AERONAUTICAL MATERIAL SPECIFICATION

Society of Automotive Engineers, Inc.
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AMS 2672

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ALUMINUM BRAZING

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

2. APPLICATION: Joining aluminum and selected aluminum alloys.

3. PROCESS REQUIREMENTS:

3.1 Surface Condition: Surfaces to be joined shall be cleaned by suitable means prior to assembly.

3.2 Fluxing: Unless otherwise specified, flux conforming to AMS 3412 shall be applied so that surfaces to be joined are sufficiently coated to ensure the specified bond between the parts after brazing.

3.3 Assembly: Parts to be joined shall be assembled so that clearances between mating surfaces are within tolerances specified on drawing. Assembly should be supported so that the parts will be in proper alignment after brazing.

3.4 Brazing Material: Unless otherwise specified, aluminum brazing alloy shall conform to AMS 4184. Sufficient brazing alloy shall be placed within, or in close proximity to, the joint. Except in the case of dip brazing, the brazing alloy shall be coated with flux.

3.5 Joining: Unless otherwise specified, heating and joining may be effected by any of the following methods: furnace, torch or molten flux. Parts shall be heated until brazing alloy melts and joints are formed. Further heating shall be kept to a minimum. The temperature to which parts are heated for brazing shall be controlled so that incipient melting of the parts does not occur.

3.6 Cooling: After brazing, assemblies shall be cooled in air in such manner as to prevent cracks and minimize internal stress, distortion and oxidation. If solution heat treatment is to be done in conjunction with brazing, cooling procedures may be revised accordingly.

3.7 Flux Removal: After brazing and cooling, flux shall be removed from the parts by a method not injurious to the surface finish.

4. QUALITY:

4.1 Exterior examination of joints shall show a generous fillet of brazing alloy at the end of the joint at which the brazing alloy was introduced, and, when practical, complete penetration of brazing alloy in the joint.

4.2 The area joined by brazing alloy shall be not less than 80% of the area of the mating portions of the assembly. Method for determining that this requirement is met shall be as agreed upon by purchaser and vendor.

4.3 Surfaces of parts shall be free from excessive brazing alloy.