AERONAUTICAL MATERIAL SPECIFICATION

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LEAD AND INDIUM PLATING

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

2. APPLICATION: To improve the performance and prevent corrosion of bearings, or of other parts where applicable.

3. TECHNICAL REQUIREMENTS:

3.1 The surfaces to be plated shall be chemically clean immediately before plating.

3.2 When specified by purchaser, the surfaces to be plated shall be blasted lightly with fine sand to obtain a matte finish.

3.3 If this specification number appears on the drawing, the part shall be plated all over, unless the surfaces to be plated are so indicated. Unless otherwise specified, parts shall be lead and indium plated only after all other manufacturing operations have been completed.

3.4 Lead Plating:

3.4.1 The plating process consists of electrodeposition of lead from a suitable lead solution directly on the cleaned surfaces.

3.4.2 The lead plated parts shall be rinsed immediately in running tap water and transferred directly to the indium plating operation. If indium cyanide is to be used, the lead plated parts, after rinsing as above, shall be immersed in a suitable sodium cyanide solution to neutralize any remaining traces of acid lead solution and rinsed again in running tap water.

3.5 Indium Plating:

3.5.1 The plating process consists of electrodeposition of indium from a suitable indium solution on the lead plated surfaces still wet with water from the final rinsing in 3.4.2 above.

3.5.2 The lead and indium plated parts shall be rinsed in tap water (preferably contained in a small tank if the indium is to be recovered later), then rinsed thoroughly in running tap water, dipped in hot water if practicable, and dried with a clean, dry air blast.

3.6 The dried lead and indium plated parts, except those which are carburized, shall be immersed in an oil bath maintained at a temperature of 340-350 F, allowed to attain that temperature and held at heat for approximately 2 hours, unless otherwise stipulated, to diffuse the indium into the lead. Hardened parts, including carburized parts, which will decrease in hardness if heated to 350 F, shall be treated by a method approved by purchaser.