	6.00-8.00	-	700-2000		550	240	45	100
	J-304	0.07	2.00	0.045	0.030	0.75	18.00-19.50	8.00-10.50	-	1000		515	205	40	92
	J-304 H	0.04-0.10	2.00	0.045	0.030	0.75	18.00-20.00	8.00-10.50	-	-		515	205	40	92
	J-304 L	0.030	2.00	0.045	0.030	0.75	18.00-19.50	8.00-12.00	-	1000		485	170	40	92
	J-304 LN	0.030	2.00	0.045	0.030	0.75	18.00-20.00	8.00-12.00	-	100-1600		515	205	40	95
	J-309	0.20	2.00	0.045	0.030	0.75	22.00-24.00	12.00-15.00	-	-		515	205	40	95
	J-309 S	0.08	2.00	0.045	0.030	0.75	22.00-24.00	12.00-15.00	-	-		515	205	40	95
	J-310	0.25	2.00	0.045	0.030	1.50	24.00-26.00	19.00-22.00	-	-		515	205	40	95
	J-310 S	0.08	2.00	0.045	0.030	1.50	24.00-26.00	19.00-22.00	-	-		515	205	40	95
	J-316	0.08	2.00	0.045	0.030	0.75	16.00-18.00	10.00-14.00	2.30-3.00	1000		515	205	40	95
	J-316 L	0.030	2.00	0.045	0.030	0.75	16.00-18.00	10.00-14.00	2.00-3.00	1000		485	170	40	95
	J-316 LN	0.030	2.00	0.045	0.030	0.75	16.00-18.00	10.00-14.00	2.00-3.00	1000-1600		515	205	40	95
	J-316 Ti	0.08	2.00	0.045	0.030	0.75	16.00-18.00	10.00-14.00	2.00-3.00	1000	Ti=5X(C+N) Min., 0.70 Max	515	205	40	95
	J-317	0.08	2.00	0.045	0.030	0.75	18.00-20.00	11.00-15.00	3.00-4.00	1000		515	205	35	95
	J-317 L	0.030	2.00	0.045	0.030	0.75	18.00-20.00	11.00-15.00	3.00-4.00	1000		515	205	40	95
	J-317 LN	0.030	2.00	0.045	0.030	0.75	18.00-20.00	11.00-15.00	3.00-4.00	1000-2200		550	240	40	95
	J-31727	0.030	1.00	0.030	0.030	1.00	17.50-19.00	14.50-16.50	3.80-4.50	1500-2100	Cu=2.8-4.0	550	245	35	96
	J-321	0.08	2.00	0.045	0.030	0.75	17.00-19.00	9.00-12.00	-	1000	Ti=5X(C+N) Min., 0.70 Max Nb= 10XC Min., 1.00 Max	515	205	40	95
J-347	0.08	2.00	0.045	0.030	0.75	17.00-19.00	9.30-13.00	-	-		515	205	40	92	
Martensitic	J-410	0.08-0.15	1.00	0.040	0.030	1.00	11.50-13.50	0.75 max	-	-		450	205	20	96
	J-415	0.05	0.50-1.00	0.030	0.030	0.60	11.50-14.00	3.50-5.50	0.50-1.00	-		795	620	15	32rc
	J-420	0.15 min	1.00	0.040	0.030	1.00	12.00-14.00	0.75 max	0.50 max	-		690	-	15	96
	J-431	0.20	1.00	0.040	0.030	1.00	15.00-17.00	1.25-2.50	-	-		-	-	-	29rc
	JBS	0.6-0.7	1.00	0.030	0.015	0.75	12.50-13.50	-	-	-		-	-	-	-
	J-405	0.08	1.00	0.040	0.030	1.00	11.50-14.50	0.60	-	-	Al = 0.10-0.30	415	170	20	88
Ferritic	J-409	0.030	1.00	0.040	0.020	1.00	10.50-11.70	0.50 max	-	-	Ti=6X(C+N) Min., 0.5 Max	380	170	20	88
	J-409L	0.030	1.00	0.040	0.030	1.00	10.50-11.70	0.50 max	-	300	Ti=6X(C+N) Min., 0.75 Max	380	170	20	88
	J-410S	0.08	1.00	0.040	0.030	1.00	11.50-13.50	0.60 max	-	-		415	205	22	89
	J-430	0.12	1.00	0.040	0.030	1.00	16.00-18.00	0.75 max	-	-		450	205	22	89
	J-430Ti	0.030	1.00	0.040	0.030	1.00	16.00-19.00	-	-	-	Ti = 0.10-1.00	360	175	22	90
	J-436	0.120	1.00	0.040	0.030	1.00	16.00-18.00	-	0.75-1.25	-	Nb = 5XC Min., 0.70 Max	450	240	22	89
	J-436L	0.025	1.00	0.040	0.030	1.00	16.00-19.00	-	0.75-1.25	250	%Nb or & Ti or %combination = 8X (C+4) Min., 0.80 Max	410	245	20	96
	J-439	0.030	1.00	0.040	0.030	1.00	17.00-19.00	0.50 max	-	300	Ti=0.20+4X (C+N) Min., 1.10 Max. Al=0.15 Max	415	205	22	89
	J-441	0.030	1.00	0.040	0.015	1.00	17.50-18.50	-	-	-	Nb=3X% C+0.3 1% Max., Ti = 0.1-0.6%	430	250	18	88
Ferritic + Martensitic															
J-409M	0.030	0.8-1.5	0.030	0.030	1.00	10.80-12.50	1.50 max	-	300	Ti=0.75 Max	450	275	20	90	
Duplex (Austenitic + Ferritic)															
J-2205	0.030	2.00	0.030	0.020	1.00	22.00-23.00	4.50-6.50	3.0-3.50	1400-2000		655	450	25	31rc	
J-2304	0.030	2.50	0.040	0.030	1.00	21.50-24.50	3.00-5.50	0.05-0.60	500-2000	Cu = 0.05 Min. - 0.60 Max.	600	400	25	32rc	
J-31803	0.030	2.00	0.030	0.020	1.00	21.00-23.00	4.50-6.50	2.50-3.50	800-2000		620	450	25	31rc	

*These grades can be supplied with 0.0005% max also.
#This grade will be supplied with 0.08%C max for improved corrosion resistance.
|| This grade can be supplied in Two versions of 0.08%C max or 0.1%C max.
Specific Chemical and Mechanical properties can be supplied by mutual agreement.