

AANURAJ FASTENERS PVT.LTD.

ASTM A193 Gr.B7 Stud/Bolt/Screw (Inch)

Chemical Requirements		
	Range	Product Variation, Over or Under
Carbon	0.37-0.49	0.02
Manganese	0.65-1.10	0.04
Phosphorus, max	0.035	0.005over
Sulphur, max	0.040	0.005over
Silicon	0.15-0.35	0.02
Chromium	0.75-1.20	0.05
Molybdenum	0.15-0.25	0.02

Mechanical Requirements- Inch					
Diameter, in	Minimum Tempering Temperature, °F	Tensile Strength, Min, Ksi	Yield Strength, Min, 0.2% offset, Ksi	Elongation In 4D, Min, %	Reduction of Area, Min, %
2 1/2 and under	1100	125	105	16	50
Over 2 1/2 to 4	1100	115	95	16	50
Over 4 to 7	1100	100	75	18	50

Hardness –Max (Inch)	
2 1/2 and under	35 HRC
Over 2 1/2 to 4	35 HRC
Over 4 to 7	35 HRC

Process Carried Out	
Stage I	Hardening at 880°C For 2 Hours in Electric Furnace.
Stage II	Quench in Hot oil 60 to 95°C.
Stage III	As Quenched Hardness 52/54 HRC.
Stage IV	Tempering at 650°C for 3Hrs.
Stage V	Cool in Air