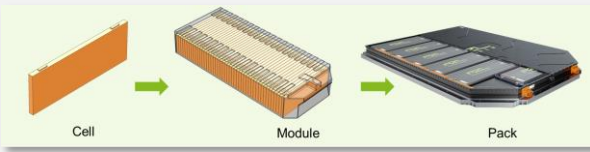
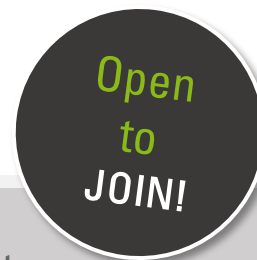


Concept Study & Development of Cell-to-Pack Battery Casings



The Objective:

Multi-material solutions for battery casings show particular potential for the use of composites. While keeping on track of the industry developments regarding battery housing structures, and as already foreseen in the previous project, it became clear that many OEMs and suppliers see an interest in the "cell-to-pack" architecture. It offers more options for optimizing cost and energy per volume. The aim of this project is to further analyse different multi-material options on weight and cost, substantiated by design and CAE studies and build up on the knowledge of a previous concluded, multi-partner project with 46 participants.

Our Content:

- Overview of developments, benefits, and challenges for cell-to-pack
- Requirements for cell-to-pack casings
- Review of potential materials and production technologies
- Simplified design & CAE models for multiple design concepts
- CAD models of selected concepts
- Sensitivity analysis of production-related KPIs
- Weight, cost & CO2 analysis for multiple concepts

Your Benefits:

- Overview on existing cell-to-pack battery casings or concepts under development
- Learn about requirements and the differences of cell-to-pack compared to current designs
- Insights into possible multi-material solutions (including CAE results)
- Visualized concepts via CAD
- Comparison of different concepts on weight, costs and sustainability KPI's
- Exchange and network with industry players along the value chain

Concept Study & Development of Cell-to-Pack Battery Casings
What & Why for Cell-to-Pack

Concept Study & Development of Cell-to-Pack Battery Casings
Previous AZL study on Battery pack designs

Concept Study & Development of Cell-to-Pack Battery Casings
Current state of the art battery packs and market development

Concept Study & Development of Cell-to-Pack Battery Casings
Project Procedure & Scope of Work

WP1: Screening of Market and Technology Developments
 Questions: Which are the major players? What is in development today? Latest update on requirements? Benefits and challenges with respect to pack requirements?
 Result: Overview on developments, benefits and challenges for cell-to-pack.

WP2: Update on reference Specification Sheet
 Results: An existing AZL aluminum reference enclosure will be updated for the purpose of studying cell-to-pack. Requirements will be updated where relevant.

WP3: Listing of concepts Sketch design & dimensioning of multiple alternative concepts
 Results: Overview of potential materials and production technologies (metal, plastic and composites). Simplified design & (CAE) analysis models for multiple selected concepts, allowing dimensioning against the relevant load cases.

WP4: CAD visualization
 Results: CAD models of selected concepts.

WP5: Process Chain Definition & Business Case Analysis
 Results: Weight & Cost analysis for multiple concepts. Sensitivity analysis of production-related KPIs, scalability. Benchmarking against cell-to-module-to-pack reference.

Participation fee (AZL Partner)

< 50 employees: 9,500.00 €
 < 500 employees: 12,000.00 €
 > 500 employees: 15,000.00 €

Participation fee (external company)

18,000.00 €

Duration

10 months



Please contact for information and individual offer:

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