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400 COMMONWEALTH DRIVE WARRENDALE PA 15096

AEROSPACE MATERIAL SPECIFICATION

AMS 6541A

Issued 2-15-65
Revised 10-1-82

UNS K91122

STEEL BARS, FORGINGS, TUBING, AND RINGS
0.48Cr - 8.0Ni - 4.0Co - 0.48Mo - 0.09V (0.24 - 0.30C)
Premium Quality, Consumable Electrode Melted, Annealed

This specification has been declared "NONCURRENT" by the Aerospace Materials Division, SAE, as of 9-27-72. 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.

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This specification has been declared "CANCELLED" by the Aerospace Materials Division, SAE, as of 10-1-82. By this action subject specification number and title will be deleted from the active specification index of Aerospace Material Specifications.

This specification is under the jurisdiction of AMS Committee "E".

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

AEROSPACE MATERIAL SPECIFICATION

CANCELED

AMS6541A

Superseding AMS 6541

Issued 2-15-65

Revised 5-1-68

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0.48Cr - 8.0Ni - 4.0Co - 0.48Mo - 0.09V (0.24 - 0.30C)
Premium Quality, Consumable Electrode Melted; Annealed

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, mechanical tubing, flash welded rings, and stock for forgings or flash welded rings.
3. APPLICATION: Primarily for heat treated parts, such as pressure vessels, requiring through hardening to high strength levels, and where such parts may require welding.

4. COMPOSITION:

	min	max
Carbon	0.24	0.30
Manganese	0.10	0.35
Silicon	--	0.10
Phosphorus	--	0.010
Sulfur	--	0.010
Chromium	0.35	0.60
Nickel	7.00	9.00
Cobalt	3.50	4.50
Molybdenum	0.35	0.60
Vanadium	0.06	0.12
Copper	--	0.35

- 4.1 Check Analysis: Composition variations shall meet the requirements of the latest issue of AMS 2259, paragraph titled "Low Alloy Steels"; check analysis limits for cobalt shall be 0.05 under min or over maximum.

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

- 5.1 Bars, Forgings, Mechanical Tubing, and Flash Welded Rings: Annealed and descaled, having hardness not higher than Brinell 341 or equivalent, except that products ordered cold finished may have hardness as high as Brinell 352 or equivalent.

- 5.1.1 Flash welded rings shall not be supplied unless specified or permitted on purchaser's part drawing. When supplied, they shall be manufactured in accordance with the latest issue of AMS 7496, unless otherwise specified.

- 5.2 Stock for Forgings or Flash Welded Rings: As ordered by the forging or flash welded ring manufacturer.

6. 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.

- 6.1 Grain Size: Predominantly 5 or finer with occasional grains as large as 3 permissible, determined, unless otherwise specified, in accordance with ASTM E112, McQuaid-Ehn test.

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