

Introduction to battery production and battery technology (BAT-PROD-1)

Short Description

The primary goal of this course is to provide basic knowledge about the production processes and technologies of Li-ion batteries for electric vehicles. The course is conducted in cooperation with RWTH Aachen University, one of Germany's leading universities in engineering and electromobility.

Objectives

At the end of the course, participants will have a sound understanding of the fundamental processes and requirements in battery production for electric vehicles. They will know how the different steps of battery production work, from the production of the electrodes to the assembly and finalization of the battery cells, and will recognize the challenges as well as innovation opportunities in this area. By combining the academic knowledge and practical experience of the course trainers, participants will gain practical insights and real-world examples from the industry to help them link theoretical knowledge with practical applications. This enables them to act efficiently and informedly in their new role in a battery factory and to apply the knowledge they have learned in their daily work.

Target Group

- Operators
- Service & maintenance technicians
- Non-technical personnel
- Planners, developers, technicians, project managers, etc.
- Electrical and mechanical engineers

Content

1. Foundations of Battery Production
 - Global Competition in Battery Cell Production
 - Electrode Manufacturing Process
 - Battery Cell Assembly
 - Battery Cell Finalization
 - Battery Module and System Production
 - Challenges in Industrializing Battery Production
 - Process Innovations in Battery Cell Production
2. Foundations of Battery Technology
 - Customer Requirements for Batteries
 - Battery Hazard Potential
 - Regulatory Requirements for Battery Development
 - Introduction to Digitized Electromobility Component Production
 - Battery Raw Materials and Their Challenges
 - Battery Circular Economy as a Holistic Approach
 - EU Battery Regulation and Its Implications

Prerequisites

- Basic knowledge of manufacturing, physics and chemistry
- Basic knowledge of English, as some terms and materials are in English

Type

Face-to-face training

Duration

2 days

Language

en