

Cooling Connections Testing and Development: Progress Update

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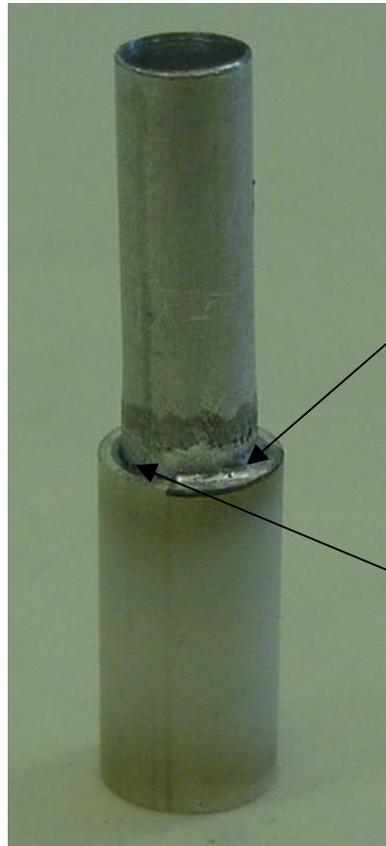


Ceramic Break Brazing

- **LBL material sciences division created ag/al eutectic alloy**
 - Melts at 566 C
 - However, joint may be brittle (okay for ceramic braze)
- **Ceramic preparation**
 - Metallized with ti and ag
 - Braze gap approximately 25 microns
- **Braze Attempts**
 - Brazes made at 580 – 625 C, for periods of 5-10 minutes
 - Heating rate 10 C/Min
 - No soak below braze temp (may be a problem)
 - 580 c appears to be most promising temperature

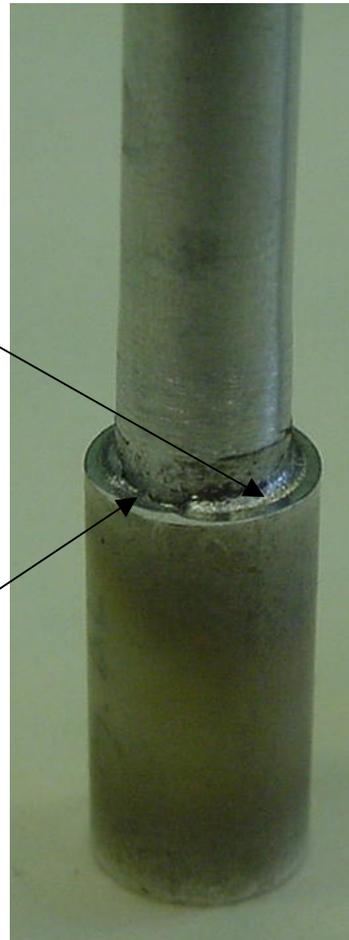
Pixel Detector

Brazing Results



Ample Fillet

Joint starved



Some joints showed good wetting in some areas, but poor wetting in other areas.

Joints are being sectioned to undergo analysis

Braze cycle may need a soak just below braze temp to even out temperatures