Digitalization and Development of Data Structure for Coating Machine in Battery Cell Production

Interdisciplinary Project (IDP)

Background
Battery cell production involves a heterogeneous process chain with many innovative processes and numerous influencing factors. Due to the complexity of the process chain and the unknown interdependencies between process parameters and quality characteristics, battery production is characterized by a high scrap rate. In order to reduce the scrap rate and improve quality, the first step is to create transparency by collecting data.

Objective
The focus of this project is on the coating and drying machine in battery cell production. The students should further develop the existing database and define a data structure for accessing and storing the machine and the sensor data. Additionally, a dashboard should be developed for the visualization and analysis of the data. The project can start at any time. Groups of students are welcome to participate as well.

Requirements
Knowledge in database and web programming (SQL), Python programming experience, strong interest in solving real-world problems for battery production, highly motivated with structured working style

Contact
M. Sc. Sajedeh Haghi
Department of Battery Production
sajedeh.haghi@iwb.tum.de
Tel.: 089 289 154 36