Thema: Development of a Static Shoulder Friction Stir Welding Tool

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Type of Thesis:
Bachelorthesis X Experiments
Projectthesis X Development X
Masterthesis X Theoretical
Literature research

Start: now

Department:
Friction stir Welding (FSW)

Our profile:
For the last 60 years the Welding and Joining Institute (ISF) of the RWTH Aachen University has been doing research work in the field of modern welding and joining technologies. The work at the ISF comprises almost all industrially relevant, non-detachable joining methods.

Description:
Friction Stir Welding (FSW) is a new, cutting edge joining technology that doesn’t melt but rather plasticizes the joining partners. The joining is done mechanically by stirring. It can therefore be used to join materials with limited fusion weldability and created mixed material joints.

In this Thesis a static (non rotating) shoulder FSW tool shall be developed. The static shoulder FSW variant offers significant advantages over conventional FSW in certain applications, but requires special welding tools. Development and implementation of such a tool on our FSW machine are within the scope of this thesis.

We offer induction and support, as well as the opportunity to gain insight into a cutting edge joining method and work with us using one of the latest machines in Germany to conduct your experiments.

Your profil:
Student of mechanical engineering, materials engineering or related studies. Knowledge of welding technology is not a prerequisite. More important are an interest in solving technical problems and a self reliant and structured way of working.
If you are interested in working on a novel system or have any questions, don’t hesitate to contact me.