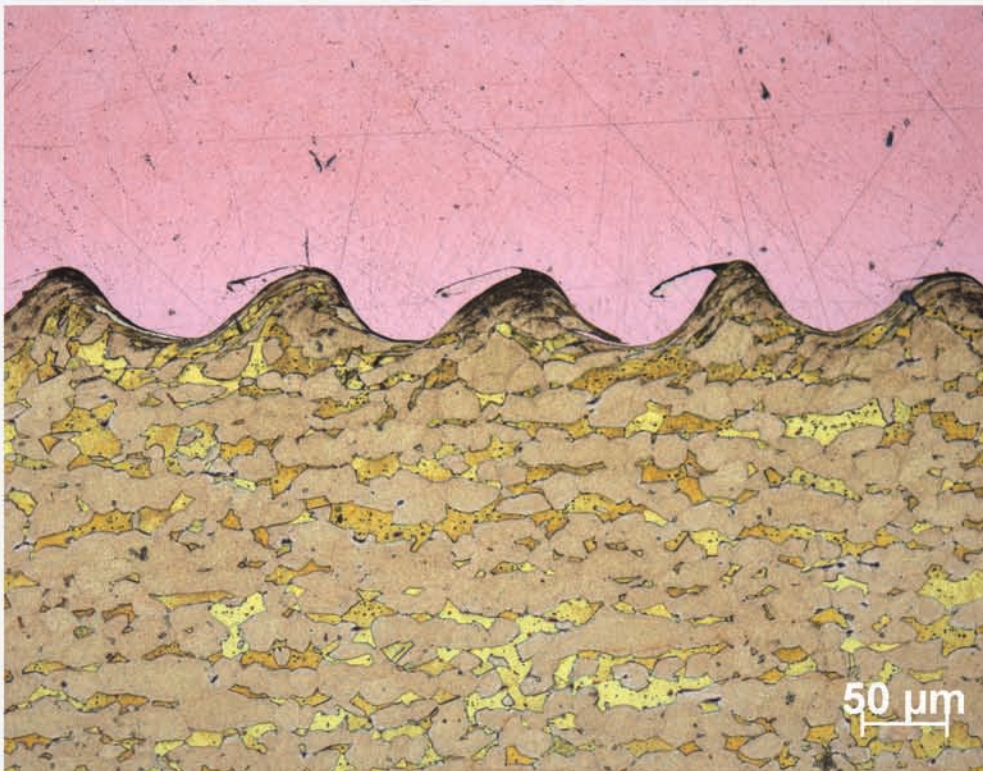


JOIN'EM

INDUSTRIAL TECHNOLOGIES FOR ADVANCED JOINING AND ASSEMBLY PROCESSES FOR MULTI-MATERIALS



JOIN'EM PROJECT ADDRESSES THE INCREASING REQUIREMENTS OF INDUSTRIAL ENTERPRISES TO WELD DISSIMILAR MATERIALS

New EU project to facilitate aluminium-copper joining by electromagnetic fields resulting in increased performance, efficiency, and environmental benefits to Europe's industry.

ABOUT:

The JOIN'EM project addresses current shortcomings of more traditional welding technologies when joining dissimilar metal combinations, and it focuses on creating a cost-effective and practical way of joining aluminium and copper. The implementation of electromagnetic pulse welding will allow designers to combine or integrate metals.

The new joining solutions will also help to implement improved lightweight designs with further weight reduction and better performance. This will decrease energy consumption and greenhouse gas emissions, an increasingly significant requirement for industries, such as car manufacturing.



JOIN'EM will develop and demonstrate flexible and cost-effective joining processes for dissimilar metal combinations, for which currently available conventional welding technologies have proved inadequate.

JOIN'EM WILL:

- Develop innovative methods for joining dissimilar metals, which will allow improved manufacturing of new products. These innovations will also deliver increased product reliability, a longer lifetime of the components and welds, combined with a reduction of maintenance costs;
- Facilitate an increased use of dissimilar metal combinations;
- Increase productivity and reduce costs for realising hybrid components using electromagnetic pulse welding: joining operations are performed faster, more efficiently and robustly, with a less expensive production process and better-quality final products;
- Achieve lower product life cycle costs;
- Enable the use of the environmentally-friendly electromagnetic pulse welding process. This process needs no fluxes or shielding gases and produces no harmful smoke, fumes or slag, thus reducing the overall environmental impact.
- Compare the joint performance with conventional alternatives, as well as novel testing methods.

