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AERONAUTICAL MATERIAL SPECIFICATION

Society of Automotive Engineers, Inc.
29 West 39th Street
New York City

AMS
5570

STEEL SEAMLESS TUBING, 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 pieces cut from any section shall conform to the following requirements:

Tensile Strength, lb/sq in., max	100,000
Elongation, % in 2 in., strip, min.	35%
Elongation, % in 2 in., full section of tube, min	40%
Rockwell Hardness, max	B 90

(c) This tubing must be capable of being flanged to a diameter of 25% more than the original diameter without cracking.

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

(b) All material shall be sound, clean and smooth, free from seams, tears, grooves, laminations, slivers, pitting, and other injurious defects.

5. EMBRITTLEMENT: 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.