ARTICLE KM-3
SUPPLEMENTARY REQUIREMENTS FOR BOLTING

KM-300 REQUIREMENTS FOR ALL BOLTING MATERIALS

KM-301 SCOPE
In this Division, bolting includes the following metallic fasteners: bolts, stud bolts, studs, cap screws, nuts, and washers.

KM-302 MATERIAL SPECIFICATIONS AND YIELD STRENGTH VALUES
Specifications and supplementary rules for acceptable bolting materials are specified in Tables KM-400-1, KM-400-1M, KM-400-2, KM-400-2M, KM-400-3, and KM-400-3M. Yield strengths at temperature for these bolting materials are specified in Section II, Part D, Subpart 1, Table Y-1. These product forms listed for bolting shall not be used for applications other than bolting (see KM-100).

KM-303 EXAMINATION OF BOLTS, STUDS, AND NUTS
Bolts, studs, and nuts shall be examined in accordance with KE-260.

KM-304 THREADING AND MACHINING OF STUDS
Threading and machining of studs shall meet the requirements of KD-623.

KM-305 USE OF WASHERS
The use of washers is optional. When used, they shall be of wrought material.

KM-306 MATERIALS FOR NUTS AND WASHERS
Materials for steel nuts and washers shall conform to SA-194 or to the requirements for nuts in the specification for the bolting material with which they are to be used.

KM-307 REQUIREMENTS FOR NUTS
Nuts shall be semifinished, chamfered, and trimmed. Nuts shall be threaded to Class 2B or finer tolerances according to ASME B1.1.

KM-307.1 Use With Flanges. For use with flanges, nuts shall conform at least to the dimensions specified in ASME B18.2.2 for Heavy Series Nuts.

KM-307.2 Use With Other Connections. For use with connections designed in accordance with the rules in Part KD, nuts may be of the Heavy Series or they may be of other dimensions provided their static and fatigue strengths are sufficient to maintain the integrity of the connection. Due consideration shall be given to bolt hole clearance, bearing area, thread form, class of fit, thread shear, and radial thrust from threads.

KM-307.3 Depth of Engagement. Nuts shall engage the threads for the full depth of the nut.

KM-307.4 Special Design. Nuts of special design may be used provided their strength meets the requirements of KM-307.2.