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Revised

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AERONAUTICAL MATERIAL SPECIFICATION

Society of Automotive Engineers, Inc.

29 West 39th Street

New York City

AMS

5510

STEEL SHEET AND STRIP, CORROSION RESISTANT 18 Chromium - 8 Nickel (Weldable)

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

Carbon	0.07 max
Manganese	2.50 max
Silicon	1.50 max
Phosphorus	0.03 max
Sulphur	0.03 max
Chromium	17.00 min
Nickel	8.00 min
Columbium	0.70 min
or	
Titanium	0.40 min
3. CONDITION: (a) Annealed and pickled.
(b) Test specimens cut in any direction shall conform to the following requirements:

Tensile Strength, lb/sq in., max	100,000
Elongation, % in 2 in., min	40
Rockwell Hardness, max	B 85

(c) Test specimens shall withstand cold bending in any direction of the sheet, without cracking, through an angle of 180° over a diameter equal to the thickness.
4. QUALITY: (a) This material must be uniform in quality, fine grain, free from surface or internal defects and must not reveal material defects during fabrication.
(b) All sheets or strips shall be straight, flat, clean, and smooth, free from seams, laminations, blisters, and other defects and shall have a good workmanlike finish.
5. EMBRIITLEMENT: Samples of the material, after being heated to 1200°F for two hours and air-cooled, shall withstand a 48-hour boiling in 10% copper sulphate, 10% sulphuric acid solution without showing evidence of intercrystalline surface attack. After immersion as above the samples must bend 180° over a diameter equal to the thickness without cracking.