

HEAVY HEX BOLTS / STUDS A193-B16

SUBMITTAL SPECIFICATION

"ABSTRACT OF ASTM A193"

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

MATERIAL / GRADE: CHROMIUM-MOLYBDENUM-VANADIUM, ASTM A193-B16

CHEMICAL REQUIREMENTS (%):

| | |
|------------------|-----------|
| CARBON | 0.36-0.47 |
| MANGANESE | 0.45-0.70 |
| PHOSPHOROUS, MAX | 0.035 |
| SULFUR, MAX | 0.040 |
| SILICON | 0.15-0.35 |
| CHROMIUM | 0.80-1.15 |
| MOLYBDENUM | 0.50-0.65 |
| VANADIUM | 0.25-0.35 |
| ALUMINUM, MAX | 0.015 |

MECHANICAL REQUIREMENTS:

| <u>2 1/2" DIA. & UNDER</u> | <u>MINIMUM</u> | <u>MAXIMUM</u> |
|--------------------------------|----------------|----------------|
| TENSILE STRENGTH (KSI) | 125 | |
| YIELD STRENGTHS (KSI) | 105 | |
| ELONGATION IN 4D (%) | 18 | |
| REDUCTION OF AREA (%) | 50 | |
| HARDNESS (BRINELL) | | 321 |
| HARDNESS (ROCKWELL) | | C35 |

IDENTIFICATION SYMBOL: B16

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 GR. 8, UNLESS OTHERWISE SPECIFIED. ADDITIONAL INFORMATION CAN BE FOUND IN ASTM A194/A194M (CARBON AND ALLOY STEEL NUTS FOR BOLTS FOR HIGH PRESSURE OR HIGH-TEMPERATURE SERVICE).

FLAT WASHERS: UNLESS OTHERWISE SPECIFIED, ALL WASHERS SHALL BE OF THE SAME MATERIAL AS THE NUTS.

Pacific Coast Bolt