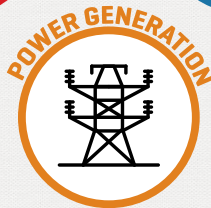
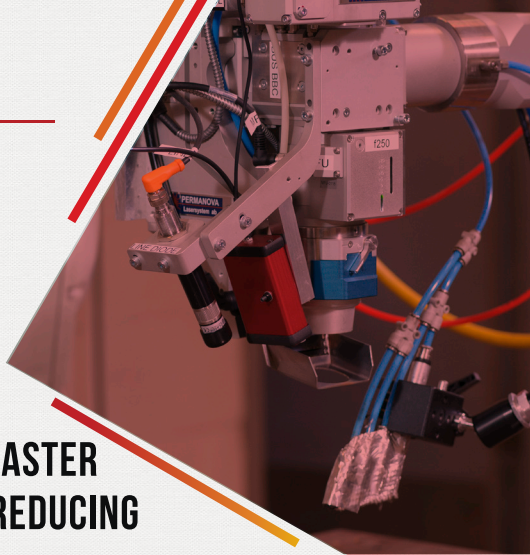


RADICLE

THE **RADICLE** PROJECT
WILL HELP COMPANIES
ACROSS DIFFERENT
INDUSTRY SECTORS
PRODUCE LASER WELDED
COMPONENTS SMARTER, FASTER
AND TO HIGHER QUALITY, REDUCING
INSPECTION COST:



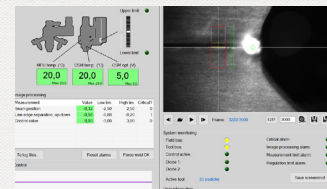
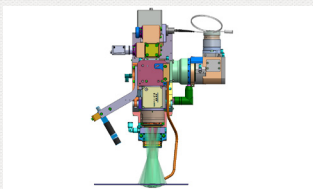
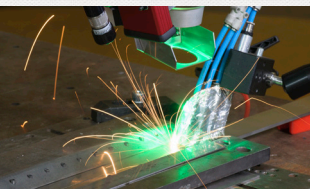
For more information:
www.radiclelaser.eu

Project consortium:





A NEW LASER WELDING MONITORING AND ADAPTIVE CONTROL ARCHITECTURE INTEGRATING MULTI-SENSOR DATA TO DELIVER HIGH-QUALITY WELDED JOINTS



THE RADICLE PROJECT HAS CREATED:

A modular system allowing users to configure the system to their specific applications:



- Photodiodes (off-axis and co-axial)
- Seam tracking camera
- Co-axial process zone imaging camera
- Keyhole depth monitoring sensor
- Microphone for acoustic emission analysis



Welding process windows for a number of ferrous and non-ferrous materials and joint configurations, supported by welding data from industrial case studies;



Welding data handling and analysis routines to extract valuable information from the welding process monitoring sensors;



The development of the architecture for a multi-sensor adaptive control system for laser welding including a machine learning algorithm able to:

- interpret raw sensor data and associated welding quality parameters
- generate the process window heatmap from the sensor data

