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

AMS 2672B

Issued 11-1-49
Revised 7-15-61

ALUMINUM BRAZING

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

2. APPLICATION: Joining aluminum and selected aluminum alloys.

3. PROCESS REQUIREMENTS:

3.1 Surface Condition: The mating surfaces and adjacent areas of all parts to be ø joined shall be thoroughly cleaned prior to assembly to remove all oil, grease, paint, dirt, oxide, and other foreign materials.

3.2 Fluxing: Unless otherwise specified, flux shall be applied so that surfaces to be joined are sufficiently coated to ensure the specified bond between the parts after brazing; if preplaced brazing alloy inserts are used, they shall also be ø coated with flux. Flux for torch brazing shall conform to the latest issue of AMS 3412; flux for furnace brazing shall conform to the latest issue of AMS 3412 or AMS 3416. The flux may be used dry or mixed with water or alcohol. Application of flux is not required when parts are to be joined by molten flux (dip) 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 ø supported so that the parts will be in proper alignment after brazing. Tack welding for fixturing shall be used only when specified or permitted on the drawing. On closed assemblies, vent holes shall be provided as specified.

3.4 Brazing Material: Unless otherwise specified, aluminum brazing alloy shall conform to the latest issue of AMS 4184 or AMS 4185. Either alloy may be used for torch or furnace brazing; AMS 4185 shall be used for molten flux (dip) brazing. ø Sufficient brazing alloy shall be placed within, or in close proximity to, the joint, except when parts to be joined are fabricated from clad brazing sheet such as AMS 4054 or AMS 4055 or when the brazing alloy is hand fed during torch brazing.

3.5 Joining: Unless otherwise specified, joining may be effected by torch, furnace, or molten flux (dip) heating; when joining is effected by molten flux heating, the requirements of the latest issue of AMS 2673 shall be met. Parts shall be heated, preferably rapidly, until the brazing alloy melts and joints are formed. ø In torch brazing, parts shall be held at heat until clean brazing alloy is visible, when joint configuration permits, at the end of the joint opposite that at which the alloy was introduced, but further heating shall be kept to a minimum. In furnace and molten flux brazing, the brazing temperature and time at heat necessary to form the joints shall be preestablished such that when parts are removed from their respective heat sources, clean brazing alloy is visible, when joint configuration permits, at the end of the joint opposite that at which the alloy was introduced. The temperature to which parts are heated for brazing shall be controlled so that incipient melting of the parts does not occur.

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