AERONAUTICAL MATERIAL SPECIFICATION

Society of Automotive Engineers, Inc.
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AMS 6317 A

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S T E E L
Nickel Molybdenum

1. ACKNOWLEDGMENT: A vendor must mention this specification number and its revision letter in all quotations and when acknowledging purchase orders.

2. FORM: Bars, billets, forgings, or as ordered.

3. COMPOSITION:

		Individual Bar Check Analysis Over or Under
Carbon	0.38 - 0.43	0.02
Manganese	0.60 - 0.80	0.03
Phosphorus	0.040 max	0.005
Sulphur	0.040 max	0.005
Silicon	0.20 - 0.35	0.02
Nickel	1.65 - 2.00	0.05
Molybdenum	0.20 - 0.30	0.03

4. GRAIN SIZE: 5 or finer, A.S.T.M. E19-39T, method a, unless otherwise ordered. A heat of steel predominately 5 or finer with grains as large as 3 is permissible.

5. CONDITION: (a)This material shall be supplied in the heat treated condition; that is, quenched and tempered. It must be uniform in physical properties throughout its entire length and from center to surface. It shall conform to the following physical properties:

Tensile Strength, lb per sq in.	125,000 min
Elongation, % in 2 in.	16 min
Reduction of Area, %	50 min
Brinell Hardness, each piece	262-311

These properties apply to sections 1" and less, if larger sizes are ordered it will be necessary to modify the properties.

(b)Forgings shall Brinell 262-311 but other physical properties are not required unless the drawing or purchase order requires a test piece, then a bar of the same heat of steel as the forgings and heat treated with them shall fulfill the requirements of (a).

(c)Bars shall be clean, free from rust and scale, finished by grinding, pickling, blasting, or equivalent, or as ordered, and oiled to prevent rust during shipment.