AERONAUTICAL MATERIAL SPECIFICATION

Society of Automotive Engineers, Inc.
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AMS 5532

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ALLOY SHEET, CORROSION AND HEAT RESISTANT
Iron Base - 20Cr - 20Ni - 20Co - 3Mo - 2W - 1Cb

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

2. APPLICATION: This material is intended for parts such as welded nozzle diaphragm assemblies, burner liner parts, tail pipes, exhaust cone assemblies, and other parts requiring high strength up to approximately 1700 F, and oxidation resistance up to 2000 F.

3. COMPOSITION:

		Check Analysis	
		Under Min or	Over Max
Carbon	0.20 max	--	0.01
Manganese	1.00 - 2.00	0.03	0.04
Silicon	1.00 max	--	0.05
Chromium	20.00 - 22.50	0.20	0.25
Nickel	19.00 - 21.00	0.15	0.20
Cobalt	18.50 - 21.00	0.15	0.20
Molybdenum	2.50 - 4.00	0.10	0.10
Tungsten	2.00 - 3.50	0.10	0.10
Columbium	0.75 - 1.25	0.05	0.05
Nitrogen	0.10 - 0.20	0.01	0.01
Iron	Remainder		

4. CONDITION: Unless otherwise specified, material shall be hot rolled, annealed, and pickled, having a surface appearance comparable to a commercial corrosion resistant steel No. 2D Finish.

5. TECHNICAL REQUIREMENTS: (a) Physical Properties. - Material shall have the following physical properties:

Tensile Strength, psi	100,000 - 130,000
Elongation, % in 2 in.	40 min

For widths 9 inches and over, tensile test specimens shall be taken with the axis perpendicular to the direction of rolling. For widths less than 9 inches, tensile test specimens shall be taken with the axis parallel to the direction of rolling.

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

Thickness Inch	Angle, Degrees Min	Bend Factor
Under 0.050	180	1
0.050 and Over	90	2