

Electromagnetic welding



Description

Substitution of current full copper parts by hybrid parts. Such components will be joined by electromagnetic pulse welding (EMW).

Objectives

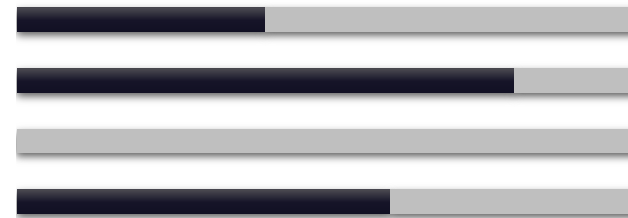
- To evaluate environmental impacts of tool materials and systems developed for the new joining technologies compared to the conventional ones and to determine energy, materials and wastes associated over their entire life cycle,
- To identify and evaluate solutions to completely disassemble the hybrid components of the joints produced to recycle the individual base materials so that only the small joint area has to be discarded.

Activities

- Sustainability assessment:
 - Life-Cycle Assessment LCA.

Challenges

- Input data complex to collect
- Technical knowledge required
- Legal & legislation barriers
- Technology readiness level



Expected outcomes

- Decrease high-costs and critical materials consumption,
- + 30% product performance (with unchanged final price),
- Reduction of fumes and waste in welding techniques.

