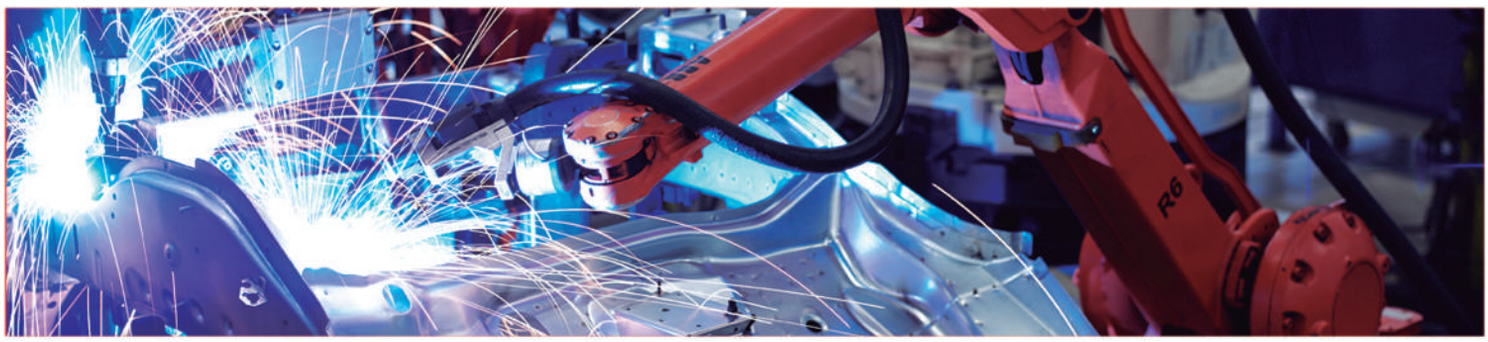
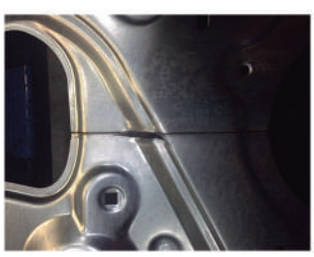
OptiBlanks

Hybrid EMAT-Vision solution for OPTImisation of advanced manufacturing process of automotive tailor welded BLANKS



PROJECT BACKGROUND

Seam-welding is considered the most critical step of the TWB manufacturing process and weld-defects result in the majority of TWB part rejections, costing European automotive manufacturers more than 9.000 Tons of wasted materials/year.



Car parts broken after the stamping process due to bad welds

The **OPTIBLANKS** project will fulfill the inspection requirements of automotive TWB manufacturers validating a novel inspection technique. **OPTIBLANKS** innovation is set around the combination of two technologies for weld seam quality control into a Hybrid system that will generate raw material savings to TWB manufacturers by:

- Optimizing part rejection criteria
- Reducing manufacturing costs
- Eliminating broken parts during and after stamping process

OBJECTIVES

TWBs are implemented wherever a vehicle needs to be safer and lighter. In order to optimize the TWB manufacturing process, reduce raw material scrap rate and optimize material usage, the industry requires 100% inspection of autogenously laser welded parts to identify defects.

OPTIBLANKS project main objectives are to offer the following **benefits for end users**:

- Increase detection, evaluation and reporting of defects in TWB plants.
- Increase quality and safety when utilizing products manufactured with TWB (cars, trucks, etc.).
- Reduce materials waste leading to economical direct savings.
- Provide the automotive sector and regulatory authorities with very valuable data that will facilitate the integration of the non-destructive testing (NDT) and structural integrity (SI) assessment, thus improving the confident in NDT performance and enabling the SI community to adopt novel and more sophisticated approaches to TWB design.
- Reduce inspection and other related costs. Cost reduction will be about 50% when compared to the use of existing NDT systems which utilize EMAT or Visual Inspection techniques separately.

Fulfilling these objectives, the **OPTIBLANKS** project main **aims** are **to reach:**

Over	Up to	Over
95%	**60m/min**	**50%**
probability of detection	inspection speed	cost reduction in inspection

Get more info about OPTIBLANKS at the project website: **https://optiblanksproject.eu**

WHO IS LEADING THIS PROJECT

Innerspec Research & Development Projects

With more than 50 patents and a world-class team of R&D and application engineers, **Innerspec Technologies** has unique solutions for nearly all industrial sectors including primary metals manufacturing, automotive, aerospace, oil&gas, shipbuilding and the nuclear industry.

Innerspec has already started to develop the **OPTIBLANKS** project and aims to have a commercially available system in less than 2 years. For further information about other Innerspec's R&D porjects visit: https://innerspec.com

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