

	SARA SAE ENGINEERING SPECIFICATION		
	SECTION SES 26 - 726		
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MATERIAL SPECIFICATION ASTM A-194 Gr. 2H
FOR ALLOY STEEL & BOLTING MATERIAL

1.0 PURPOSE

- 1.1 It is the purpose of this material specification to list in concise form of the material requirement for ASTM A-194.
- 1.2 This material specification is intended to aid the purchasing department in procuring and the vendor in supplying a material which meets the needs of its intended use, and the quality control department in the inspection and release of incoming material.

2.0 REQUIREMENTS

- 2.1 The requirements of specification S.E.S. 26-590 shall apply in addition to the following specific requirements.

- 2.1.1 **Chemical composition:** Chemical composition limits are listed below. An analysis of each heat of steel is made by the manufacturer, preferably from a ladle sample taken at or near the time of pouring. The listed elements shall be reported in weight percent. Reporting of residual elements is not required, but total residuals must not exceed 1%.

ELEMENTS	COMPOSITION RANGE (%)
Carbon (C)	0.40 (min)
Manganese (Mn)	1.00 (max.)
Silicon (Si)	0.40 (max.)
Sulphur (S)	0.050 (max.)
Phosphorus	0.040 (max.)

- 2.1.b **Mechanical Properties:** Mechanical property requirements are listed below. Each heat shall be tested and the listed mechanical properties shall be reported.

<u>MECHANICAL PROPERTIES</u>			
THREAD PER INCH	STRESS AREA	PROOF LOAD	HARDNESS
			248-352 BHN



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2.1.c) Melt practice: The steel shall be made by the electric furnace process or vacuum induction melting (VIM) or open-hearth, basic-oxygen shall also be acceptable.

2.1.d) Condition: The nuts shall be hot or cold forged or shall be machined from hot-forged, hot-rolled, or cold drawn bars and shall be heat treated to meet the required mechanical properties. However, nuts machined from heat treated bars not to be heat treated.

3. Product Marking: Grade and manufacturer's identification symbols shall be applied.

4. DOCUMENTATION REQUIRED:-

4.1 Each shipment shall be accompanied by material certifications for each lot of material, certifications must be positively relatable to the lot of material represented

4.2 Recheck of Chemical properties to be carried out by SARA SAE.

