

TCDLA brazing test – January 2018

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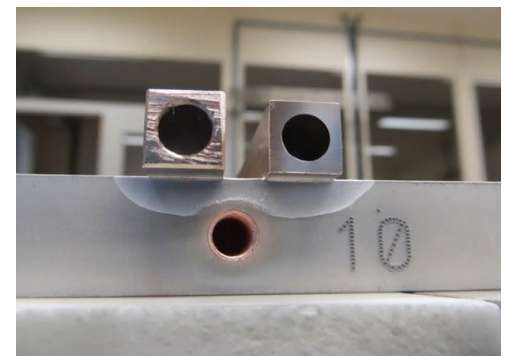
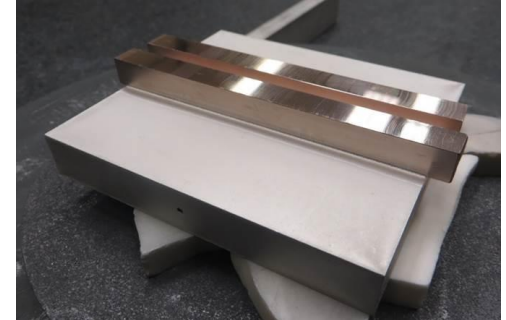


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Summary

Last test in date with Glidcop that was subjected to:

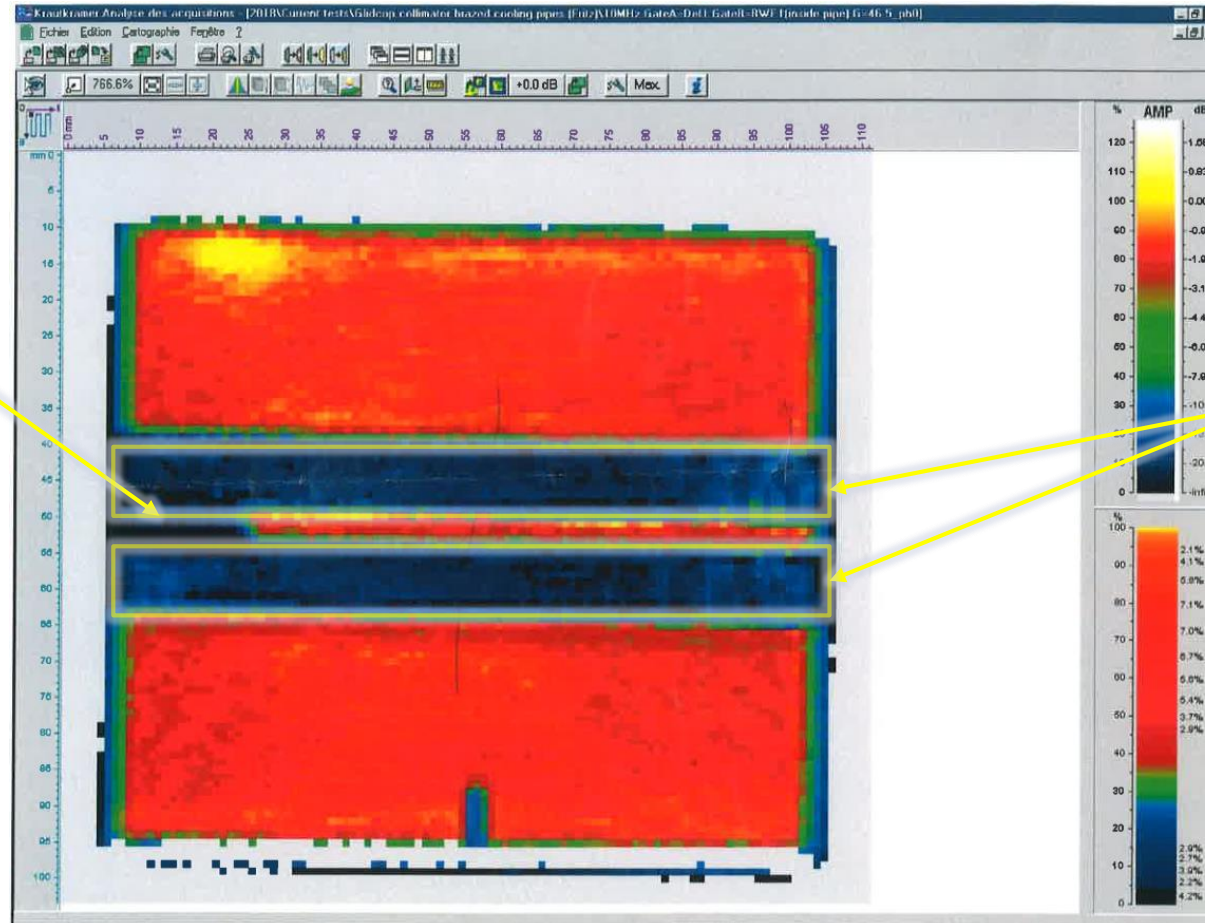
- a. ED30''
- b. Cu
- c. HT 700°C
- d. Ni without brighter, new bath
- e. HT Brazing thermal cycle
- f. Brazing



