AERONAUTICAL MATERIAL SPECIFICATION

Society of Automotive Engineers, Inc.
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AMS5651B

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STEEL, CORROSION AND HEAT RESISTANT
25Cr - 20Ni (SAE 30310)

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, forging stock, and mechanical tubing.

3. APPLICATION: Primarily for parts, such as turbine nozzle ring assemblies, and assemblies requiring both corrosion and heat resistance, and where such parts ø may require welding during fabrication. Parts and assemblies requiring oxidation resistance up to approximately 2000 F, but useful at the higher temperatures only when stresses are very low.

4. COMPOSITION:

		Check Analysis Under Min	Check Analysis Over Max
Carbon	0.08 max	--	0.01
Manganese	2.00 max	--	0.04
Silicon	0.30 - 0.80	0.05	0.05
ø Phosphorus	0.040 max	--	0.005
Sulfur	0.030 max	--	0.005
Chromium	24.00 - 26.00	0.25	0.25
Nickel	19.00 - 22.00	0.20	0.20
Molybdenum	0.50 max	--	0.03
Copper	0.50 max	--	0.03

5. CONDITION:

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5.1 Bars, Forgings, and Mechanical Tubing: Solution heat treated free from continuous carbide network.

5.1.1 Bars: Unless otherwise specified, shall be supplied hot finished, having hardness not higher than Brinell 187 or equivalent.

5.1.2 Tubing: Cold finished.

5.2 Forging Stock: As ordered by the forging manufacturer.

6. QUALITY: Material shall be uniform in quality and condition, clean, sound, and free from foreign materials and from internal and external defects detrimental ø to fabrication or to performance of parts.

7. TOLERANCES: Unless otherwise specified, tolerances shall conform to the following:

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7.1 Bars: The latest issue of AMS 2241 as applicable to hot finished.