AERONAUTICAL MATERIAL SPECIFICATION

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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 rings, and assemblies requiring both corrosion and heat resistance, especially where such parts 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
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:

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, except that bars under ø 0.25 in. in diameter or distance between parallel sides may be cold finished having hardness not higher than Brinell 229 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 to fabrication or to performance of parts.