



## THOMPSON ENTERPRISES

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### SUBMITTAL INFORMATION

"STUDS, BOLTS, NUTS AND FLAT WASHERS"  
"ABSTRACT OF ASTM A193/ASTM A194"  
"GRADE B7"

**GRADE:** CHROMIUM-MOLYBDENUM (AISI) 4140

#### **CHEMICAL REQUIREMENTS:**

	<u>RANGE</u>	<u>VARIATION</u>
CARBON,	0.37 - 0.49	0.02
MANGANESE	0.65 - 1.10	0.04
PHOSPHOROUS, MAX	0.35	0.005 OVER
SULFUR, MAX	0.040	0.005 OVER
SILICON	0.15 - 0.35	0.02
CHROMIUM	0.75 - 1.20	0.05
MOLYBDENUM	0.15 - 0.25	0.02

#### **MECHANICAL REQUIREMENTS:**

	UP TO
	2-1/2" DIA.
	<u>MINIMUM</u>

TENSILE STRENGTH (KSI)	125
YIELD STRENGTHS (KSI)	105
ELONGATION (%)	16
REDUCTION OF AREA (%)	50

**IDENTIFICATION SYMBOL:** B7

#### **OTHER:**

ALL BOLTS, NUTS & STUDS, SHALL BE THREADED IN ACCORDANCE WITH ANSI/ASME B1.1, PAGE A-26, CLASS 2a FIT, SIZES 1 IN. AND SMALLER IN DIAMETER WITH THE COARSE-THREAD SERIES, AND 1-1/8 IN. AND LARGER IN DIAMETER WITH THE 8-PITCH-THREAD SERIES.

BOLT HEADS SHALL BE IN ACCORDANCE WITH THE DIMENSIONS OF ANSI/ASME B18.2.1, PAGE C-1, THE HEAVY HEX SERIES BOLTS SHALL BE USED. NUTS SHALL CONFORM TO ASTM A 194, THE HEAVY HEX SERIES NUTS GRADE 2H SHALL BE USED.

ADDITIONAL INFORMATION CAN BE FOUND IN ASTM 193/A193M, DTM 1997 (ALLOY STEEL AND STAINLESS STEEL BOLTING MATERIALS FOR HIGH-TEMPERATURE SERVICES) AND IN ASTM A194/A194M, DTD 1997 (CARBON AND ALLOY STEEL NUTS FOR BOLTS FOR HIGH-TEMPERATURE SERVICE).

#### **FLAT WASHERS:**

ALL WASHERS SHALL BE OF THE SAME MATERIAL AS THE NUTS.