

Highlight

Mikkeli,
May 09, 2011

New machines for cost effective manufacturing with increased reliability

Work package 5 has started in the beginning of the year 2010 and will continue until the end of the year 2013. The members of the WP 5 are Fraunhofer Gesellschaft – Institut für Lasertechnik, Leister Process Technologies, Fundacion Tecnia, Centro Ricerche Fiat S.C.p.A., Electrolux Italia S.p.A., Cencorp Corporation, VTT Laser Processing Team and Arges GmbH.

The WP 5 consists of three tasks. Task 5.1 is led by Fundacion Tecnia and it deals with designing of high performance assembly systems for polymeric products. Task 5.2 is led by VTT Laser Processing Team and it deals with demonstration of advanced clamping devices for flexible product design. Task 5.3 is led by Cencorp Corporation and it is dealing with setting-up and testing of prototype laser manufacturing systems for polymeric products with breakthrough productivity.

Overall objectives are

- Analysis of machine concepts for laser welding technologies for polymeric parts
- Demonstration of flexible and reconfigurable clamping systems for polymer welding (figures 1-4: different clamping concepts)
- Experimental machine setups for polymer welding
- Build up of prototype machines for polymer welding

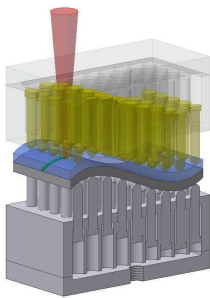


Figure 1: tactile elements

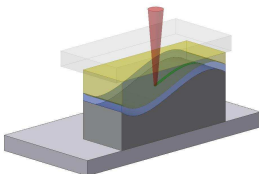


Figure 2: elastomeric elements

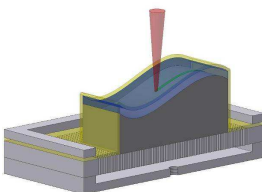


Figure 3: vacuum

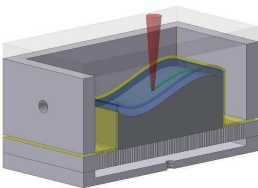


Figure 4: pressure chamber
Figures of the different clamping concepts for laser welding of polymeric parts



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For any further questions our experts will be pleased to provide you assistance:

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