

Modern Metals®


The magazine for metal service centers, OEMs and fabricators

www.modernmetals.com

A TREND Publication April 2011

Still standing

Service centers get
a grip on demand



Laser Technology: Maximize productivity with automation



Coated Coil: Surprising and stylish uses for tread plate

Rock and roll

SineWave technology delivers cost savings on difficult-to-cut materials

BY LAUREN DUENSING

Tough materials require tough tools. As the demand for super alloys has grown in the aerospace, energy and forging industries, companies need a precise way to cut and machine these materials—all while creating very little waste.

Houston Precision Process LLC specializes in the precision cutting and machining of super alloy stainless material, which Howard Lane, vice president of HPP, saw as an essential component to the marketplace.

"I retired from a large forging company young and eventually wanted to get back to work," says Lane. "I saw a need for a band saw shop that could cut nickel-based

metals because of the cost savings from using a narrower-kerf blade. There is close to 5 pounds difference in kerf in an 8-inch round piece of Inconel from abrasive cutting to band saw cutting. I gave it a try and the results were well received."

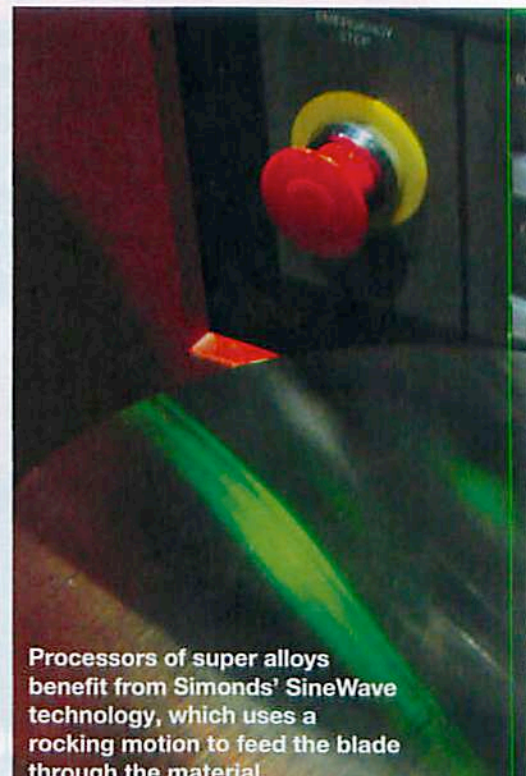
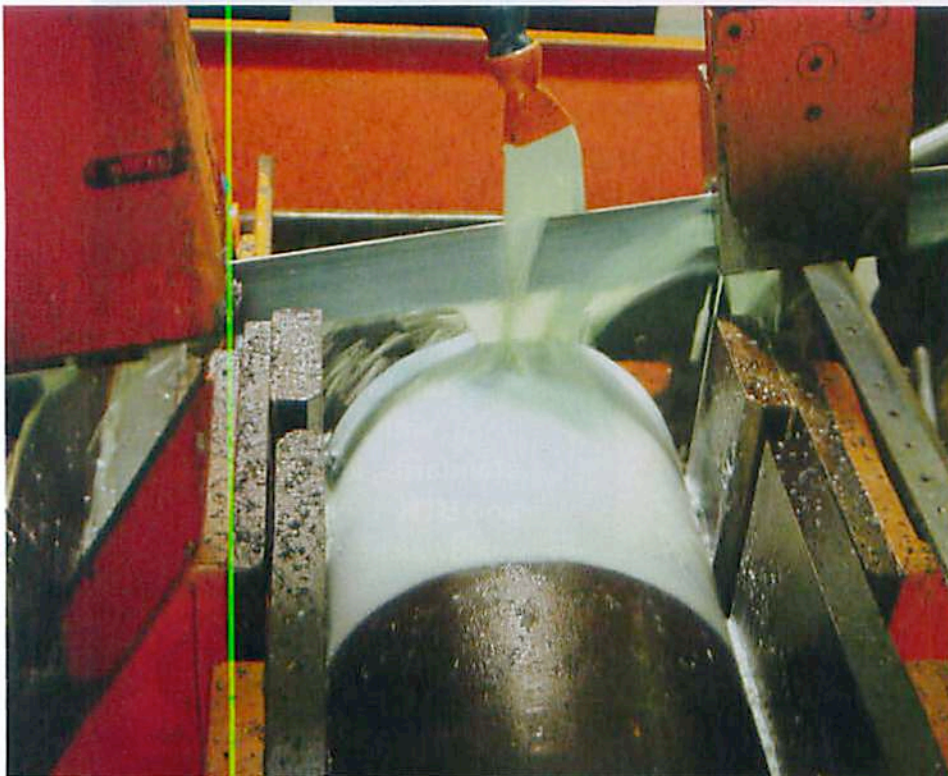
Efficient cuts

