

Hybrid Repair of Worn Tools

Enabling Industries Through Refurbishing & Remanufacturing



Motivation and Relevance

- Manufacturing companies in all industries use tools that can be remanufactured for multiple uses
- Circular economy and repair can save a lot of raw materials in the industrial sector of mechanical engineering

Approach

- Machining of a defined area
- Extreme Highspeed Laser Application (EHLA) of 1.2343 with scanning velocity of 20 m/min
- Near-net-shape finishing
- Hybrid 5-axis machinery center for milling and welding

Results

- Repaired surface area by 5-axis machine motion
- Resetting the component lifetime

Resource Savings ★★★★★

Circular Economy ★★★★★

Component Lifetime ★★★★★

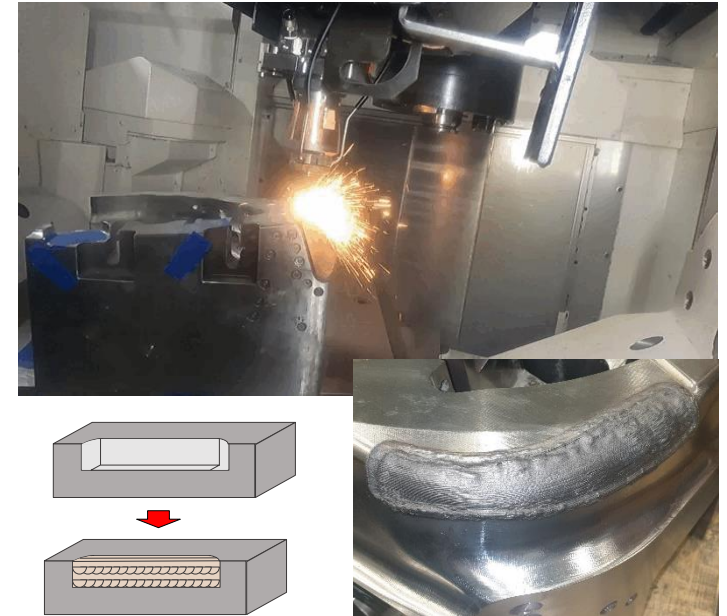
Research Area

- Tools & Dies, Hybrid Repair, Resource Efficiency

Partners

Mubea

Picture



Contact



Clemens Johannes Müller
clemens.mueller@dap.rwth-aachen.de
www.dap-aachen.de