AERONAUTICAL MATERIAL SPECIFICATION

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

AMS 2408

Issued 11-1-46
Revised

T I N P L A T I N G

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

2. PURPOSE: Primarily intended for providing a surface for soldering, preventing galling or seizing of metal surfaces or preventing the formation of case during nitriding. Corrosion resistance is improved by tin plating.

3. PREPARATION: (a) Before placing parts in plating solutions they shall have chemically clean surfaces, prepared with minimum abrasion, erosion, or pitting.

(b) Parts having hardness higher than Rockwell C45 and which have been ground after heat treatment should be suitably stress-relieved before cleaning for plating. Temperatures to which parts are heated shall be such that maximum stress-relief is obtained without reducing hardness of parts below drawing limits.

4. PROCEDURE: (a) Tin shall be electrodeposited directly on the basis metal from an alkaline stannate solution, a stannous sulphate solution, or a stannous fluoborate solution.

(b) Unless otherwise specified, after plating, rinsing and drying, all parts having hardnesses higher than Rockwell C45 shall be suitably heated to relieve possible embrittlement. Temperatures to which parts are heated shall in no case be so high as to reduce the hardness of the basis metal below drawing limits but shall be not less than 300 F for not less than one hour, unless otherwise specified. At higher temperatures, the time may be shortened.

5. THICKNESS: (a) Plate thicknesses may be specified by this specification number and a suffix number designating the minimum thickness in ten thousandths of an inch; thus AMS 2408-1 designates a thickness of 0.0001-0.0003 in., AMS 2408-6 designates a thickness of 0.0006-0.0008 in., etc. A tolerance of +0.0002 in. in thickness is allowed, unless otherwise specified.

(b) Where "tin flash" is specified, the thickness of tin shall be approximately 0.0001 in.

(c) Requirements for plate thickness shall not apply to small holes or deep recesses unless so specified on drawings.

(d) Thickness of tin plate shall be determined by micrometer measurement, stripping or dropping tests, or by magnetic methods. These methods shall be calibrated by microscopic examination.

Note: (A) Parts plated to provide a surface for soldering should have a "flash" coating of tin.

(B) Parts plated to prevent galling or seizing should have a plate thickness of 0.0002-0.0004 in.