Because HPP specializes in alloys that are difficult to cut, the company always is

"looking for ways to improve cutting efficiency and precision," Lane says.

One way companies can process super alloys is abrasive wheel cutting and grinding; however, this method can cause work-hardening of the material. These types of metals are poor conductors of heat, and the accumulated high temperatures often interfere with the cutting process or damage the piece. This can be extremely expensive because the cost for raw materials and alloying components is high. Abrasive wheel cutting also can produce heat-affected zones, increased kerf and heavy machine maintenance and downtime.

However, Simonds International, Fitchburg, Mass., a manufacturer of cutting tools and products for the industrial marketplace, can provide a technology that makes it possible to use band saw cutting on aerospace alloys efficiently. SineWave uses a rocking motion to force each tooth of the band saw blade to penetrate the workpiece and generate a self-feeding ac-



Processors of super alloys benefit from Simonds' SineWave technology, which uses a rocking motion to feed the blade through the material.

tion that delivers faster cut times.

"Before SineWave, processors of aerospace alloys were forced to use abrasive wheels to cut their bars of material because traditional band saws were incapable of cutting them effectively," says David Miles, vice president of sales and marketing, Simonds International.


"The original version of SineWave was developed and patented many years ago and called SiNamic," says Dale Petts, global product manager, metal products, Simonds International. "The SineWave had been built with that patent serving as the foundation. The original version was the answer to cutting stainless and tool steel grades that tend to be difficult to cut with standard or carbide-tipped band saw blades. These materials, when machined, are prone to a condition called work-hardening when cut."

Petts says band sawing easily causes work-hardening because the continuous contact of the saw's teeth sometimes does not penetrate the material properly. As a

result, he notes, "the work-hardened surface becomes even more difficult to penetrate, thus causing the blades to wear

out even more rapidly."

SineWave's ramping motion works to offset this condition "by creating a change



CUT : to separate into parts as with a sharp edged instrument :
DIVIDE;SEPARATE;SEVER;INCISE;BISECT;SHORTEN;TOSAW

No matter how you say it, blades from Morse perform as well or better than any others, made anywhere. Combining experience, innovation and a desire to fulfill customers' cutting needs gives Morse an edge you can depend on, every time.

MORSE
THE M. K. MORSE COMPANY

800.733.3377 • mkmorse.com
©2011 The M. K. Morse Company

MADE IN U.S.A.





Cuts More for Less

Cosen-7-Advantage:

- 90 Models Across 6 Product Lines
- Superior Performance
- Fastest ROI
- Engineered to Your Needs
- Consultative Approach
- Worldwide and American Support
- Integrity from Day One

C-800iNC with V-Drive

“This piece of equipment typically will give me a productivity increase of a minimum of 25 to 50 percent more pieces on the floor in the same amount of time.”

— Allen Coddu, President
Impact Alloys, Inc., Pembroke, Massachusetts

www.cosen.com

ISO 9001 CERTIFIED EMC
11626-B Wilmar Blvd., Charlotte, NC 28273
Phone: 704.943.1030 • Toll Free: 1-877-SAWING 1 • Fax: 704.943.1031

of the cutting plane by altering the back edge of the blade as it rests against the fixed plane of the upper machine guides,” he says. “This creates a smaller contact area for the teeth on the opposite side of the blade, allowing them to penetrate with less pressure.”

