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AERONAUTICAL MATERIAL SPECIFICATION

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

AMS
5580

SEAMLESS TUBING, 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)Cold drawn, annealed.

(b)Test pieces cut in longitudinal direction shall conform to the following requirements:

Tensile Strength, lb/sq in., max	100,000
Tensile Strength, lb/sq in., min	80,000
Yield Strength, lb/sq in., max	45,000
Elongation, % in 2., min	35
Rockwell Hardness	B 76 - 88

(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, fine grain, 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. TOLERANCE: (a)The following variations are permissible in the mean outside diameter of tubes. All dimensions are in inches:

Nominal Outside Diameter	Tolerance, plus or minus
less than 0.5	0.005
0.5 to less than 1.5	0.0075
1.5 to 3.5, inclusive	0.010
3.5 to 4, "	0.015

(b)The following variations are permissible in the wall thickness of the tubes:

Nominal Inside Diameter (inches)	Tolerance, % of Wall Thickness
less than 0.5	± 15
0.5 and greater	± 10