AERONAUTICAL MATERIAL SPECIFICATION

Society of Automotive Engineers, Inc.
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AMS 6292 C

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STEEL - CARBURIZING
1.8 Ni .25 Mo (.15 - .20C)

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	0.15 - 0.20	0.01
Manganese	0.45 - 0.60	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, ASTM E19-39T, method a, unless otherwise ordered. A heat of steel predominately 5 or finer, with grains as large as 3, is permissible.

5. HARDENABILITY: (a) Specimens with sections 1/4 inch in thickness and not greater than two (2) square inches in area shall be cut from the bar or forging after normalizing at 1700°F. The specimens shall be ground and then protected by suitable means, or treated in an atmosphere, to minimize scaling and eliminate either carburization or decarburization during heat treatment.

(b) The specimens shall be placed in a furnace which is at 1550°F, allowed to heat to 1550°F, held 25 minutes and quenched in commercial paraffin oil (100 S.U.V. at 100°F) at room temperature. Each specimen when tested shall have an average hardness within the limits of Rockwell C 30-45.

6. CONDITION: (a) Bar stock must be supplied in a machinable condition with a hardness of not more than Brinell 229, unless otherwise ordered.

(b) Stock ordered for forging must be supplied in the condition and finish ordered by the forging manufacturer.

(c) Forgings are to be supplied as ordered.

7. QUALITY: (a) This material must be aircraft quality. It shall be sound, clean, commercially straight and must not reveal injurious defects during forging, heat treating, or machining.

(b) Visual examination of deep acid etched bars in the as furnished condition shall show no evidence of abnormal segregation, pipes, cracks, seams, or abnormal change in structure from the surface to the center.

(c) Unless otherwise stated, finished parts are subject to magnetic inspection.