AEROSPACE
MATERIAL SPECIFICATIONS

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AMS 2665B
Superseding AMS 2665A
Issued 12-1-47
Revised 11-1-67

SILVER 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 iron, copper, and nickel alloys by the use of silver alloy filler metal.

3. PROCESS REQUIREMENTS:

3.1 Surface Condition: The surfaces to be joined shall be clean prior to assembly. Surfaces shall not be highly polished.

3.2 Fluxing: Unless otherwise specified, flux conforming to AMS 3410 shall be applied so that the surfaces to be joined are completely coated.

3.3 Assembly: The parts to be joined shall be assembled so that the clearance between mating surfaces are within the tolerances specified on the drawing. (Note. A clearance of 0.0015 inch on a side is considered optimum). The assembly should be supported so that the parts will be in proper alignment after brazing.

3.4 Brazing Filler Metal: Unless otherwise specified, brazing filler metal shall conform to AMS 4770. Sufficient filler metal shall be placed within, or in close proximity to, the joint.

3.5 Joining: Unless otherwise specified, heating and joining may be effected by any of the following methods: furnace, electrical induction, electrical resistance, molten salt, molten brazing alloy, torch, or burner. Unless otherwise specified, furnace brazing shall be performed in a suitable protective atmosphere. Parts shall be heated until the brazing filler metal melts and the joint is formed. Further heating shall be held to a minimum. For furnace heating, the furnace temperature during brazing shall not exceed 1350 F (732 C), unless otherwise specified. For immersion heating, the temperature of the immersion medium shall not exceed 1250 F (677 C), unless otherwise specified. Furnace brazing and immersion brazing may be used only when hardness of the detail parts will not be reduced below the drawing limits.

3.6 Cooling: After brazing and prior to handling, assemblies shall be cooled for a sufficient time to allow the filler metal to solidify and in such a manner as to prevent cracks and minimize internal stress, distortion, and scaling.

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

4. QUALITY:

4.1 Visual examination of joints shall show at all joint edges a complete line or ring of brazing filler metal.

4.2 The area joined by filler metal shall be not less than 80% of the area of the mating portions of the assembly. The method of determining that the above requirement is met shall be as agreed upon by purØ chaser and vendor. When specified on the drawing, any part from a lot, selected at random, shall pass a proof test.