

ENERGY REDUCTION FOR SAFE BATTERY MANUFACTURING THROUGH INNOVATIVE CONNECTION OF INFORMATION AND PRODUCTION TECHNOLOGY

Motivation: Significant improvement of energy and resource efficiency in battery cell production by using mini-environments with circulating air mode

Project goal:

- Draft, engineering and R&D of a key component (functional unit) for spark elimination and neutralization of hazardous gases in industrial processes
- Energy saving by factor 5 for the intended ventilation application

Additive Manufacturing & Coating

Circular metal powder usage
free of contamination /
resource efficient

Efficient post-processing

Innovative surface coating



Digital Infrastructure

Digital Product Passport:
relevant information from raw
material to final part – available
anytime and anywhere

OPC UA ready
easy integration in OPC UA
network

Process Technology

Acid and abrasion resistant inner surfaces

Integrated spark elimination

Minimum pressure drop in the component

Defined dosing of neutralization agent

Active mixing zone for acid neutralization

OPC-UA communication

Plug & play - easy integration into existing systems

Industrial benefits for the project partners and future customers

assonic: improvement of powder classification; expansion of own value added chain

EuropCoating: addressing customers in the area of AM & functional integrated parts

ULT AG: implementation of production capacity to cover the demands of the battery industry

ARNIO: implementation of an engineering center, focusing on design for additive manufacturing, functional integration and digitalization