

Project Overview

Research project "WASABI" - "Tools-integrated assistance system for production control in injection moulding of highly complex and demanding component specifications"

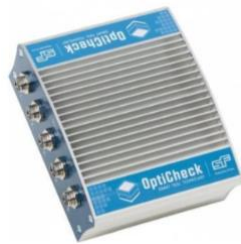


Figure 1: OptiCheck system for a breath monitoring tool
Source: Schneider Form GmbH

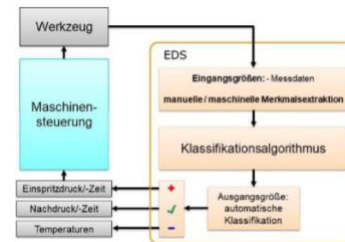


Figure 2: Regulation concept of the EDS of the University of Applied Sciences Schmalkalden
Source: University of Applied Sciences Schmalkalden



Figure 3: Half of an injection mould for a front bumper
Source: Schneider Form GmbH

Problem Statement:

- Permanent operating point monitoring
- In situ quality control
- Efficient process adaptations
- Loss of knowledge on start-stop production processes due to the elimination of co-workers
- Avoidance of rejects and downtimes

Keywords:

- Large tools
- Classifier
- Machine learning
- Assistance system

Project Sponsors / Third-Party Donor:

- Karlsruhe Institute of Technology (KIT)
- Federal Ministry of Education and Research (BMBF)

Grant Sum:

- 550,000.- €

Duration of Project:

- 06/2019-05/2021

Approach to Solution:

- Implementation of sensors in injection moulds
- Combination of OptiCheck and EDS sensor signals
- Hardware and software development for the application of machine learning methods
- Integration and improvement of classification algorithms

Target:

Realization of a digital assistance system for production optimization in plastic injection moulding.

Project Partners:

- University of Applied Sciences
Schmalkalden, Faculty of Mechanical
Engineering; Applied Plastics
Technology,

- Prof. Dr.-Ing. Thomas Seul
Contact: t.seul@hs-sm.de
- Schneider Form GmbH, department
OptiCheck,
project manager Mr. Markus Lehr
Contact: schneider-form.de/kontakt