



# AEROSPACE MATERIAL SPECIFICATION

**Society of Automotive Engineers, Inc.**  
485 LEXINGTON AVENUE, NEW YORK, N. Y. 10017

## AMS 5132D

Superseding AMS 5132C

Issued 11-1-41  
Revised 5-1-68

### STEEL BARS (0.90-1.30C)

1. **ACKNOWLEDGMENT:** A vendor shall mention this specification number and its revision letter in all quotations and when acknowledging purchase orders.
2. **APPLICATION:** Primarily for dowels and other parts requiring close tolerances.
3. **COMPOSITION:**

|            | min  | max   |
|------------|------|-------|
| Carbon     | 0.90 | 1.30  |
| Manganese  | 0.15 | 0.50  |
| Silicon    | 0.10 | 0.35  |
| Phosphorus | --   | 0.040 |
| Sulfur     | --   | 0.050 |

- 3.1 **Check Analysis:** Composition variations shall meet the requirements of the latest issue of AMS 2259, paragraph titled "Carbon Steels".
4. **CONDITION:** Unless otherwise specified, bars shall be spheroidized annealed and cold finished; round bars shall be ground or polished.

5. **TECHNICAL REQUIREMENTS:**

5.1 **Hardness:**

| Nominal Diameter or Distance<br>Between Parallel Sides<br>Inches | Hardness, max     |          |
|--|-------------------|----------|
|  | Brinell           | Rockwell |
|  | Up to 0.125, incl | 302      |
| Over 0.125 to 0.250, incl  | 277               | C 29     |
| Over 0.250 to 0.500, incl  | 241               | C 23     |
| Over 0.500   | 207               | B 95     |

- 5.2 **Decarburization:** Decarburization shall be absent unless steel is ordered to tolerances greater than those specified in Section 7, in which case the permissible maximum depth of decarburization shall be as agreed upon by purchaser and vendor.
- 5.3 **Microstructure:** Shall consist of uniformly distributed spheroidized carbides, free from carbide network and excessive amounts of lamellar pearlite.
6. **QUALITY:** The product shall be uniform in quality and condition, clean, sound, and free from foreign materials and from internal and external imperfections detrimental to fabrication or to performance of parts.
7. **TOLERANCES:** Unless otherwise specified, tolerances shall conform to the following:

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