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AT THE SHOW

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WEDNESDAY'S EDITION

NPE2018

ENGEL TO RESUME ASSEMBLING PRESSES IN PA.

By Bill Bregar
Plastics News Staff

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ENGEL HOLDING GMBH

Engel Holding GmbH, bursting at the seams at its large-tonnage plant in St. Valentin, Austria, will resume assembly of big injection molding machines at its Engel Machinery Inc. facility in York, Pa., CEO Stefan Engleder said at NPE2018.

Meanwhile, Engel is investing $450 million through 2020 in a move to increase productivity by 30 percent, Engleder said at the company's NPE2018 May 8 news conference. Engel needs to produce more machines and robots around the world, as lead times are getting stretched out thanks to economic growth.

Lead times can be 12-20 weeks for smaller-tonnage machines and up to six months for large presses, he said, adding "delivery times should fall by the end of the year" as investment kicks in.

NPE2018 also marks the kick-off of North American sales of general purpose Wintec injection presses, which are built in China. Those standard machines could be shipped "off the shelf" right away or would have lead times of only eight to 12 weeks.

At York, the goal is to ramp up U.S. assembly by the end of the year, he said. The York factory can assemble injection presses in clamping force from 400-4,000 tons.

Engel Machinery used to do complete press manufacturing, including machining, in York before suspending production in 2009, said Mark Sankovitch, president of the U.S. operation. The York operation moved the machining equipment out, so the plant will do final assembly with parts provided from other Engel facilities in Europe and Asia, officials said. The York building is equipped with large cranes and production

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Plastics News photo by Joe Wilssens

Stefan Engleder, Engel Holding GmbH chairman, at the Engel booth at NPE2018.

Euromap unveils first digital 4.0 standard

By Steve Toloken
Plastics News Staff

'Industry 4.0 will only really work if you have a complete information flow.'

Thorsten Kühmann, Euromap

The European machinery association Euromap is introducing what it's calling a significant step forward for the development of Industry 4.0, releasing the first common digital standard that allows machines from different companies to talk to each other.

The group unveiled the standard, called Euromap 77, at NPE2018, with a May 8 press tour. While the topic is technical, officials said it's important for the industry to move forward on developing such standards.

"Our opinion is we really need these digital interfaces for Industry 4.0 to work," said Thorsten Kühmann, secretary general of Euromap. "Industry 4.0 will only really work if you have a complete information flow."

The Euromap 77 standard, which was officially released May 4, only covers injection molding machines and allows standardized communication between the injection press and a manufacturing execution system (MES).

The association said other standards are being worked on, covering data exchanges between molding machines and temperature controllers (Euromap 82), molding machines and robots (Euromap 79) and between extrusion machines and MES (Euromap 84).

Industry officials said one advantage of new standards would be to have more flexibility in how plastics processors can have equipment from different companies work together and trade

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Stäubli adding fourth US site PAGE 12

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Ultrasonic staking joins plastics, dissimilar materials

By Roger Renstrom
Plastics News Correspondent

Herrmann Ultrasonics Inc. photo

Herrmann Ultrasonics Inc. believes its ultrasonic compressive staking is relevant for a wide range of materials.

Herrmann Ultrasonics Inc. of Bartlett, Ill., is displaying a patented version of ultrasonic staking that can join plastics and dissimilar materials.

The process utilizes a hollow rivet that it shapes into a form-fitting bead.

Short joining times and high retention force are characteristics of ultrasonic compressive staking.

Parent firm Herrmann Ultraschalltechnik GmbH & Co. KG of Karlsbad, Germany, and academician Michael Gehde began to work on compression staking in 2012.

Gehde specializes in machine components and product design studies in the department of mechanical engineering at Chemnitz University of Technology in Germany.

"As the compression staking showed high strength combined with a short cycle time during research, we were certain about the potential of the concept," said Tim Adler, application engineer with Herrmann Ultraschalltechnik.

Herrmann Ultraschalltechnik obtained patents for compression staking technology in Germany in October 2011 and in the U.S. in January 2018. A patent also exists in China. Ulf Riehm is listed as the inventor.

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HERRMANN ULTRASONICS INC.

"One important benefit of the compression staking is that there is no contact between vibrating sonotrode and the joint partner," Adler said via email.

Having the vibrating sonotrode never touch the staked upper part is especially important for applications with printed circuit boards and other electronic components that could be damaged.

"The high strength provided by compression staking is valuable for applications in the automotive and consumer sector," Adler said.

Herrmann believes ultrasonic compressive staking is relevant for a wide range of materials and enables bonding between new types of sophisticated material combinations.

Traditional staking methods can have disadvantages resulting from partially insufficient bonding between the staked head and the shank.

The ultrasonic advantage in joining time is dramatic: 1.6 seconds (and an additional 1-second holding time) for ultrasonic staking compared to 10-20 seconds for thermal staking. The times do not take into consideration the required warmup time and recommended cooling cycles.

At NPE2018, Herrmann Ultrasonics is giving live demonstrations of compression staking and its configurable HiQ Vario ultrasonic welder with a radio frequency identification reader. The integrated RFID reader is built into both the sonotrode and the fixture.

Ultrasonic welding is suitable for the medical manufacturing industry.

The Vario provides multiple pneumatic drive modes with different stroke designs along with programmable proportional valve technology.

Generators come in three frequencies with power ratings up to 6200 watts. Herrmann says the Vario product line can significantly reduce setup and changeover times.

An integrated controller can store up to 32 different weld applications.