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AERONAUTICAL MATERIAL SPECIFICATION

Society of Automotive Engineers, Inc.

29 West 39th Street

New York City

AMS

5540

SHEET AND STRIP, CORROSION RESISTANT NICKEL CHROMIUM IRON ALLOY

1. **ACKNOWLEDGMENT:** A vendor must mention this specification number and its last revision in all quotations and when acknowledging purchase orders.

2. **COMPOSITION:**

Carbon	0.15 max
Manganese	1.00 max
Silicon	0.50 max
Chromium	12.00-15.00
Nickel	75.00 min
Iron	9.00 max

3. **CONDITION:** (a) Test pieces cut in any direction from this material shall conform to the following requirements:

Tensile Strength, lb per sq in.	100,000 max
Yield Strength, lb per sq in.	45,000 max
Elongation, % in 2 in.	35 min
Rockwell	B 76 - 88 or equivalent

Yield Strength and Elongation not required for sheet or strip under 0.020" in thickness.

(b) Test specimens shall withstand cold bending 180° over a diameter equal to the thickness, in any direction of the sheet, without cracking.

4. **QUALITY:** (a) This material must be uniform quality, fine grain, free from surface or internal defects and must not develop material defects during fabrication.

(b) All sheets and strips shall be straight, flat, clean, and smooth, free from seams, laminations, blisters, and other defects and shall have a good workmanlike finish.

5. **TOLERANCE:** The following variations in thickness are permissible. All dimensions are in inches:

<u>Ordered Thickness</u>	<u>Tolerance, plus or minus</u>
Up to 0.034	0.002
Over 0.034 to 0.062, incl.	0.003
Over 0.062 to 0.125, "	0.004
Over 0.125 to 0.187, "	0.005
Over 0.187 to 0.218, "	0.006
Over 0.218 to 0.234, "	0.007
Over 0.234	0.008