Next Generation Plastics Workforce

By Tony Deligio
Plastics Technology

After years of closely monitoring an increasingly worrisome labor shortage, the Plastics Industry Association’s (PLASTICS) warnings about the widening gap between the sector’s need for skilled workers and the supply of such employees have shifted to full alarm. As stated in PLASTICS’s 2017 Size & Impact Study, “While the skills gap and the decline of a qualified manufacturing workforce have been discussed for many years now, the nation has reached the point where their impacts will begin to be felt more acutely.”

In that report, released in December 2017, PLASTICS forecasts that employment in plastics manufacturing will expand 0.9 percent, 0.7 percent and 0.6 percent from 2017 to 2019—rates slower than in the three prior years and in five of the last six going back to 2011. Total employment in 2019 is forecast to reach 735,000, not including captive operations. It stands at 719,000 today. “Employment growth slows as the supply of labor starts to dry up,” is how PLASTICS describes the impending scenario in the report.

Plastics is not alone in its search for workers. According to the Manufacturing Institute, 3.5 million manufacturing jobs will need to be filled in the next decade, but 2 million of those will remain vacant, as economic expansion and the retirement of Baby Boomers stoke a self-sustaining fire. According to the Institute’s most recent survey, 35 percent of respondents believe a shortage of skilled workers will be the top impediment to growth next year.

In its report, PLASTICS calls for a “collaborative response across all levels of government and all manufacturing sectors,” including a shift in how new employees are created. “The U.S. must do a better job of training workers to fill the jobs that are available today and will be available tomorrow, rather than training workers for the jobs America formerly possessed,” the report states.

The plastics industry has responded at the university level with shifting curricula and new learning formats, including online education and at the processor level with unique programs that target everyone from engineers who had no introduction to plastics while in school to people who’ve had no introduction to engineering or plastics, period.

Strong NPE Bodes Well for the Future

By Tom Beard
Plastics Technology

NPE2018, which is wrapping up today, is certainly the largest ever, with more than 2,100 exhibitors and 1.2 million square feet of exhibit space. But more than just numbers, the show opened with high aspirations in other ways. As Plastics Industry Association (PLASTICS) President and CEO William R. Carteaux put it, “this week you’ll see the innovations, technologies, design, science and people behind the material that transforms, improves and saves lives.”

How has it gone? We spoke with Carteaux yesterday for his assessment of the week. The displays on the show floor have not disappointed. All over the halls of NPE, visitors are seeing an array of technologies—such as a variety of automation, 3D and the emerging 4D printing, sustainability in the design and use of materials, and the biggest story this year, Industry 4.0—that are not only forward-looking, but are deployable right now. Carteaux also points to the first ever Bottle Zone, which speaks to “really cool new technology never seen before.” Even by the pound, the show is up, with some 2 million more lbs.

PLASTICS Hosts Local High School Students on Final Day of NPE2018

Today, about 130 high school students from Orange County Public Schools are visiting NPE to learn more about the plastics technology industry, hosted by the Plastics Industry Association (PLASTICS). Three area high schools—Edgewater High School, Dr. Phillips High School, and Timber Creek High School—are sending students who are enrolled in the NAF Academy of Engineering, a program that teaches students the principles of engineering and gives them career-focused activities like today’s NPE visit. The program is a half-day event that includes presentations, a tour of the show floor led by members of NPE staff and special visits to various exhibitors.

Speakers include William R. Carteaux, PLASTICS president and CEO; Phil Wilson, business intelligence and pricing strategy manager at BASF; Steve Petrakis, v.p. industries, equipment council at PLASTICS; Ashley Hood-Morley, director of sustainability at PLASTICS; and Patrick Krieger, assistant director of regulatory and technical affairs at PLASTICS. The presentations are designed to introduce the students to the plastics technology industry overall and teach them about more specific topics like sustainability and bioplastics.

Ten groups of 12 to 15 students are visiting host exhibitors throughout the morning, where volunteers from each exhibit are presenting on what their company does and the various career opportunities available. Students will hear not only from engineers but professionals in all facets of the plastics technology industry—including sales people, communications professionals and those working in the sustainability and regulatory sides of the industry. At each booth, students also have the chance to see the machines and products on display up close.

Special stops on the tour include visits to the NPE Studio, a “This Is Plastics” experience, and a trip to the recycling center. According to PLASTICS, this student program is an opportunity to welcome tomorrow’s industry professionals into NPE and introduce them to the leaders, machines, companies and careers available in this growing field.

Students are touring the show floor and visiting various exhibitors on the last day of NPE2018.

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real-time moisture analysis (Moisture Meter), multi-bed drying with a consistent dewpoint (X Max), dynamic airflow management (FlowMatix) and superior mass-flow drying characteristics (DOTX).

The Moretto Moisture Meter Manager provides in-line measurement of moisture in a closed loop system monitored by the company’s Smart Factory 4.0 software. Smart Factory 4.0, in turn, is managed by Moretto’s MOWS software, which serves to unify all the plant’s machines for integrated process control, monitoring and management from anywhere.

In resin conveying, Moretto is displaying its One Wire3 control system for centralized management, as well as the Kasiko range of resin hopper loaders and receivers; Dolphin pneumatically-operated manifold; Kruise Kontrol automatic speed control; and Loader F24 high-capacity, self-contained hopper loader.

