

**EUROPEAN CONCERTED ACTION
ON
“Advanced Solder Materials for High Temperature Application –
HISOLD”**

COST MP0602

Expression of Interest:

1. Title of Project or Project Theme

Aspects of lead-free soldering of litz copper wires at high temperatures

2. Full name of proposer, address, telephone, fax and e-mail details

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3. Outline of activity or theme of work to be undertaken

1. Defining the case of soldering of litz wires at high temperatures and the problems existing on the process.
2. Copper dissolution in different solder alloys at different temperatures. Literature survey and experimental work.
3. Reliability testing of test samples soldered with different suitable solder alloys
4. Survey of coatings suitable for wire insulating. If the coating could be burnt away at lower temperatures than 400 °C, copper dissolution rate would be slower.

4. Resources available in laboratory/institution of proposer

- Electronics manufacturing equipment (paste printing, reflow soldering, wave soldering, rework stations, ...)
- X-ray microscope
- Environmental test equipment like climate chamber and vibration test equipment
- ...

5. Skills or expertise sought from other partners – if any.

We would like to get a partner(s) to enlarge and deepen the point of view of this study.

6. Any other relevant information not covered in sections above.

Due the practical nature of the research theme, we believe that industrial interest exists.