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400 COMMONWEALTH DRIVE WARRENDALE PA 15096

AEROSPACE MATERIAL SPECIFICATION

AMS 5625A

Issued 8-15-55
Revised 10-1-81

STEEL BARS, HIGH EXPANSION
5.5Mn - 9.5Ni (0.55 - 0.65C)
Cold Drawn

This specification has been declared "NONCURRENT" by the Aerospace Materials Division, SAE, as of 10-1-81. It is recommended that this specification not be specified for new designs.

This cover sheet should be attached to the "A" revision of the subject specification.

AERONAUTICAL MATERIAL SPECIFICATIONS

SOCIETY OF AUTOMOTIVE ENGINEERS, Inc. 485 Lexington Ave., New York 17, N.Y.

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

2. FORM: Bars.

3. APPLICATION: Primarily for bolts and screws requiring a coefficient of expansion approaching that of aluminum alloys.

4. COMPOSITION:

		Check Analysis Under Min or Over Max	
Carbon	0.55 - 0.65	0.02	0.02
Manganese	5.00 - 6.00	0.04	0.04
Silicon	1.00 max	--	0.05
Phosphorus	0.040 max	--	0.005
Sulfur	0.030 max	--	0.005
Nickel	8.50 - 10.50	0.15	0.15

5. CONDITION: Cold drawn.

6. TECHNICAL REQUIREMENTS:

6.1 Tensile Properties:

ø Nominal Diameter or Distance between Parallel Sides, Inches	Tensile Strength, psi, min	Yield Strength at 0.2% Offset or at Extension Indicated (E = 29,000,000) psi, min	Extension Under Load in. in 2 in.	Elongation % in 4D min	Reduction of Area %, min
1.00 and under	125,000	100,000	0.0109	16	30
Over 1.00 to 1.063, incl	120,000	90,000	0.0102	16	30

6.2 Hardness: Material shall have hardness as follows or equivalent:

ø Nominal Diameter or Distance Between Parallel Sides, Inches	Hardness, Brinell
1.00 and under	255 - 331
Over 1.00 to 1.063, incl	248 - 331

6.3 Coefficient of Thermal Expansion: Material shall be capable of showing a coefficient of thermal expansion not lower than 11.5 x 10^{-6} per deg Fahr over the temperature range 72 - 600 F.