Chemical Composition

Specification	Grade	C %	Mn %	P % max	S % max	Si %	CE
ASTM-A-588		0.19 max	0.80-1.25	0.040	0.050	0.30-0.65	
	Al 0.02 min, Cr 0.40-0.65, Ni 0.40 max, Cu 0.25-0.40, V 0.02-0.10						
DIN 17100	ST 52.3	0.20-0.22	1.6 0	0.040	0.040	0.55	Al 0.02 min
HCRS (Cu+P)		0.15	0.25-0.8	0.07-0.15	0.03	0.28-0.50	Cu 0.2 min
SAILCOR (IRS M-41)		0.10	0.25-0.45	0.075-0.140	0.03	0.30-0.60	
	Al 0.03 max, Cr 0.35-0.60, Ni 0.20-0.47, Cu 0.30-0.60 V 0.05 max						
IS: 2002/2009	1	0.18 max	0.50-1.20	0.035	0.040	0.15-0.35	0.44 max Cu 0.10% max residual
	2	0.20 max	0.50-1.20	0.035	0.040	0.15-0.35	0.44 max Al 0.020% max
	3	0.22 max	0.50-1.20	0.035	0.040	0.15-0.35	0.44 max
ASTM-A-285	C	0.28 max	0.90	0.035	0.035		
ASTM-A- 515	60	0.24 – 0.27	0.90	0.035	0.035	0.15-0.40	Al 0.02% max
	65	0.28 – 0.31	0.90	0.035	0.035	0.15-0.40	
	70	0.31 – 0.33	1.20	0.035	0.035	0.15-0.40	
ASTM-A-516	55	0.18 – 0.22	0.60-0.90	0.035	0.035		
	65	0.24 – 0.28	0.85-1.20	0.035	0.035		
	70	0.27 – 0.30	0.85-1.20	0.035	0.035		
	– For each reduction of 0.10% of C below the specified max, an increase of 0.60% of Mn above the specified max is permitted up to 1.50%. – Grade 60 plates, Mn 0.85-1.20 for thickness <=12.5 mm – Heats will be micro alloyed for orders requiring impact test						
ASTM-A-537	Cl 1	0.24 max	0.7-1.60	0.035	0.035	0.15-0.50	Micro alloyed with Nb/V, if required
	Al 0.02 min, Cr 0.25 max, Ni 0.25 max, Cu 0.35 max, Mo 0.08 max						
DIN 17155	H1	0.16	0.40-1.20	0.035	0.030	0.35	
	Al 0.02% min, Cr 0.25% max, Ni 0.30% max, Cu 0.30% max, Nb 0.01% max, V 0.03% max, Ti 0.03% max, Mo 0.10% max						