Technical Project Series

Testing Charge Recovery for Auxiliary Lead Batteries on Laboratory Scale

Expected Impact

This project will define key material characteristics to guide the development of **active material formulations for auxiliary batteries**, with a focus on enhancing charge recovery and pulse power capability.

Initial Results

1. Identification of the state-of-the-art additives and selection of carbon, lignin, and expander additives for further study.

2. Preliminary testing of pulse power characterization (PPC) and various charge recovery test protocols according to IEC 60095-8 standards.

3. Preliminary electrical tests (EN DCA, PPC at –18°C, charge recovery variants) on 12 V SLI and EFB batteries.

Objective

Carbon additives are known to enhance charge acceptance and dynamic charge acceptance (DCA).

This project will explore their role in **improving charge recovery** and apply the knowledge from DCA improvements to develop **new formulations for auxiliary battery functions**.

It will also assess how cell layout and different active material formulations affect charge recovery and pulse power performance, using both 2V and 12V platforms.

Project Info

Duration: 18 months

Partners: Fraunhofer ISC, Moll Batterien, Eckhard Karden

Focus: Automotive Applications

Location: Germany

Research Imagery

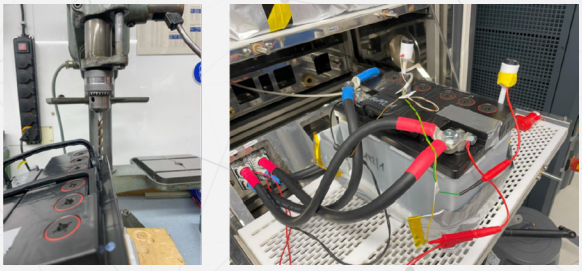

Figure 1: Testing 12V lead batteries (EFB and SLI) containing reference electrode.