AERONAUTICAL MATERIAL SPECIFICATIONS

SOCIETY OF AUTOMOTIVE ENGINEERS, Inc. 485 Lexington Ave., New York 17, N.Y.

AMS 2550

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Revised

TREATMENT OF SHEET METAL PARTS, STEEL, CORROSION RESISTANT

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

2. PURPOSE: To provide maximum attainable corrosion resistance of sheet metal parts, such as brackets, spacers, and washers, made of martensitic corrosion resistant steels, usually AMS 5504 or AMS 5508 and having hardness not higher than Rockwell C 40. Not recommended for use on parts subject to impact in service.

3. PREPARATION: All forming operations, all welding, and all brazing at temperatures above the austenitizing temperature of the steel shall be completed prior to heat treatment of the parts when heat treatment is specified and prior to cleaning of all parts.

4. PROCEDURE:

4.1 Heat Treatment: Parts requiring heat treatment to specified hardness or strength shall be heat treated as follows:

4.1.1 Heating Equipment: Furnaces may be any type ensuring uniform temperature throughout the parts being heated and shall be equipped with, and operated by, automatic temperature controllers. The heating medium or atmosphere shall cause no surface hardening or softening.

4.1.2 Hardening: Parts shall be uniformly heated to the proper temperature for hardening, held at heat for 10 - 15 min., and quenched in oil or cooled in air. Elapsed time between hardening and tempering shall be as short as practicable.

4.1.3 Tempering: Hardened parts shall be tempered by heating uniformly to the temperature necessary to produce the specified hardness, holding at heat for not less than 1 hr, and cooling.

4.2 Cleaning: Parts shall be cleaned as follows:

4.2.1 Abrasive Blasting: All brazed parts and assemblies, and all other parts and assemblies containing recesses, pockets, overlaps, etc., in which acids could be trapped, shall be blasted with a substantially iron-free abrasive, preferably alumina or silica sand, applied either dry or as a slurry. Blasting shall be performed in such a manner as to avoid undesirable roughening of surfaces. Such parts shall receive no further treatment. Parts which have been wet blasted shall be thoroughly washed and dried. Abrasive blasting may be used on other parts as an aid to removal of heat treatment scale; the above restrictions on types of abrasive do not apply to such parts.

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