# AERONAUTICAL MATERIAL SPECIFICATION

Society of Automotive Engineers, Inc.
29 West 39th Street
New York City

**AMS 5710**

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Revised

## S T E E L - V A L V E

Chromium Silicon Nickel

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

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

3. COMPOSITION:

| | |
|---|---|
| Carbon | 0.76 - 0.86 |
| Manganese | 0.20 - 0.60 |
| Phosphorus | 0.030 max |
| Sulphur | 0.030 max |
| Chromium | 19.0 - 21.0 |
| Silicon | 1.9 - 2.6 |
| Nickel | 1.0 - 1.6 |

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

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

5. QUALITY: (a) This material must be of highest quality, free from hard spots, internal and surface defects and must not reveal material defects during forging or machining.

(b) The steel will be subject to microscopic examination for inclusions and also subject to coarse etching and any other tests necessary to insure high quality steel.

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

6. REPORTS: The manufacturer shall furnish three copies of a notarized report of the chemical composition of each heat and size in each shipment. This report shall include the purchase order number, heat number, material specification number, size, part number if parts are supplied, and quantity in each heat. If forgings are supplied the part number and size of steel used to make the forgings shall also be included.

7. IDENTIFICATION: All material shall be identified by a heat number or code letter and AMS 5710. Bar stock 2 inches or larger must be stamped within 2 inches of one end with the heat number. Smaller bars may either be stamped with the heat number or securely bundled and identified by a metal tag stamped with the purchase order number, material specification number and heat number and attached to each bundle. Material that cannot be identified at destination is subject to rejection.