

## **Handle on Success: Tom Honsa's Anti-Vibration Crusade**

Jackhammers, meat cutters and chipping tools all do a mean job. They tear up stuff. They make noise. Sometimes they make sparks fly. Mostly they vibrate. And those vibrations go not only throughout the material being processed, but also through the operators of the machines, through the fingers, hands, arms and torsos of men and women, who might be blasting, banging or chopping away for several hours a day. According to those workers and several job safety agencies, this is not a good thing. But help is on the way ... in a big way. And the hero of this story is a bright, amiable and resourceful guy from Milan, Ill., by the name of Tom Honsa.

Over the past 25 years, Tom and a few other family members have taken a good idea and turned it into a niche industry that serves international clients and a long list of Fortune 500 companies such as Boeing, Ford, GM, Lockheed Martin, General Electric, Deere and Company and Caterpillar. Their company is Honsa Ergonomic Technologies, Inc., and they manufacture a line of low-vibration tools and equipment under the Honsa Tools brand. They are dedicated to building safer pneumatic and electric powered tools across many industries such as aerospace, agriculture and auto manufacturing, the military and shipbuilding.

Along the way, the Honsa group was awarded a \$10,000 grant from the Northwest Region Entrepreneurship Center. These "Innovate Illinois" funds were used to beef up the company's marketing effort in 2007. That, along with a retooled national sales program, quadrupled the privately held company's income level over the previous year.

"The grant gave us the 'wheels' to do what we do, only better," said Honsa. "We put our sales manager out on the road. At the same time we re-did our catalog, improved our Web site and prepared new literature for the distributors. Sales, especially in the southeast U.S., went through the roof." The grant money was also used, in part, to buy ads in the trade journal of the American Foundry Society.

Honsa said he appreciated the marketing stimulus, but also the regular chats with NWREC's Don Henry, who directs the regional business development program for this part of Illinois. "Don's advice is so helpful. His experience is valuable—he knows about making a payroll and all the challenges facing a small company. I always run new ideas past him," said Honsa.

There have been a lot of new ideas since 1983, when Thomas W. Honsa and his father, a Moline dentist, Thomas S. Honsa, scribbled their original idea about modified handles for a chipping hammer onto a paper napkin, inauspiciously launching a careful but successful enterprise. (The napkin is framed and hangs

on a wall in the 10,000-square-foot headquarters in the Milan Industrial Park.) The company now holds eight patents on various tools, employs six people and has eight stocking distributors, as well as 10 non-stocking distributors in the U.S., two in Canada and one in Mexico.

That first design used polyurethane to lessen the vibrations in the handles of the chipping hammer. Dr. Honsa had experimented with various consistencies of polymers in his work with dentures, so he knew what kinds of materials would adhere and hold up to strong physical demands.

The first prototype for the modified chipping hammer was cobbled together in the Honsa family's basement from pieces of junkyard scrap metal with some design advice from a sculptor and teacher from St. Ambrose University, Jim Anderson. It weighed 18 pounds. Although the Honsas were excited about the low-vibration tool, at that time the industry was not focused on ergonomics, and they couldn't find an appreciative audience.

That changed when they showed it to John Prey at the Deere Technical Center in Moline, Ill. He suggested that they demonstrate the chipper hammer in front of the biomechanical experts in the University of Iowa's bioengineering department. That group tested the device according to National Institute of Occupational Safety and Health (NIOSH) standards and found that this design reduced the measured vibration by 87 percent.

Dr. Honsa prepared a formal paper on these results and presented the findings at a national meeting of the American Foundry Society. He was awarded first place award among 400 presenters that year – 1989. Still self-funded, the Honsas formed a family partnership that included the dentist, his wife, Jean, and their two sons, Tom and Mike. Between 1987 and 1989, they worked at applying this vibration-reduction technology to a wider variety of tools and industrial applications. In '89, they also received their first patent for the chipper hammer and got an order for 25 of a light-weight aluminum model from J.I. Case in Racine, Wis.

The company sought grant money from the local financial community and took a loan through the City of Rock Island's revolving loan fund for businesses. They rented a space at 2832 Fifth Street in Rock Island and added a business manager, secretary and shop technician.

"It was an exciting time," said Tom Honsa. "I lived at home and was totally focused on this technology. It was challenging to grow a company and develop new products. We worked with a machine shop in Bettendorf to create the pieces."