Custom engineering

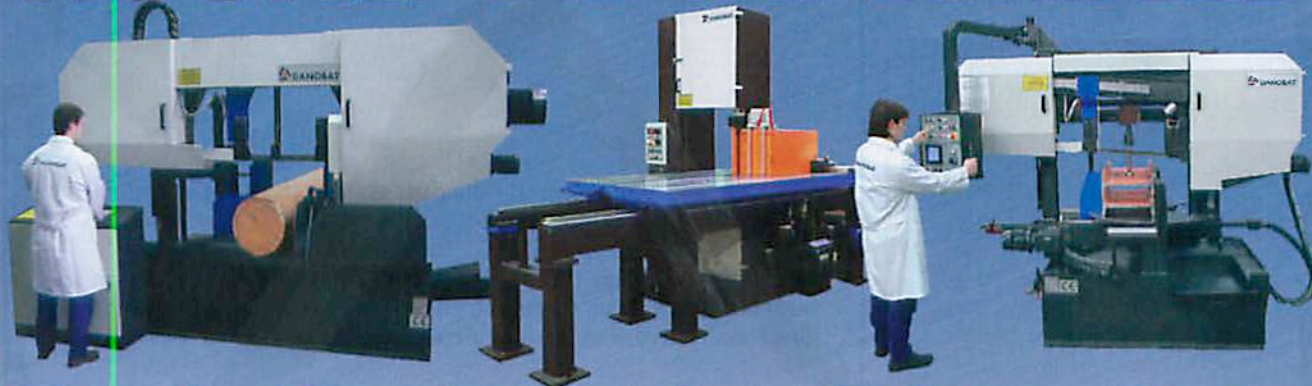
SineWave has advantages on materials beyond aerospace alloys. It can be used on blades cutting high chrome, tool, die, stainless and nickel-based steels, along with titanium and other exotic metals, and it can be used

on almost all band saw machines. It can be supplied on all M42 bi-metal and carbide-tipped band saw blades from 1 inch to 3½ inch and used with light, moderate or aggressive cutting action.

“SineWave technology was born by taking the SiNamic idea to an entirely new level that is custom engineered for every user and specifically to each of their machines,” Petts says. “This computer-calculated refinement optimizes the contact area, the number of teeth engaged and the penetrating force available for



ROUND • PLATE • BUNDLED



Danobat Saw Technology Delivers Faster Cycle Times with Step x Step Sawing.

Danobat is THE technology for today's companies that delivers maximum flexibility to your operation.

Thinking About An Amada or Behringer? Think Again!



DANOBAT

502 S. Westgate Street • Addison, IL 60101
Phone: 630-543-6222 • Fax: 630-543-5584
800-323-7503 • patmooneysaws.com



SineWave technology reduces downstream finishing operations, providing a smooth cut surface.

the teeth to pierce the material surface. In fact, the penetration force required by the machine with the new SineWave technology is in most cases actually lower than with conventional blades while still cutting faster."

Petts points out there are numerous customer benefits, depending on the application and the need. For instance, it allows band saw blades to cut materials they were formerly unable to cut and reduces downstream finishing operations with the improved surface finish, elimination of a heat-affected zone and improved cut accuracy.

In addition, for "customers using carbide-tipped blades as the answer to cut faster or fend off heat-induced failure, using SineWave technology on bi-metal blades can actually be less expensive per blade than carbide-tipped products, yet still able to obtain cut times that are as fast or faster than when using carbide.

"Typically, we find that the more difficult the application, the more radical the benefit associated with the SineWave technology," Petts says. "Free-machining materials benefit relatively little because they are easy to cut. Although SineWave technology may not be the

CERMET CIRCULAR SAW BLADES

WITH THE COUGAR CTC-1000 SERIES YOU GET

- MORE PARTS PER HOUR
- MORE PARTS PER BLADE
- BETTER RUN-OUT
- LONGER LIFE



AVAILABLE 250mm to 580mm

Our unique advanced-technology manufacturing and state-of-the-art Cermet processing delivers blades of unequalled tension stability and level, combined with the very highest in Cermet properties. They are your best choice for high production cold saw machines (Tsune, Nishijima, Kasto, Amada, etc.)



