Press release

Dürr and Bostik host Battery Gluing Customer Day

Innovative applications of thermal conductive materials in automated battery assembly

Shanghai, November 13, 2023 – On November 9, 2023, Dürr and the global adhesive specialist Bostik hosted a customer day focused on battery gluing. During the event, Dürr shared a variety of battery gluing solutions and showed its modular dispense-system through on-site gluing process demonstrations. Participants engaged in comprehensive discussions about the innovative use of thermal conductive materials in automated battery assembly.

The battery serves as the primary power source for electric vehicles, essentially acting as their heart. Due to the challenging conditions on roads, vehicle requirements in terms of puncture resistance, vibration resistance, waterproofing, moisture-proofing, air isolation, and heat dissipation are necessary, especially for the battery pack. A precise gluing process is one of the core factors in achieving a stable, efficient, and durable operation of an electric drive system. Only when each battery unit is securely connected and the thermal management of the pack is built up properly can the performance, safety and longevity of the entire battery system be ensured. This largely determines the success of the electric vehicle.

Dürr's dispense technology is the cornerstone in high-quality battery manufacturing. The modular system adapts to various adhesive material viscosities and mix ratios, ensuring precise and even material application. Whether sealing, structural bonding, TIM (Gapfiller), Dürr's battery dispense application technology spans the entire assembly process, from cells to modules and battery packs. Dürr is proficient in every gluing and sealing process, ensuring safety and quality throughout the production process to achieve battery system stability and durability. Thereby several modules play an important role in the gluing application system.

**Material supply of viscous glues**

The **Eco**RAM is a drum press compatible with all of Dürr’s gluing machines, available in unheated and heated temperature-controlled variants. These variations ensure the effective pumping and dispensing of viscous glues. The system can be configured as either a single- or double-drum pumping station.

**Control system of pumps and applicators**  
The **Eco**HVMP consists of a modular, extendable control cabinet equipped with standard components to control pumps and applicators. The compact control (Safety PLC) operates without complex and costly cable guides. Plug connectors facilitate rapid electrical and pneumatic installation. Dürr’s **Eco**HVC software includes numerous analytical tools and is Industry 4.0 compatible.

**Accurate metering systems**  
The **Eco**Shot Meter, an electric piston dosing unit, accurately doses high­viscosity materials regardless of material supply variations. It is suitable for applications demanding exceptional dynamism and process precision. Fully integrated into the EcoHVC control system, this double dosing unit allows for continuous material application or a 2K application.

**Versatile applicators  
Eco**Gun applicators offer versatility by accommodating various nozzles depending on the application task. They handle highly viscous adhesives, creating different bead cross-sections while ensuring optimal quality at each end of the bead. These applicators are used for robot application, on the bonding tower, and work with both 1K and 2K materials.

Battery gluing is one component of Dürr’s comprehensive services within battery manufacturing. Andre Hurst, Application Technology vice president from Dürr China said: “We have diversified battery production solutions, covering cell manufacturing, module assembly, battery pack assembly, and battery integration, and are committed to achieving safe and high-quality battery production."

Mo Liu, Mobility business director from Bostik, a partner of this event, highlighted, "Dürr’s partnership with Bostik enables flexibility and adaptability in applying various viscosities and mixing ratios of Thermal Conductive Adhesives for more effective thermal management." As a leading global adhesive specialist, Bostik is introducing its new Thermal Conductive Adhesives to address the thermal management challenge in the latest Cell-to-Pack battery design for e-mobility solutions.

Ein Bild, das Kleidung, Person, Menschen, Im Haus enthält.

Automatisch generierte BeschreibungPicture 1: The Battery Gluing Customer Day attracts nearly 80 people to participate.

Ein Bild, das Entwurf, Design, Kunst enthält.

Automatisch generierte BeschreibungPicture 2: Several modules play an important role in the gluing application system.

Ein Bild, das Maschine, Rad, Bautechnik, Autoteile enthält.

Automatisch generierte BeschreibungPicture 3: On-site gluing process demonstrations.

Ein Bild, das Kleidung, Person, Mann, Bautechnik enthält.

Automatisch generierte Beschreibung**Picture 4**: Dürr’s on-site display of battery gluing solutions and modular dispense system.

Ein Bild, das Person, Kleidung, Wand, Im Haus enthält.

Automatisch generierte Beschreibung**Picture 5**: Introduction of Dürr China and overview of the comprehensive battery manufacturing services within battery manufacturing by Andre Hurst, Application Technology vice president from Dürr China

Ein Bild, das Kleidung, Mann, Person, Im Haus enthält.

Automatisch generierte Beschreibung**Picture 6:** In addition to the Dürr modular dispense system, Dürr has also presented various solutions in the field of battery manufacturing during this event.

Ein Bild, das Kleidung, Person, Mann, Anzug enthält.

Automatisch generierte Beschreibung**Picture 7:** In addition to the Dürr modular dispense system, Dürr has also presented various solutions in the field of battery manufacturing during this event.

**About Dürr**

The Dürr Group is one of the world's leading mechanical and plant engineering firms with particular expertise in the technology fields of automation, digitalization, and energy efficiency. Its products, systems, and services enable highly efficient and sustainable manufacturing processes – mainly in the automotive industry and for producers of furniture and timber houses, but also in sectors such as the chemical and pharmaceutical industries, medical devices, electrical engineering, and battery production. In 2022, the company generated sales of €4.3 billion. The Dürr Group has over 20,500 employees and 140 business locations in 32 countries, and it operates in the market with five divisions:

**Paint and Final Assembly Systems:** paint shops as well as final assembly, testing, and filling technology for the automotive industry

**Application Technology:** robots and products for the automated application of paint, sealants, and adhesives

**Clean Technology Systems**: air pollution control, coating systems for battery electrodes, and noise abatement systems

**Industrial Automation Systems**: automated assembly and test systems for automotive components, medical devices, and consumer goods as well as balancing and diagnostic technology

**Woodworking Machinery and Systems:** machinery and equipment for the woodworking industry

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