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Eirich at The Battery Show Europe and Battery Cells & Systems Expo 2022

From laboratory scale to gigafactories: Solutions for wet to dry electrode mixtures

May 2022 saw the commissioning of the first gigafactory for lithium-ion batteries in Asia in which Eirich MixSolver® units are used to manufacture the electrode slurries. The process demonstrated the excellent scalability of this process technology. The Eirich team is looking forward to a lively exchange with customers and industry representatives at The Battery Show Europe in Stuttgart (hall 10, booth E9) and at the Battery Cells & Systems Expo 2022 (booth 17 – 621). Visitors will gain first-hand insight into what makes Eirich mixers equally well suited to slurries, extrusion mixes, and structured dry mixes – both at lab scale and in production.

First gigafactory taken into operation with MixSolver® units

Although the theory behind the technology is straightforward enough and the initial tests at the research factory UKBIC in Coventry/UK already delivered excellent results, the commissioning process for the Asian battery cell manufacturer's gigafactory meant a further round of practical testing. Dr. Stefan Gerl, Head of Process Technology at Eirich, confirms: "The scale-up worked incredibly well. We transferred the parameters 1:1 from the laboratory trials, and right from the first batch we were able to produce perfect electrode slurry." The expert process engineer is also delighted about the first-class reproducibility of slurry quality and the expected low energy consumption. The gigafactory is equipped with two mixers each for anode and cathode slurries. At a throughput of around 500 l/h per MixSolver®, this results in a plant capacity of around 5-6 GWh

CleanLine C5 – the ideal laboratory mixer

The lab trials and testing carried out on a pilot line at Eirich did enough to impress the operator of the new gigafactory about the technology, which the company had not used previously. The cell manufacturer was using an Eirich Laboratory Mixer EL5 for its own development work and for slurry optimization. Dr. Gerl: "It was a perfect fit. As an alternative, we now also offer the even more flexible laboratory mixer CleanLine C5. It can satisfy a wide range of different requirement profiles along the process chain for electrode manufacturing." Just like all other Eirich mixers, the CleanLineC5 has a rotating mixing pan. The inclination of the pan can be freely adjusted, and it features a temperature control system. The rotational speed range of the eccentrically positioned

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mixing tool varies from slow to fast. The direction of rotation can be reversed, and it is easy to exchange the mixing tool. The unit can also be used for production under vacuum or for degassing of slurries. The CleanLine C5 is also available as an ATEX mixer. “In Stuttgart we will not only be displaying a CleanLine C5 mixer – we will also be demonstrating live how it works. A similar mixer is also available for trials at the Eirich Test Center,” adds Dr. Stefan Gerl, who will attending the event in person. Visitors to the Eirich booth will also have the opportunity to find out about the new liquid feeding system.

From slurries to dry mixes, from laboratory scale to gigafactories

Dr. Gerl will be giving a presentation in English at the Battery Show Conference on Wednesday, June 29, 2022 from around 4.20 p.m. onward, in which he will be talking about his rich wealth of experience with a wide range of different electrode mixtures. Current challenges in the production of electrode slurries both at laboratory scale and in production in a gigafactory will be discussed alongside the Eirich solutions for the production of all-solid-state battery compounds and dry mixes for electrodes, which are coated using dry film technology.

The Battery Show Europe will take place from June 28-30 at the exhibition center in Stuttgart/Germany. The battery experts from Eirich will be presenting the company’s portfolio of solutions for the production of lithium-ion batteries at booth E9 in hall 10. At the Battery Cells & Systems Expo at the NEC in Birmingham/UK the team will be present at booth 17 – 621.

The press release in German and English as well as the following pictures are available for download in printable resolution at: <http://gofile.me/5yRts/Ali2MxnVI>



Press info



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Eirich MixSolver® R12 in the research factory in Coventry. UKBIC has already been successfully producing battery cells for its customers here since 2021.



CleanLine C5 with tablet control – to be seen in action at the Battery Show Europe 2022 in hall 10, booth E9.



Eirich will be presenting a stainless steel EL1 Laboratory Mixer at the Battery Cells & Systems Expo at booth 17 – 621.



Looking forward to meeting customers and industry representatives in person at the Battery Show Europe in Stuttgart: Dr. Stefan Gerl, Head of Process Technology at Maschinenfabrik Gustav Eirich.

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All pictures: Eirich

About Eirich

From its headquarters in Hardheim in Southern Germany, the Eirich Group is a family-run group of companies specializing in the supply of machinery for process engineering applications. As a globally leading manufacturer of machinery and systems for the preparation of raw materials, Eirich has been pioneering advanced technology for mixing, granulating, dispersing, kneading, reacting, temperature control, and fine grinding since 1863. Under the brand label EIRICH digital, the group also offers numerous services that are designed to support the machinery and systems throughout their entire lifecycle, ranging from online spare parts ordering to AI-based assistance systems.

With an annual revenue of €180 million and over 400 patents, Eirich is an innovation leader in mixing and preparation technology. Now in its fifth generation of family ownership, the company is led by Stephan Eirich and Ralf Rohmann and employs around 1,200 employees at 13 different locations in eleven countries.

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