New at NPE2018, and designed specifically for U.S. processors, is the Loader F24 stainless-steel, high-capacity, self-contained hopper loader that operates on common, single-phase power. Moretto says with the F24, large quantities of resin can be transferred automatically as required, without a central vacuum system.

The company’s Gravix gravimetric blender is also on hand. Featuring naged, “double eyelid” dose metering, a precision batch-weighing hopper and an easily cleaned mixer, the Gravix also has Moretto’s exclusive Vibration Immunity System. This is said to ensure accurate weighing, even when mounted on injection machines that could vibrate as the platen opens and close. Eight models with throughputs from 11 to 11,000 pounds per hour and as much as 12 materials are available. A color, touch-screen control powers setup, use, troubleshoot ing and maintenance, and accommodates storage of as many as 200 recipes. Moretto is also featuring its stainless steel range of TEKO liquid temperature controllers, in water and oil. Models range in power from 0.6 to 54 Kw, with temperatures up to 574°F.

The perfect blend. Every time.

Plastrac puts you in total (touchscreen) control.

Our new touchscreen controller, optional on all our blenders, puts complete, intuitive process management at your fingertips. Set-up parameters are viewable during operation and stored automatically. There is a non-volatile shot counter. A thumb drive enables easy software updates and transfer of the recipe files. A full keyboard enables easy entry of all recipe and component names. All events and alarms are captured with both a real time and a day stamp. In other words, everything you always wanted to know about blending in a single panel.

Easy does it blending.

Now. And down the road.

Plastrac designs and builds blenders to uncomplicate life for our customers. They are simple to set up. Simple to operate. Simple to adapt in the field. Simple to expand in the future. Let’s say you buy a two-component (color + additive) system now, but a few years later, you need to make it a multi-component system. Plastrac blenders are all entirely modular, so you won’t be locked into the original configuration if your needs change or grow. What’s more, all our parts, mechanical and electronic, are always well stocked, because we don’t think your present or future operations should include downtime.

On the fly Color Changes. PDQ.

There are a lot of features that distinguish a Plastrac blender, but none greater than the ability to change colors as often and as quickly as customer orders demand it. The secret is our level-sensing vane switch (standard on every single blend er). Harried processors can hurry up color changes by swapping top casings without any need for cable removal.

Dukane (Booth W1442) is highlighting its newly introduced rotary infrared (IR) welding system that features multiple heating stations to reduce cycle time. The reportedly unique rotary infrared welding system is designed for assemblies that fall within a footprint of 7.87 in. x 9.84 in, or less, requiring a fast cycle time. It provides a non-contact IR welding solution that is capable of producing welded assemblies as fast as every 8 seconds—this compared to conventional IR welding machines that take a rate of 30-40 seconds. These rates are accomplished by enabling the normally sequential welding steps (load, heater extend, melt, retract, join, hold, open and unload) to happen simultaneously on a rotary indexing machine. Each step of the weld process occurs at the same time on each of the indexer stations.

Herrmann Ultrasonics (Booth W8153) is spotlighting the latest enhancements to its HQ Vario series of ultrasonic welders, which can be configured to suit individual needs, and boasts significant reduction in setup and changeover times with features like the quick-change system (QCS), whereby the aligned weld tools can be changed to a new application in under a minute. Manufacturers using the Vario for different applications, which reportedly combines a QCS with features like the quick-change system (QCS) for assemblies that fall within a footprint of 7.87 in. x 9.84 in, or less, requiring a fast cycle time. It provides a non-contact IR welding solution that is capable of producing welded assemblies as fast as every 8 seconds—this compared to conventional IR welding machines that take a rate of 30-40 seconds. These rates are accomplished by enabling the normally sequential welding steps (load, heater extend, melt, retract, join, hold, open and unload) to happen simultaneously on a rotary indexing machine. Each step of the weld process occurs at the same time on each of the indexer stations.

Rinco is showcasing its new Electrical Motion Ultrasonic welding machine, said to represent a move away from traditional pneumatic-type press systems to electrically driven machines.

Rinco Ultrasonics USA (Booth W5733) is launching its new AGM Pro ultrasonic generator designed to be built into automation lines and special-purpose machines for controlling ultrasonic components. The digital, Industry 4.0-capable AGM Pro is an upgraded version of Rinco’s current AGM ultrasonic generator and is reportedly well suited for semi-automated and automated applications mostly for the automotive, packaging industries.

Rinco is also unveiling its Electrical Motion ultrasonic welding machine. Available in 20 kHz and 35 kHz frequencies, the new unit is said to represent a move away from traditional pneumatic-type press systems to electrically driven machines. This system enables users to finely regulate the weld, using precise positioning of the horn, along with the applied welding force to the welding rate. This means considerably better results in welding, punching, cutting and sealing of molded thermoplastic parts, nonwovens and synthetic textiles.

Emerson’s Branson Ultrasonics Div. (Booth W3763) is showcasing the latest addition to the Branson 2000Xc series ultrasonic assembly systems, which reportedly combines a small physical size, precise and consistent high-quality welds, and the process control needs of today’s manufacturing environment. New Branson 2000Xc 40kHz MicroActuator features a narrow-width of 70 mm/2.76 in. as well as a low height of 660 mm/25.98 in., and a 40kHz ultrasonic frequency at 800W output power. The 2000Xc locks in the welding process with fully electronic welder settings, hierarchical password protection and Ethernet connectivity access.

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