

AERONAUTICAL MATERIAL SPECIFICATION

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Revised

STEEL SHEET AND STRIP

1.8Ni - 0.8Cr - 0.35Mo - 0.2V (0.31-0.38C)

1. ACKNOWLEDGMENT: A vendor shall mention this specification number in all quotations and when acknowledging purchase orders.
2. FORM: Plate, sheet, and strip.
3. APPLICATION: Primarily for heat treated parts which require through hardening to tensile strength not lower than 180,000 psi and which may be welded after heat treatment.
4. COMPOSITION:

Check Analysis
Under Min or Over Max

Carbon	0.31 - 0.38	0.03	0.03
Manganese	0.60 - 0.80	0.04	0.04
Silicon	0.20 - 0.35	0.02	0.02
Phosphorus	0.040 max	--	0.01
Sulfur	0.040 max	--	0.01
Chromium	0.65 - 0.90	0.04	0.04
Nickel	1.65 - 2.00	0.05	0.05
Molybdenum	0.30 - 0.40	0.03	0.03
Vanadium	0.17 - 0.23	0.02	0.02

- 4.1 If size is over 100 sq in. in cross sectional area, the chemical composition shall be negotiated between purchaser and vendor.
5. CONDITION: Hot finished, pickled if necessary, annealed and oiled, having hardness not higher than Rockwell C 25, unless otherwise specified.
6. TECHNICAL REQUIREMENTS:
 - 6.1 Grain Size: Five or finer as determined on the rerolling slab, ASTM E19-46, Method a. A heat of steel predominantly five or finer, with grains as large as three is permissible.
 - 6.2 Decarburization: Material shall be free from decarburization to the extent that the increase in hardness from the surface to any point below the surface of an oil hardened specimen will not be more than the equivalent of two points on the Rockwell A scale for material 0.249 in. and under in thickness and will not be more than three points on material over 0.249 in. in thickness.
7. QUALITY: Product shall be suitable for use in aircraft. It shall be uniform in quality and condition, clean, sound, and free from foreign materials and from internal and external defects detrimental to fabrication or to performance of parts.

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