

## sawing/cutting



The HE&M Saw H130 DC double-column model can cut large-diameter bar, among other products. The saw can readily be automated.

# RAPID evolutions

Customers want more data and process control over production, pushing band saw manufacturers to take a new approach to software and monitoring technology

BY PAUL BEHA, HE&M SAW

**S**hop owners and managers are looking for methods to obtain a more concise set of data throughout their production process as a basis to support decisions made to increase productivity and efficiency. The concept refers to the “factory of the future” or smart factory and involves cognitive manufacturing solutions to lead manufacturing into the next phase of the next industrial revolution. The effort is multifaceted and is evolving rapidly.

The era of preventive diagnostics, while already increasing in machine shop applications, is also becoming part of the Industry 4.0 movement in band saw technology for HE&M Saw. This advancement will lead to management moving into predictive efforts as opposed to the reactive



common language for the purpose of visualizing efficiency and collecting data, and it's becoming the standard in the U.S. for all CNCs and is widely in use.

HE&M Saw wants to ensure it stays on top of what others in the industry are doing and provide leadership with new features, particularly those related to Industry 4.0.

"Industry 4.0 is all about data," Max Harris says. "It's about flexibility—being able to see what your current processes are and how you speed them up or alter them to become more flexible."

SSC will allow users to see how many saw cuts are being made over a specific period of time, how many parts they're putting out in total, and how quickly they are being produced, while helping to identify where issues occur that keep them from achieving their production goals.

"This is largely intended as a method to be able to determine what and where those bottlenecks are and how you improve your efficiency," Max Harris says of the information SSC will provide and



Touch-screen controls allow operators to program the jobs for their shift, adjust each job as needed and save each job for reuse in the future.

how it allows updates and tracking of production goals.

An early version of SSC was demon-

strated last year at the IMTS and Fabtech shows, but it's still in beta testing. A full release is expected during late 2019 or early 2020, the company says.

**When the Cutting Gets Tough,  
the Tough Go to HE&M Saw!**

**HE&M<sup>®</sup> SAW**  
The saw that cuts straight.

[www.hemsaw.com](https://www.hemsaw.com)

P.O. Box 1148, Pryor, OK 74362 • Toll Free: (888)729-7787 • Email: [info@hemsaw.com](mailto:info@hemsaw.com)

Made in the U.S.A.

Facebook, Twitter, YouTube icons

### Intelligence

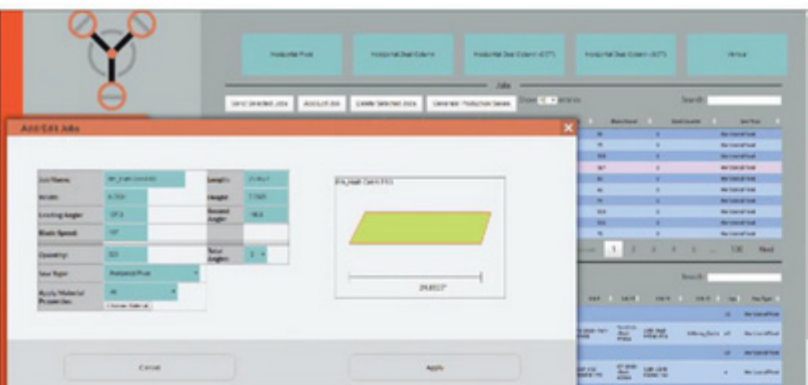
As development progresses and produces a smarter product, artificial intelligence (AI) is becoming a part of the system, Doug Harris says. As that occurs, more data is gathered, and AI components are learning how to translate that into information that shop owners and managers can use.

"Every time the bar feeder is moving, it's learning," he says of the AI as it relates to moving material accurately into the saw. "We put learning routines into the SSC software so it learns and integrates metric information continuously. We're trying to develop more and more intelligent pieces of equipment; that's why we must have our beta sites."

One of the machine shops Doug Harris visited reported that the capacity utilization rate on their saw was as low as 30 percent.

"After creating their own monitoring software, they increased that to about 70 percent. It is validation on what we are doing with SSC," he says.

For example, if the projected part total on a saw is set at 600 but only 400 parts are cut during a shift, the SSC will reveal



**Customers are seeking actual increases in productivity and the ability to monitor that.**

the source of the bottleneck. Perhaps the saw sat idle for an extended period during the shift due to material movement inefficiencies or a broken blade caused machine downtime. Those problems would be identified by the SSC software and reported.

**Alert system**

There is also a reactive aspect of SSC. Management can be alerted when a problem occurs. For example, if a saw blade breaks or a machine component malfunctions, an alert can go out to managers so they can address the problem promptly to avoid further downtime losses.

SSC is also able to monitor problems beyond the saw. An operator might know what production is expected of them but fail to achieve expectations. HE&M is working to develop software in machines with SSC that will reveal these issues as well. "Unless you track performance, you cannot hold anyone accountable, and you can't quantify what work they've actually done," according to Doug Harris.

Clients' expectations have grown. They're seeking actual increases in productivity and the ability to monitor that. The HE&M Saw team believes that advancements in band saws are as much about improving software that collects and reports information as they are about mechanical engineering. One beneficial side effect is that this has already led to improved safety by integrating software-driven features such as reduced blade speeds or "idle mode" while the saw is not cutting. This reduces the chance for an operator to suffer a more damaging accidental injury.

"So by using this intelligence now,"

Doug Harris notes, "we have created a safer piece of equipment and primarily are moving our equipment design further along into the realm of Industry 4.0 and industry expectations for the future with increased data-driven feedback." ■

HE&M Saw, Pryor, Oklahoma,  
918/825-1000, www.hemsaw.com.

# CLEAN-CUTS™

## CARBIDE TIPPED SAW BLADES



### ENGINEERED SAWING SOLUTIONS

- Nationwide Blade Management
- No-Cost Sawing Operation Survey

Longer Life • Best Finish • Quiet Cutting



**SPECIALTY  
SAW INC.**  
[www.SpecialtySaw.com](http://www.SpecialtySaw.com)

1-800-225-0772

[www.SpecialtySaw.com](http://www.SpecialtySaw.com)

ISO 9001:2015 Certified

**Specialty Saw Inc.**  
30 Wolcott Road, Simsbury, CT 06070 USA  
Voice: (860) 658-4419 • Fax: (860) 651-5358 • Email: [info@specialtysaw.com](mailto:info@specialtysaw.com)