

# HEAVY HEX BOLTS / STUDS A193-B7

## ***SUBMITTAL SPECIFICATION***

"ABSTRACT OF ASTM A193"

"ALLOY-STEEL & STAINLESS STEEL BOLTING MATERIALS FOR HIGH TEMPERATURE SERVICE"

**MATERIAL / GRADE:** CHROMIUM-MOLYBDENUM, AISI 4140/4142, ASTM A193-B7

**CHEMICAL REQUIREMENT (%):**

CARBON	0.37-0.49
MANGANESE	0.65-1.10
PHOSPHOROUS, MAX	0.035
SULFUR, MAX	0.040
SILICON	0.15-0.35
CHROMIUM	0.75-1.20
MOLYBDENUM	0.15-0.25

**MECHANICAL REQUIREMENTS:**

**2 1/2" & UNDER DIAMETERS**

	<u>MINIMUM</u>	<u>MAXIMUM</u>
TENSILE STRENGTH (KSI)	125	
YIELD STRENGTHS (KSI)	105	
ELONGATION IN 4D (%)	16	
REDUCTION OF AREA (%)	50	
HARDNESS (BRINELL)		321
HARDNESS (ROCKWELL)		C35

**IDENTIFICATION SYMBOL:** B7

**OTHER:**

ALL BOLTS & STUDS, UNLESS OTHERWISE SPECIFIED IN THE PURCHASE ORDER SHALL BE THREADED IN ACCORDANCE WITH ANSI/ASME B1.1 UNIFIED INCH SCREW THREADS, CLASS 2A FIT. BOLT HEADS SHALL BE IN ACCORDANCE WITH THE DIMENSIONS OF ANSI/ASME B18.2.1, HEAVY HEX BOLTS. UNLESS OTHERWISE SPECIFIED IN THE PURCHASE ORDER, THE HEAVY HEX BOLT SERIES SHOULD BE USED. ADDITIONAL INFORMATION CAN BE FOUND IN ASTM A193/A193M, (ALLOY STEEL AND STAINLESS STEEL BOLTING MATERIALS FOR HIGH-TEMPERATURE SERVICES).

**NUTS:**

NUTS SHALL CONFORM TO ASTM A194-2H, UNLESS OTHERWISE SPECIFIED. ADDITIONAL INFORMATION CAN BE FOUND IN ASTM A194/A194M, (CARBON AND ALLOY STEEL NUTS FOR BOLTS FOR HIGH PRESSURE AND HIGH-TEMPERATURE SERVICE).

**FLAT WASHERS:** UNLESS OTHERWISE SPECIFIED, ALL WASHERS SHALL BE SIMILAR MATERIAL AS THE NUTS.

**Pacific Coast Bolt**