AERONAUTICAL MATERIAL SPECIFICATION

Society of Automotive Engineers, Inc.
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STEEL SHEET AND STRIP, CORROSION AND HEAT RESISTANT
25Cr - 20Ni - 2Si

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

2. FORM: Sheet, strip, and plate.

3. APPLICATION: Parts and assemblies requiring both corrosion and oxidation resistance, and where such parts may require welding during fabrication. Parts and assemblies requiring oxidation resistance up to approximately 2000F, but useful at the higher temperatures only when stresses are low. Strength at elevated temperatures is similar to that of the 18-8 types. The specified silicon content improves oxidation resistance with some sacrifice of weldability and ductility.

4. COMPOSITION:

		Check Analysis	
		Under Min	or Over Max
Carbon	0.10 - 0.15	0.01	0.01
Manganese	1.00 - 2.00	0.04	0.04
Silicon	1.70 - 2.30	0.10	0.05
Phosphorus	0.040 max	--	0.005
Sulfur	0.030 max	--	0.005
Chromium	23.00 - 25.00	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: Unless otherwise specified, the material shall be furinshed in the following condition:

(a) Sheet. - Hot rolled, annealed and pickled (No. 1 Finish).

(b) Strip. - Cold rolled, annealed and pickled (No. 1 Strip Finish).

(c) Plate. - Hot rolled, annealed and pickled (No. 1 Finish).

6. TECHNICAL REQUIREMENTS: (a) Hardness. - Rockwell B70-95, or equivalent.

(b) Bending. - Material shall withstand, without cracking, bending at room temperature, through the angle indicated below, around a diameter equal to the thickness of the material with axes of bends both perpendicular and parallel to the direction of rolling:

Thickness Inch	Angles, Degree Min
0.249 and under	180
Over 0.249 to 0.749, incl	90