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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 brazing alloys.

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 Material: Unless otherwise specified, silver brazing alloy shall conform to AMS 4770. Sufficient brazing alloy 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. Furance brazing shall be performed in a suitable protective atmoshpere. Parts shall be heated until the brazing alloy 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 unless otherwise specified. For immersion heating the temperature of the immersion medium shall not exceed 1250 F 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 brazing alloy 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 silver brazing material.

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