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Press Release

automatica 2023 – showcase for efficient production of the future

Felix Kirschenbauer
PR Manager
Phone +49 89 949-21472
felix.kirschenbauer@
messe-muenchen.de

Sustainability and green technology create new markets

- **Automation reduces CO₂ footprint of production facilities**
- **Sustainable production through assembly plants and robots**
- **New fields of application in battery and fuel cell production**

It is no doubt necessary to achieve the CO₂ reduction goals that the UN and numerous manufacturing companies have set for themselves. The implementation of measures is ambitious and expensive.

However: Sustainability efforts also create entirely new markets, lead to attractive business models, and offer great opportunities for the key technology that is robotics and automation. automatica, held in Munich from June 27 to 30, 2023, presents the opportunities of sustainable production.

Smart automation can make a significant contribution to achieving the set climate goals by improving the energy efficiency of production facilities or by facilitating resource-conserving manufacturing processes through the minimization of reject parts. Also, assembly and handling technology enables new approaches to recycling and the circular economy. And it helps produce sustainable products more economically. In brief: It optimizes both the production and product level.

automatica presents solutions from the fields of smart automation and robotics that suppliers prefer to use in a diverse range of applications and industries. Green technologies in the fields of power generation and mobility come with a promise of particular excitement.

Messe München GmbH
Messegelände
81823 München, Germany
Germany
messe-muenchen.de

Green technology creates new business

Green technologies such as photovoltaics, wind power, fuel cells, and e-mobility are considered economic drivers of automation technology. The social transformation towards sustainability and climate neutrality generates new business because robotics and automation are key technologies driving this transformation.

This already reflects in the increased demand currently experienced by automation and robotics suppliers. Volker Spanier, Head of Industrial Robotics at Epson, notes: “We have recently seen an increase in leads from the area of battery and fuel cell manufacturing. And we will soon see the volumes rise to current photovoltaic industry levels. The decisive factor for Europe will be the future location of this business. For the time being, almost all equipment suppliers for giga factories are located in Asia. Maybe automatica will show promising approaches here, especially for the emerging fuel cell manufacturing sector.”

New requirements for robotics

Amidst all the enthusiasm about the scope of application for robots, a question pops up: Are standard robots at all suitable for lithium-ion battery and fuel cell production? And which features of four- and six-axis robots are particularly useful for these applications?

Fuel cell production has some particularities as well. And it would not be where it is without robots. For example, each of the 400 to 500 bipolar plates in any given fuel cell stack must be layered with utmost precision and care. This does not merely require extremely fast robots. They must also be qualified for the corrosive environment they operate in. At automatica, robot manufacturers will show if they can supply robots for such specific use cases.

Peter Pühringer, Managing Director of Stäubli Robotics Germany, is not worried: “I am sure that several leading manufacturers offer robots capable of meeting these requirements. Stäubli Robotics will showcase four-axis and six-axis robots for deployment in hyperdry environments, as well as special designs for

operation in corrosive conditions. Thus, we are in a position to supply robots for both markets – lithium-ion batteries and fuel cells.”

The promising recycling market

Recycling of electrical devices and batteries is another promising market for robotics and automation. In this context, Kuka has an electronic waste separation project in Ireland, where there staff are not exposed to hazards posed by gases and sharp-edged parts. Here, electronic waste is separated and processed to become a valuable resource with a ‘second life’ in the circular economy.

Electric vehicle battery recycling is an application with promising future prospects. As EVs increasingly populate the streets, the question arises as to what happens with their batteries at the end of their life cycle. Dr. Joachim Döhner, Chairman of the VDMA Battery Production Department Board and Senior Director Global Sales Battery at Kuka: “The required automation level in battery disassembly and the recovery of valuable resources will produce new know-how and lead to new robotics business segments.”

Mandatory sustainability

Climate-neutral production trends and new fields of application for robotics and automation are expected to be the subject of intense discussions at automatica. The new EU directive CSRD, applicable throughout the EU from 2024 onwards, puts the topic of ‘sustainable automation’ in the spotlight even more. The CSRD – an acronym for Corporate Sustainability Reporting Directive – requires companies above a certain size to submit a sustainability report and to assess the sustainability of their production in this context.

Robotics and automation have the potential to improve environmental footprints: Modern assembly plants and robots contribute to the associated efforts through improvements in service life, energy efficiency, and flexibility. Rigidly interlinked production lines had to be converted or completely replaced in a huge product change effort, but things have changed: “In modern assembly plants with a modular design, it usually suffices to make some simple modifications and to reprogram the robots to get the conversion done. That saves time, resources,

and energy,” as Frank Konrad, CEO at Hahn Automation and Chairman of VDMA Robotics and Automation, emphasizes.

Further information is available online at

<https://automatica-munich.com/en/>

About automatica

automatica is the world's leading marketplace for automated smart production. It is the trend setting event for companies from all industry sectors, providing access to innovations, knowledge, and trends with a high degree of business relevance. automatica focuses and shapes the transformation of industrial production – from automated to autonomous facilities. Messe München GmbH and VDMA Robotics + Automation, conceptual sponsor of the trade fair, are behind the industry-driven concept of automatica.

Messe München

With a stable of more than 50 trade fairs for capital goods, consumer goods and new technologies at its Munich site and abroad, Messe München is one of the world's leading trade fair organizers. Every year more than 50,000 exhibitors and around three million visitors take part in the events at the Munich exhibition site, in the ICM – Internationales Congress Center München, in the Conference Center Nord, and MOC Veranstaltungszentrum München, as well as abroad. Messe München also organizes trade fairs in China, India, Brazil, South Africa, and Turkey in cooperation with its subsidiaries. With a network of affiliated companies in Europe, Asia, Africa and South America as well as more than 70 foreign agencies for more than 100 countries, Messe München has a global presence.