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AERONAUTICAL MATERIAL SPECIFICATION

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

STEEL WIRE SCREEN, CORROSION RESISTANT
18 Chromium - 8 Nickel - 2 Molybdenum

1. **ACKNOWLEDGMENT:** A vendor must mention this specification number and its last revision in all quotations and when acknowledging purchase orders.
2. **FORM:** Cold drawn wire or cold drawn wire screening.
3. **COMPOSITION:**

| | |
|------------|---------------|
| Carbon | 0.10 max |
| Manganese | 2.50 max |
| Silicon | 0.75 max |
| Phosphorus | 0.03 max |
| Sulphur | 0.03 max |
| Chromium | 16.00 - 18.00 |
| Nickel | 9.00 - 14.00 |
| Molybdenum | 2.00 - 3.00 |
4. **CONDITION:** (a) Annealed and free from continuous carbide network.
(b) The wire shall be capable of being bent 180° flat on itself without cracking.
5. **QUALITY:** (a) The wire shall be uniform in quality, cylindrical, clean, and free from kinks, twists, scrapes, splits, cold shuts, and other injurious defects.
(b) The surface must have a bright, smooth cold-drawn finish, free from pits, abrasions, and other surface imperfections.
6. **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.
7. **TOLERANCE:** The following variations in thickness are permissible. All dimensions are in inches:

| <u>Diameter</u> | <u>Tolerance</u> | |
|---------------------------|------------------|--------------|
| | <u>plus</u> | <u>minus</u> |
| 0.025 or less | 0.000 | 0.0005 |
| 0.026 to 0.032, inclusive | 0.000 | 0.001 |
| 0.033 to 0.090, " | 0.000 | 0.002 |
| 0.091 to 0.180, " | 0.000 | 0.003 |

8. **REPORTS:** The manufacturer shall furnish three copies of a certified report of the chemical analysis of each shipment. This report shall include the purchase order number, material specification number, size, quantity, and part number if parts are supplied.