



**AWS C3.7 Official Interpretation**

**Subject:** Furnaces

**Document:** C3.7M/C3.7:2005, *Specification for Aluminum Brazing*

**Code Provision:** C3.7: Page 4, Subclause 5.3.2.1 (Aluminum Brazing Furnaces)

**Inquiry:** The vacuum furnaces we possess for brazing are controlled and operated in accordance with SAE/AMS 2750, *Pyrometry*, and the furnace class is "2." So, we perform TUS (Temperature Uniformity Survey) to verify that the temperature uniformity is within the range of +/- 11°F [ +/- 5.5°C] with nine thermocouples.

On the other hand, subclause 5.3.2.1 requires temperature uniformity as below:

- 1) Within the range of +/-20°F [ +/-11°C] before thermal equilibrium has been reached.
- 2) Within the range of +/-5°F [ +/-3°C] after thermal equilibrium has been reached.

If we braze in accordance with AWS C3.7M/C3.7:2005, *Specification for Aluminum Brazing*, do the vacuum furnaces we possess need to be performed TUS to verify the above two requirements?

Our interpretation is:

The vacuum furnaces that we possess do not need to be applied the requirement of subclause 5.3.2.1 because subclause 5.3.2 states that "the requirements of 5.3.2 are considered met if the requirement is controlled and operated in accordance with SAE/AMS 2750."

**Response:** The requirements of subclause 5.3.2.1 do not need to be met if the furnace is controlled and operated in accordance with AMS 2750, *Pyrometry*, Class 1. Furnace Class 2 does not comply with AWS C3.7M/C3.7.