AERONAUTICAL MATERIAL SPECIFICATION

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SPRAYED METAL FINISH
Aluminum

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

2. USE: Primarily for air-cooled cylinder assemblies, but may be used on other parts where applicable.

3. PREPARATION: (a) Completely remove all oil and grease by the vapor degreasing method, or by other similar methods of equal cleaning power.

(b) Blast with No. 18 (0.039"), No. 20 (0.033") or No. 25 (0.028") refractory grit, or with No. 30 (0.023"), No. 35 (0.020") or No. 40 (0.017") hard, angular silica or flint sand, which shall be free from oil, grease, dust, moisture, or other foreign substances. The above designations are standard sieve numbers and sieve openings (in inches) in accordance with ASTM E11-39.

(c) No. 35 (0.020") steel grit may be used for blasting steel but shall not be used on aluminum alloys.

(d) If compressed air is used as the blasting force, it shall be essentially free from oil and water.

(e) Extreme care shall be exercised that products of corrosion and foreign materials are thoroughly removed by the blasting and the surface roughened to attain a good bond for the sprayed aluminum. Remove all dust and particles after blasting by blowing with high pressure clean dry air.

(f) Blasted surfaces shall be kept absolutely clean and handled only with protected hands.

4. APPLICATION: (a) Sprayed metal coating shall be applied as soon as possible after the surfaces have been blasted.

(b) The aluminum shall be applied with an approved metal spray gun in such a manner as to insure complete coverage of the entire surface without depositing an unnecessarily heavy coating.

(c) All surfaces exposed after the parts are assembled shall be sprayed with metallic aluminum unless otherwise noted.

5. QUALITY: Sprayed coating shall be of fine texture, close-grained, as dense as possible, and free from unatomized particles of metal.

6. CORROSION RESISTANCE: (a) The effectiveness of the sprayed metal coating shall be determined by subjecting representative parts to the salt spray corrosion test conducted in accordance with the general procedure outlined in ASTM B117-41T, using specifically a 20% by weight aqueous sodium chloride solution and an operating temperature of 95°±2°F.

