Remote Laser Welding (RLW) System Navigator for Eco & Resilient Automotive Factories

RLW Navigator – an engineering platform to introduce new emerging RLW joining technology into existing assembly systems

Coordinated by WMG, the EU FP7 RLW Navigator programme integrates a universal simulation engine and experimental models to precisely configure, optimise and control laser welding process variation, production throughput and cost. It serves as a crucial enabler for future energy efficient smart factories by addressing the need for frequently changing operating conditions and product mix provisions. It will lead to developing a system that removes trial-and-error from the process using precise mathematical modelling. Results will deliver the significant efficiencies that manufacturers need from the process.

Benefits:
• Faster Processing Speed – 5 times faster than spot welding for an equivalent strength weld
• Reduced Floor Space – Laser welding cell occupies 50% less floor space
• Lower Investment Costs – 80% fewer robots and less tooling stations
• Lower Operating Costs – 10% lower operating costs
• Reduced Tooling Requirements – work area facilitates applying more welds in a single station

An Industry-University Research Collaboration:

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