AERONAUTICAL MATERIAL SPECIFICATION

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STEEL SHEET AND STRIP, CORROSION AND HEAT RESISTANT
25Cr - 20Ni - 2Si

1. ACKNOWLEDGMENT: A vendor shall mention this specification number and its revision letter 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 2000 F, but useful at the higher temperatures only when stresses are very 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	0.12 max	- -	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:

5.1 Sheet: Cold rolled, solution heat treated and pickled. (No. 2D Finish).

5.2 Strip: Cold rolled, solution heat treated and pickled. (No. 1 Strip Finish).

5.3 Plate: Hot rolled, solution heat treated and pickled.

6. TECHNICAL REQUIREMENTS:

6.1 Hardness: Rockwell B 70-95, or equivalent.

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

Nominal Thickness Inch	Angle, Degrees Min
0.249 and under	180
Over 0.249 to 0.749, incl.	90