AERONAUTICAL MATERIAL SPECIFICATION

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

AMS 5075

Issued 3/1/42
Revised

STEEL TUBING (SEAMLESS)
.22 - .28 Carbon

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

2. COMPOSITION:

		Individual Tube Check Analysis Over or Under
Carbon	0.22 - 0.28	0.01
Manganese	0.30 - 0.50	0.03
Phosphorus	0.04 max	0.008
Sulphur	0.05 max	0.008

3. GRAIN SIZE: Shall be fine and uniform in all parts of the tubing.

4. CONDITION: (a) Cold drawn and sufficiently stress relieved to conform to the following minimum physical properties:

Tensile Strength, lb per sq in.	55,000
Yield Strength (0.2% set), lb per sq in.	36,000
Equivalent Extension Under Load, inch in 2 in.	0.0064
Elongation, % in 2 in.	22

For each 2000 pounds per square inch in excess of 55,000 pounds per square inch tensile strength, a reduction in elongation of one per cent, to a minimum elongation of 10 per cent, will be allowed.

(b) The tubing shall be capable of developing the minimum physical properties specified in (a) when normalized by heating to 1625° - 1675°F and cooling in still air.

5. QUALITY: (a) This material must be aircraft quality, uniform in temper and must not reveal defects during the fabrication processes.

(b) The tubing shall have a good workmanlike finish conforming to the best practice for high quality aircraft material. It shall be smooth, clean, and free from heavy scale or oxide, burrs, seams, tears, grooves, laminations, slivers, pits, and other injurious defects. Surface imperfections such as handling marks, straightening marks, light mandrel and die marks, shallow pits, and scale pattern will not be considered as injurious defects, provided the imperfections are removable within the tolerances specified herein for diameter and wall thickness. The removal of surface imperfections is not required.