CUT TECHNOLOGIES METAL

3254 Bennett Drive
Bellingham, WA 98225
1.800.722.0305 • fax 360.715.2938

For full information visit our web site

www.cuttech.com

DIRECT FROM THE MANUFACTURER

Made in the U.S.A.



THE PIONEERS IN
CARBIDE SAWING

Turnkey Responsibility
for Large and Small
Saw Systems, Handling
Systems and Saw Blades



Fast, Economical Sawing of
Carbon and Alloy Steel Bars
and Billets From 1" to 24"

ADVANCED
MACHINE & ENGINEERING CO.

1-800-860-6076

www.ame.com

WHY JUST REPLACE YOUR EXISTING BANDSAWS, WHEN YOU CAN ALSO UPGRADE AT THE SAME TIME?

BTM bandsaws are designed with specific attention to eliminating blade damaging vibrations, improvement of cut quality and maximizing material throughput. Through superior machine design, and the use of reliable top grade components, BTM machines will provide your operation with lower cutting costs and greater productivity.



"For ease of operation, part fit and finish, and throughput of material, our BTM model 61.41 machine is the best bandsaw I've used in over 25 years in the fabricating business"

—Robert Smith, Saw Operator, Lanzen Fabricating, Detroit, MI
3 yr. owner of model 61.41 ADS 3000

BTM
Bandsaws

It's worth a look.

www.btmsaws.com

113 Winniett St., Woodstock, ON, Canada N4S 5Z8
Phone: 519-539-0450 Fax: 519-539-2210 info@btmsaws.com

Make Sawing Your Profit Center



Band Saws
Material Handling
Metalworking Fluids
Utility Saws

Custom Applications
Factory Service Department
Fast-Available Parts
Made In the U.S.A.



H&M SAW

— The saw that cuts straight. —



www.hemsaw.com



PO Box 1148, Pryor, OK 74362

Toll Free: (888) 729-7787 o Fax: (918) 825-4824 o E-mail: info@hemsaw.com

answer for every cutting application, being able to cut faster with less pressure while also experiencing longer blade life with a smoother surface finish are a compelling combination of benefits given conventional thinking on tooling of this type."

Increase blade life, save money

Instead of adding shift work, overtime or additional capacity to meet demand and reduce costs, companies can use SineWave to improve their performance by increasing productivity.

"I learned about SineWave from Roland Hayes with Industrial Diamond Products, who is our local Simonds distributor," Lane says. "I had worked with Roland for 30 years during my time at the forging company. After he told me of the success Simonds had been having cutting Inconel with SineWave, I decided to give it a try.

"When I tried the SineWave technology, I was sold," he continues. "We got much better blade life with the SineWave and achieved more productivity. In some

Extremely fast.

Ferro Max Cold Saw Blade

KANEFUSA



KANEFUSA CORPORATION
Head Office
1-1, Nakaoguchi, Ohguchi-cho,
Niwa-gun, Aichi, 480-0192, Japan
Tel +81 (0) 58795 7221
Fax +81 (0) 58795 7226
sales-ex@kanefusa.co.jp

KANEFUSA USA, INC.
Tel +1 859 283 1450
Toll Free +1 877 283 1450
Fax +1 859 283 1450
sales@kanefusa-na.com

www.kanefusa.net

Cycle times three times faster than HSS circular saw blades or band saws. Drastically longer edge life. Substantially lower tool costs. No wonder that the automobile industry increasingly employs Ferro Max. Available for tubes and solids made from mild, alloyed or stainless steel. When will you go for it? Kanefusa. Not without reason Japan's leading manufacturer of quality tools.

cases, it doubled the life of the blade."

According to Simonds, in a series of competitive trial runs, using the company's carbide-tipped triple chip blade with SineWave technology delivered a 5:1 cut ratio. With continued testing, SineWave achieved more than 100 cuts per blade on HPP's toughest materials.

"We experienced an immediate improvement in efficiency, ease of recycling, improved cuts, reduction in down time and material use," says Lane. According to HPP's cost savings analysis, SineWave saves nearly \$1 million for every 40,000 pieces cut. "With Simonds' products, training and support, we have effectively doubled our square inches cut per blade," Lane says. ■

Houston Precision Process LLC,
Houston, 713/856-0510.