→UT is very good (see scan on next slide)

→Two metallographic cuts close to the edge and at centre were carried out to check.

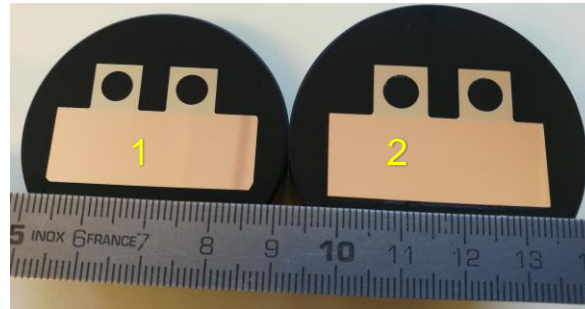
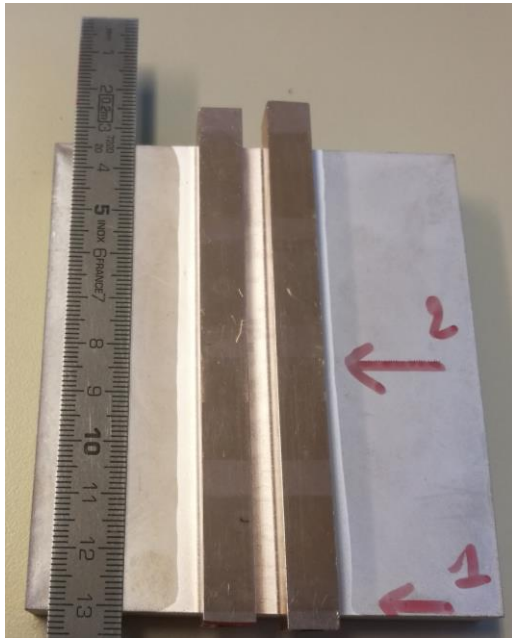
UT scan