Another breakthrough happened in 1990, when the Oscar Mayer meat processing plant in neighboring Davenport, Iowa, heard of their innovative designs. They were having a problem with people in the ham-deboning line developing carpal tunnel syndrome because the “wizard knife” used to slice and trim the hams was heavy and awkward and produced a lot of vibration, according to Honsa. During an on-site visit, Tom literally had a brainstorm and sketched out his ideas for improving the machine handles. Honsa cast the first new knife system in what he describes as an “unforgettable pink” dental acrylic, but the Oscar Mayer people loved the results. By 1991, Honsa Ergonomic Technologies was mass-marketing a line of patented stainless steel “ErGrip” handles to meat packers nationwide. Their promotional activities were assisted by a written endorsement from the head of the Physical Therapy Department at the University of Iowa.

The polyurethane recipe used in the special handles is a trade secret and is custom-blended for various applications. In the early 90s, there was a flurry of innovation as they tried to find a variety of tools and equipment processes that would benefit from this vibration-reducing system. In 1991, they received patents for a variety of percussive tools such as vertical grinders, chipping tools and aircraft riveting tools. A year later, in a successful cooperative venture with Allied Signal Company of Kansas City, Mo., Honsa manufactured a vertical grinder that reduced vibration by half.

By then, the younger Tom Honsa had replaced his father as president and CEO of the company. He still carries those titles today. The next decade included the development of a Web site (1997) and the company’s first expansion into the Canadian market. In 2003, they developed a relationship with a Mexican distributor, their fastest growing market. As they grow globally, there is now product literature and Web information in Spanish. An upgraded Web site was developed with a local graphic artist in 2004. They received an Export Achievement Award from the U.S. Department of Commerce in 2005.

Four years ago, Honsa made a determination to conduct as much of his operation locally as was possible. All the polymer work is done in the Honsa facility in Milan, but the metal work was spread out all across the United States. “We really want to support local industry, so we took our machining work from New York, Ohio, Michigan and California, and found very capable operations in the Quad Cities and this region. This influences a lot of people working in these machine shops. We are proud that all of our products are made right here in the United States.”

There is competition in this niche market, according to Honsa, including a Swedish company, and several big tool-making companies that commit 15 or 20 percent of their product lines to reduced-vibration tools. “But we are the only group that makes this our exclusive line.”

The company has grown by 15 percent each of the past three years. More than 20 percent of the 2008 revenues are from overseas. Honsa has received helpful advice from Adrian Madunic, the coordinator of the International Trade Center at Black Hawk College in Moline.

Brett Casper is a sales engineer for Honsa, who has witnessed changes in this industry over his 12-year tenure. "As robotics in manufacturing and assembly grows, they still need the special attention to vibration reduction," he said. "Whether it's a robot or a person building a jet engine, you can damage human joints or robot parts with too much vibration." He sees their ventures into robotic as a significant growth area.

From Casper's perspective, the sophistication of computers in tool-making has had the greatest impact in the past decade. "With the 3-D technology available, we have become more likely to see problem—and solutions, so there's more efficient planning and better results," he said.

Tom Honsa sees the development of financial support as the biggest challenge to his company's progress. "With success and experience, it will get easier, but we are always trying to change people's thinking, to make them realize how much ergonomics really matters." One of the largest ergonomics consulting firms, Humantech, Inc., has recommended Honsa Tools to many of its clients, which certainly helps spread the idea. Honsa admits to some frustration at the pace of growth of the company, but he also believes his cautious approach has served the company well with stability over the long run.

He cites several people and organizations, along with the Northwest Region Entrepreneurship Center, for helping him build his dream. "We have appreciated business tips from Paul Nagovan, an accountant with the local Small Business Development Center (SBDC). And Vickie Miller, the lead technical procurement officer at SBDC, helped us secure a General Services Administration contract with the Boeing Company," said Honsa.

And while Honsa Ergonomics is benefiting from its industrial success, it is really the clients and their employees who are reaping the rewards of reduced injuries and lower worker compensation claims. As the Honsa Web site says, "With 21<sup>st</sup> century technology, they will reduce costs, increase productivity, improve employee relations and foster an environment of long-term increase corporate profitability."

With Honsa Tools, you won't hear vibrations, but you will hear the sweet sound of success.