SOCIETY OF AUTOMOTIVE ENGINEERS, Inc. 485 Lexington Ave., New York, N.Y. 10017

AEROSPACE MATERIAL SPECIFICATIONS

AMS 5070C
Superseding AMS 5070B
Issued 3-1-42
Revised 11-1-67

STEEL BARS AND FORGINGS
(0.18 - 0.23C) SAE 1022

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

2. FORM: Bars, forgings, and forging stock.

3. COMPOSITION:

	min	max
Carbon	0.18	0.23
Manganese	0.70	1.00
Phosphorus	--	0.040
Sulphur	--	0.050

3.1 When permitted by purchaser, manganese may be as low as 0.30.

3.2 Check Analysis: Composition variations shall meet the requirements of the latest issue of AMS 2259, paragraph titled Carbon Steels.

4. CONDITION: Unless otherwise ordered, the product shall be supplied in the following condition:

4.1 Bars: In a machinable condition and cold finished having hardness not higher than Brinell 207 or equivalent.

4.2 Forgings: As ordered.

4.3 Forging Stock: As ordered by the forging manufacturer.

5. TECHNICAL REQUIREMENTS: When ASTM methods are specified for determining conformance to the following requirements, tests shall be conducted in accordance with the issue of the ASTM method listed in the latest issue of AMS 2350.

5.1 Bars and Forgings:

5.1.1 Tensile Properties:

Tensile Strength, psi	55,000 min
Yield Strength at 0.2% Offset or at 0.0064 in. in 2 in. Extension Under Load (E = 30,000,000), psi	36,000 min
Elongation, % in 2 in. or 4D	22 min

5.1.1.1 For each 2000 psi in excess of 55,000 psi tensile strength, a reduction in elongation of 1% to a minimum elongation of 10% shall be allowed.

5.1.2 Grain Size: Predominantly 4 or finer with occasional grains as large as 2 permissible, ASTM E112, McQuaid-Ehn test.