

CHEMICAL ANALYSYS	ASTM A 193 GRADE STUDBOLTS - GRADES						
	B7	B7M	B6	B8CI.1	B8MCI.1	B8T	L7
CARBON	0.37	0.37	0.15	0.08	0.08	0.08	0.38
	0.49	0.49	MAX	MAX	MAX	MAX	0.48
SILICON	0.15	0.15	1.00	1.00	1.00	1.00	0.15
	0.35	0.35	MAX	MAX	MAX	MAX	0.35
MANGANESE	0.65	0.65	1.00	2.00	2.00	2.00	0.75
	1.10	1.10	MAX	MAX	MAX	MAX	1.00
CHROMIUM	0.75	0.75	11.5	18.00	16.00	17.00	0.80
	1.20	1.20	13.5	20.00	18.00	19.00	1.10
MOLYBDENUM	0.15	0.15	-	-	2.00	-	0.15
	0.25	0.25	-	-	3.00	-	0.25
SULPHUR	0.04	0.04	0.03	0.03	0.03	0.03	0.04
	MAX	MAX	MAX	MAX	MAX	MAX	MAX
PHOSPHOR	0.035	0.035	0.04	0.045	0.045	0.045	0.035
	MAX	MAX	MAX	MAX	MAX	MAX	MAX
NICKEL	-			8.00	10.00	9.00	-
				11.00	14.00	12.00	-
Mechanical Properties							
UTS Mpa Min.	860	690	760	515	515	515	860
YIELD stress Mpa Min.	720	550	585	205	205	205	720
Elongation % MIN	16	18	15	30	30	30	16
Reduction Area % Min.	50	50	50	50	50	50	50
Hardness	35 HRC MAX	99 HRB MAX	-	96 HRB MAX	96 HRB MAX	96 HRB MAX	-