

Highly flexible laser processing of single batch tubes for e-cars

A. Draeger¹, T. Reichl²

JENOPTIK Automotive

JENOPTIK Automatisierungstechnik GmbH

Konrad-Zuse-Strasse 6

07745 Jena Germany

Corresponding author: andreas.draeger@jenoptik.com

Mega trend e-mobility requires new solutions for car body parts. Bended and hydro formed tubes and tube frames are becoming crucial elements for e-cars. Processing of those tubes sets particular challenges to suppliers and manufacturing equipment. Due to safety tracking reasons single frame production is one of those challenges.

That means all frame tubes are processed with lot size 1 and then joined to one frame.

For realization of this requirement highly flexible laser machining solutions for processing those tubes, which differ in size shape and cutting task, are necessary. Due to lot size one production the tube shapes are fluctuating. This needs to be considered and compensated during the laser process.

The presentation will illuminate an existing robot based solution and the single steps to reach the required flexibility and accuracy in tube processing under the given challenging conditions by using a JENOPTIK VOTAN® BIM Multi Robot System.