

FCAL1 Process Sheet

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Process Spec: 1.3.3.1.1.2-1 – Visual Tube Inspection

Components: Copper Tube [4.2.7.1.2.1]

Material: Nitril Gloves

Tooling:

Location: UofA PAS 180 – Garage/Granite Table

QC Form: FCal1-QC-1.3.3.1.2-1 – Tube Traveler
FCal1-QC-1.3.3.1.2-2 – Rolling Inspection

Process:

1. Put on Nitril gloves before handling tubes.
2. Unpack tubes from vendor.
3. Visually inspect tube ends held in bunches.
4. Set aside tubes with visually out-of-round ends in well-marked Reject bin.
5. Move tube bunch to granite surface plate for inspection by rolling.
6. Roll each tube (about 10 turns) on granite surface plate, inspecting for dents dings, cracked tubes, bent tubes, curved tubes, and out-of-roundness.
7. Dented tubes, dinged tubes, cracked tubes and bent tubes to be set aside in well-marked Reject bin.
8. Out-of-straight tubes to be accepted or rejected according to tolerance given in tube drawing.
9. Record date and name of inspector on traveler form for batches of approximately 1,000 tubes.

Remarks:

- Process applies to acceptance inspection (1 box selected from batch) and systematic inspection of all tubes, except for item 9 (only for systematic tube inspection).

Global Process: [1.3.3.1.1.1](#) – Tube Acceptance Inspection
[1.3.3.1.1.2](#) – Tube Processing

Previous: none

Follow-Up: [1.3.3.1.1.1-1](#) – Tube Dimension Inspection
[200 extracted tubes]
[1.3.3.1.1.2-2](#) – Tube De-Burring
[all accepted tubes]