

# **Laser Welding in Automotive Production : New Applications in gear body and exhaust components**

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## **ABSTRACT**

Multi axis Lasersystems are more able to succeed welding applications which have been previously handled by conventional production systems. Thanks to the accurate dynamic guidance of the Laserbeam along definitive special parts and the appropriate control of the processing parameters, a wide variety of additional fields is opened up to material processing by Laser. New Laser Welding applications in automotive production will be introduced.

1. Steering tube - Aluminium welding with filler wire, using twin spot process
2. Drive axis - high carbon steel, preheated welding
3. Gear elements for automatic transmission as final process
4. Roof welding with CO<sub>2</sub> Laser
5. Roof welding with YAG Laser
6. Exhaust manifold in sheet deep drawing design
7. Integral beams in sheet deep drawing design
8. Beam delivery system with high precision and dynamic