Simonds International, Fitchburg, Mass.,
800/343-1616, fax: 800/541-6224,
www.simondsinternational.com.

WHY DO METAL FABRICATORS CHOOSE SCOTCHMAN?

QUALITY, POWER, DEPENDABILITY and VERSATILITY!

LEASING
3.9%-24 Months
4.9%-36 Months
on All NEW Scotchman
Machines

EASY Financing!

EASY Delivery!

EASY Operation!

EASY Service!

CPO 350 PKPD
COLD SAW

with
Advanced
Feed System

SH 1419
BAND SAW

SCOTCHMAN
ADVANCED
MEASURING
SYSTEMS

Scotchman
Metal Fabricating Solutions

SEE US AT...
AERODEF
BOOTH 1373

3YR.
WARRANTY

CPO 350LT
COLD SAW

The Solution **PREFERRED** by Metal Fabricators!

Call Toll Free 1-800-843-8844 or Call Direct 605-859-2542 • Fax 1-800-843-5545 or 605-859-2499
Website www.scotchman.com • Email info@scotchman.com • Scotchman Industries Inc., P.O. Box 850, Philip, SD 57567



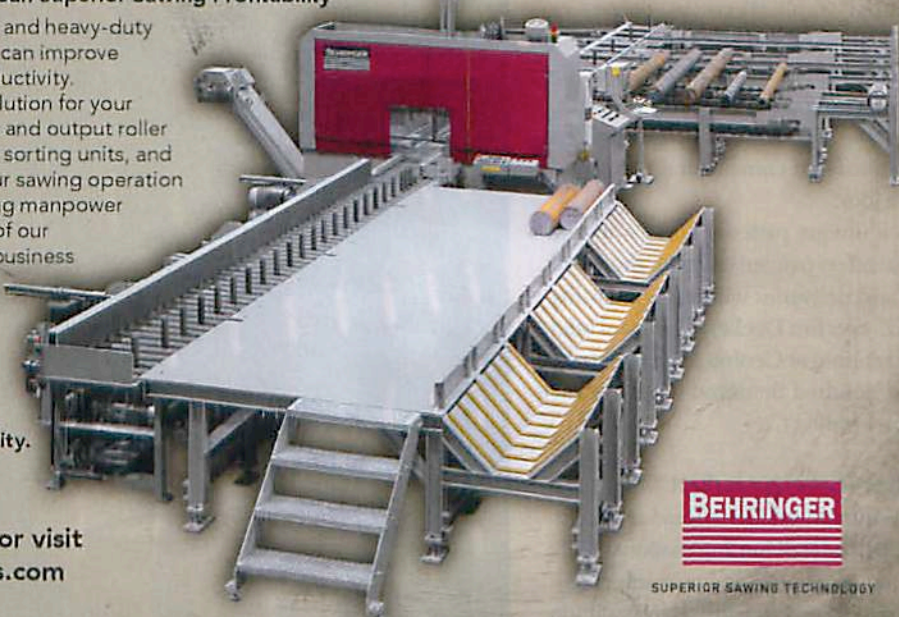
BRAINS AND BRAWN

Smart Sawing Solutions Mean Superior Sawing Profitability

Superior sawing technology and heavy-duty material handling systems can improve efficiency and increase productivity. We can help you create a solution for your material flow featuring input and output roller conveyors, transfer systems, sorting units, and transport systems to run your sawing operation at full capacity while reducing manpower and labor costs. It's all part of our commitment as an integral business partner in your operation.

Work smarter and let us do the heavy lifting. Find out more about our complete sawing systems to increase your productivity and profitability.

Call 1-888-234-7464 or visit
www.behringersaws.com



BEHRINGER

SUPERIOR SAWING TECHNOLOGY

Automatic Bandsawing Systems / High Performance Circular Cold Saws / Marking, Punching, Drilling & Shearing Systems

©2010 Behringer Saws, Inc., 721 Hemlock Road, Morgantown, PA 19543