

Internship

Continuous Ultrasonic Welding

Automated joining of thermoplastic composites

SAM XL is a manufacturing automation expertise centre that forms a unique liaison between TU Delft faculties, the industry and suppliers. We develop software and hardware to enhance the intelligence, connectivity and flexibility of industrial robots. This robot technology for executing complex and varied tasks on large structures is validated and demonstrated in our industrial-scale automation lab.

Continuous Ultrasonic Welding (CUW) is a new process which uses ultrasonic vibrations to generate heat to melt the interface between two laminates, welding them together. This experimental process is still being developed. We are devoted to improving weld quality and reliability.

Internship openings

- 4-5 month internship, exploring approaches to ensure fully welded start and stop areas; including study into effect of re-welding part of the material.
- 4-5 month internship, developing a computer vision method to track and measure the melt front of the squeeze flow in real time.
- MSc thesis conducting a sensitivity study on process parameters to better understand the physical mechanisms underlying the welding process.
- MSc thesis on thermal characterization to monitor the process.

Your profile and skills

- HBO / WO engineering student
- Independent worker
- Fast learner
- Enthusiastic about composites

What we offer

- A cool workspace with a lot of robots
- Access to high-end hardware
- Dynamic and experienced colleagues
- Mentoring in task scoping and implementation
- Exposure to robotic manufacturing technology know-how
- An internship remuneration.

Interested? Send your CV and a short motivation to internships-samxl@tudelft.nl