AERONAUTICAL MATERIAL SPECIFICATION

Society of Automotive Engineers, Inc.
29 West 39th Street
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AMS 5132 A
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STEEL
High Carbon

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

2. FORM: Rods, bars, or as ordered.

3. COMPOSITION:

		Individual Bar Check Analysis Over or Under
Carbon	0.90 - 1.30	0.03
Manganese	0.15 - 0.50	0.03
Phosphorus	0.040 max	0.008
Sulphur	0.040 max	0.008
Silicon	0.35 max	0.02

4. CONDITION: (a) The hardness shall be Brinell 170-228, or the equivalent, unless otherwise specified.

(b) The microstructure of the steel shall not show a cementite network or excessive amounts of lamellar pearlite. The steel shall be annealed to show a microstructure of well spherodized cementite, unless otherwise ordered.

5. DECARBURIZATION: Shall be absent, unless steel is ordered to tolerances greater than those specified in section 7 in which case the depth of decarburization shall be as agreed between purchaser and vendor.

6. QUALITY: (a) Steel shall be uniform in quality and condition, externally clean, sound and free from foreign materials and from internal and external defects which adversely affect its strength or machinability. Steel revealing defects during fabrication shall be subject to rejection.

(b) Steel and parts made therefrom shall be subject to inspection by any method which will reveal defects.

7. TOLERANCES: Unless otherwise specified, tolerances shall conform to the following:

Diameter or Distance Between Parallel Sides Inches	Tolerance, Inch Plus and Minus
Up to 0.124, incl.	0.0002
0.125 to 0.499, incl.	0.00025
0.500 to 1.500, incl.	0.0005

8. REPORTS: (a) Unless otherwise specified, the vendor of steel shall furnish three copies of a notarized report of the chemical composition of each size in each shipment. This report shall include the purchase order number, material specification number, size, and quantity.