Brazing & Soldering

APPLICATION DATA

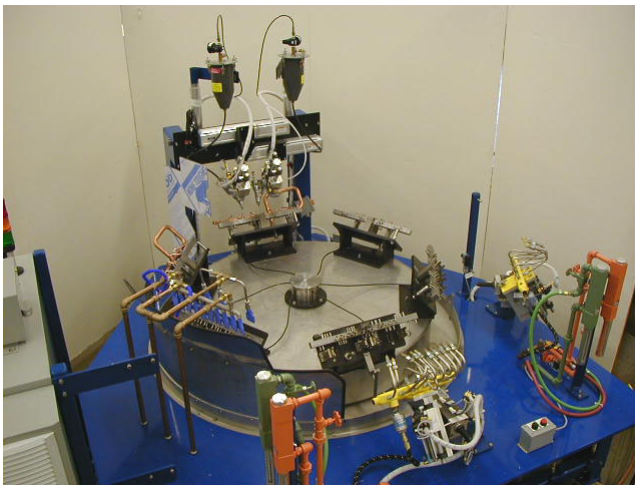
No. 527 – Manifold Assembly

Brazing Machine Specifications

- **Assembly**: 3/8" O.D. copper tubes to 7/8" O.D. header; (4) assembly styles – 5, 7, 9, 11 tubes.
- **Paste Filler Metal**: Fusion CTT-1310-940, copper bearing, fluxless, 1340ºF liquidus.
- **Production Rate**: 120-200 per hour, two operators (varies depending on part style).
- **Dimensions**: 110" X 110" welded steel base, 50" diam. Aluminum toolplate with stainless steel cover, Weiss TC320 barrel cam indexer.
- **Utilities**: Electrical (440 VAC, 3 PH), Control voltage 24VDC, Gas (86 CFH), Oxygen (110 CFH), Compressed air (5 CFM), water and drain.
- **PLC**: Allen Bradley SLC500 with Panel View 550 operator interface.
- **Options**: Nitrogen purged through assembly during heating to control internal oxidation. Three level heat control (idle, low, high).

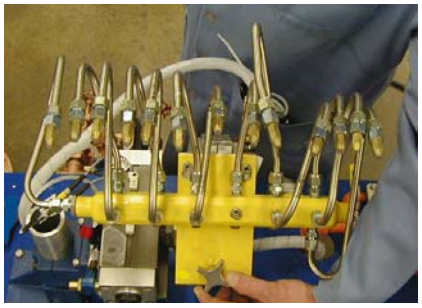
Sequence:

1. Operator 1 loads header and outside tubes into fixture; unloads brazed assembly.
2. Two, single axis robots control applicator guns to apply paste deposits at joint areas.
3. Operator 2 loads remaining tubes in position.
4. Gas/oxygen burner pattern begins heating cycle.
5. Second, gas/oxygen burner pattern completes heat cycle.
6. Water cool assembly and fixture.



Single axis robots guide applicator guns to dispense paste filler metal to tube joints.

Gas/oxygen flames are gas flux enriched to minimize copper discoloration.



Quick-change heat manifolds permit easy transition to braze four part styles.

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