Threaded hole

brazing interface

Metallographic cuts



Two transverse cross sections

- 1 close to the edge
- 2 at centre

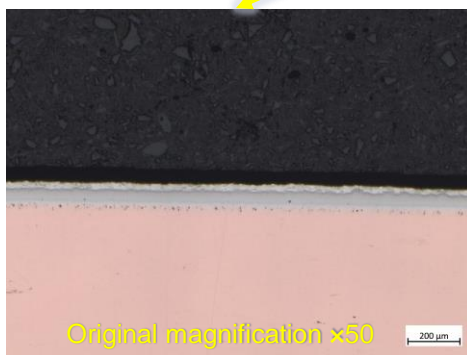
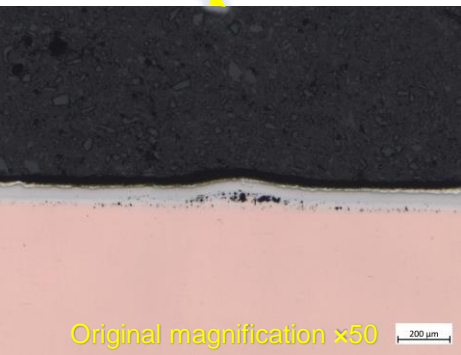
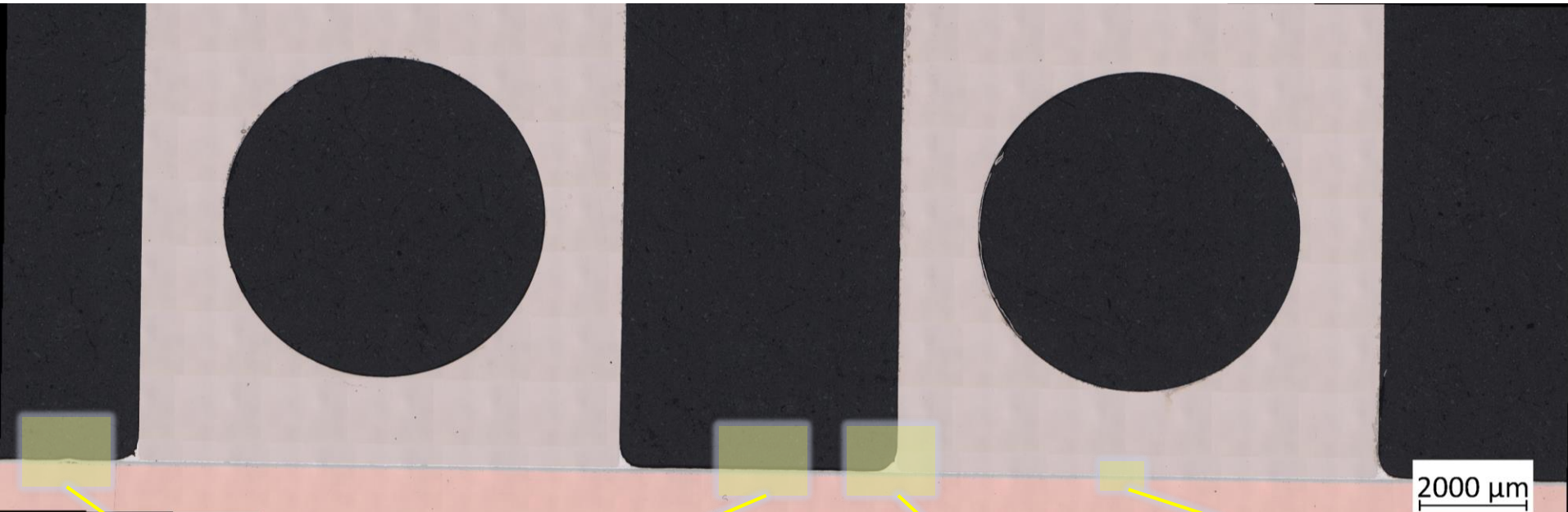
Plane grinding down to grit P1200 and polishing down to 1 μ m. No etchant was used.

All micrographs taken with a Zeiss AXIO Imager optical microscope under bright field illumination.

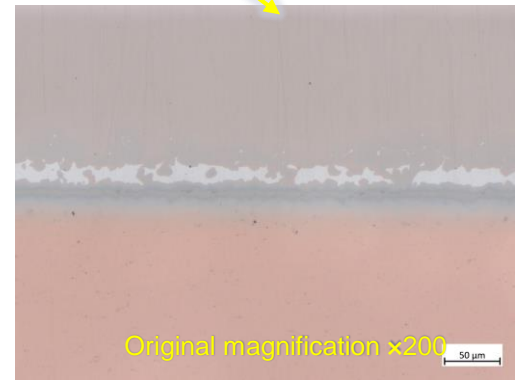
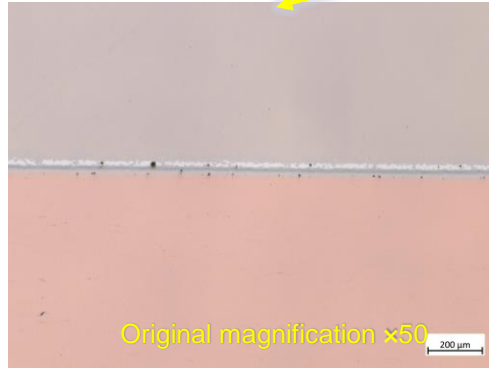
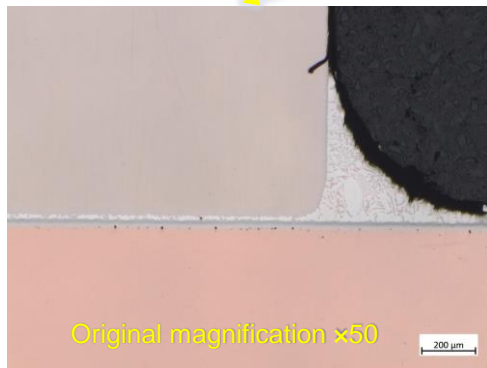
Observations:

- Cut 1: good brazing interface free from imperfections (rare micro-pores). Micro-porosities are noticed just below the Ni layer,
- Cut 2: good brazing interface free from imperfections (rare micro-pores). Micro-porosities are noticed just below the Ni layer,
- Thicker Ni layer close to the edge of the piece.

Cut 1



Cut 2





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