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Easing the Daily Grind

Following the birth of his son, Jean Pierre Vilanova decided that he wanted to build his grinding business into something he could pass on. His first step was to invest in productivity enhancing machinery.

ISSUE: Reinventing a re-grind shop to expand.

SOLUTION: Adding value to service by upgrading to CNC grinding equipment.

By all definitions, Jean Pierre Vilanova's tool and cutter grinding shop is a modest one. This recent French immigrant, who works out of a small industrial space in Granby, QC, has built himself a nice market niche by grinding high precision cutting tools such as drill bits, end mill and step tools. If it was not for his wife, Béatrice, who handles bookkeeping, answers the phone and does paperwork, Vilanova would have only the radio to keep him company.

But take a few steps into the shop, and it becomes immediately clear that Vilanova has big plans for Entreprise Affut-Mill, the business he founded early in the decade, working nights, while holding a day job to support his wife and five kids. For one, though the space he works in is small, it is spotless and extremely well-organized.

Vilanova's production equipment is spaced meticulously and equidistantly and his machine tools are laid out in precise rows. But Vilanova's *piece de resistance* is in the back of the shops; a spanking new Walter Helitronic Power CNC Tool and Cutter Grinder, which stands out starkly amidst much of his older, though spotless, grinding equipment.

Vilanova's new acquisition, designed both for regrind shops and for manufacturers, cost him a pretty penny. But he expects to more than make up for it through the many productivity features that it provides, ranging from short cycle times, quicker setups, an autoloader and an automatic measuring/positioning system. "I have been working on

manual grinders all of my life and I waited a long time to get a computerized numerical controlled (CNC) machine," says Vilanova. "If I had realized how functional it was, I would probably have gotten one earlier."

GROWING A FAMILY, GROWING A BUSINESS

While growing one's business may seem like an obvious step, it was by no means clear that Vilanova needed the headaches, particularly during current tough economic times. Vilanova moved to Granby from France early in the decade, hauling a wife and three kids (two more were born in Canada). Despite the fact that Vilanova knew no one here, he soon developed a reputation as one of the most skilled craftsman in the district.

That said, one asset Vilanova had was lifelong experience in the tool grinding trade. His earliest memories date back to when his father used to bring him and his siblings into the family shop on weekends, where the kids would do all sorts of odd jobs, and where they all learnt the business from the ground up. However Vilanova's father decided to leave the business to his oldest brother, so he decided to seek out his fortune in the new world. But like many

Europeans, his taste for the continuity of being in a family business never left him.

After his son Mathys was born, Vilanova began to think about the future. "My first four children were daughters and I was not sure that they would like this kind of life," said Vilanova. "But after Mathys came along, I began to want to leave something behind." However to do that, Vilanova knew that he would first need to grow the company.

ENTREPRISE AFFUT-MILL AND VILANOVA

In a sense the new Walter CNC Tool Grinder is a perfect fit for Vilanova's needs. Affut-Mill currently supplies regrinding services to more than a hundred clients. Most of these are machine shops, which Vilanova got to know through word of mouth recommendations. Vilanova's services are crucial, because the tools that he supplies are typically fit onto machines used to produce precision aircraft and automotive industry parts. Delays in production lines at these facilities can be extremely costly and Vilanova's customers have come to rely on the fact that he can often deliver reground cutting tools the next day, by working late hours when needed.

Vilanova also supplies a large local Fortune 500 customer, which has a large plant in the area, but is cautious; "you have to be careful taking big contracts," says Vilanova. "They can allow your business to grow quite rapidly. But once the contract expires, you can never be too sure that it will be renewed. By keeping production diversified, you drastically reduce the risks that come from any sudden slowdown."

WALTER CNC TOOL GRINDING EQUIPMENT

John Manley, president of Machine Tool Systems Inc., the distributor who sold Vilanova his Walter grinder, agrees that the machine was a perfect choice for Entreprise Affut-Mill. "The Walter Power is very flexible, much faster than manual machines and can be put into operation quickly," says Manley. "Furthermore, once the machine has been programmed to produce one tool, you can just keep it running to pump out several more with little additional work. Since the process is automated, each of the parts produced is identical."

The multi-axis CNC machines have several design characteristics that make them substantially more productive than earlier generation equipment says Manley. "In manual machines, the grinding wheel has minimal coolant, so often these wheels break down not through wear, but because of the heat they generate."

Another of the Walter Helitronic Power's key benefits is that it works well on carbide tools, the raw material of many modern tool bits. Carbide, particularly when coated with titanium aluminum nitride (TiAlN), is far harder and more durable than high speed steel, which continues to



Jean-Pierre Vilanova gives his five-year old son Mathys pointers about how to program Affut-Mill's new Walter CNC machine.

be used in many tools and bits. However, carbide is more challenging to grind. "Carbide tools made with manual equipment tend to have microscopic stress fractures in them," says Manley. "However producing tools using CNC machines with high pressure coolant substantially reduces this problem."



Jean Pierre Vilanova plans to expand his business with his new machines, including this Walter grinder.

FROM RE-GRINDING TO MANUFACTURING

According to one of Vilanova's clients who Vilanova prefers we don't name for competitive reasons, says his new machinery will increase Affut-Mill's value as a supplier. "Among the key value he adds are his fast job turnarounds and consistent quality. The new equipment will make it much easier for him to supply this."

However, now that he has the new grinder, Vilanova

seems less inclined to content himself with merely doing regrinding work, an area that he has focused on in the past. His latest plan is to move beyond mere regrinding into original tool manufacturing. He has already made several tests and the initial results have been good.

Ironically, once again it is Vilanova's son Mathys who is partially responsible for this change of plan. Mathys suffers from a particularly uncomfortable form of diabetes and Vilanova wants to help him by contributing a portion of the funds he earns from his manufacturing work

"According to one of Jean Pierre Vilanova's clients, his new machinery will increase Affut-Mill's value as a supplier."

towards diabetes research. "It is true that I am a workaholic and I love what I do," says Vilanova. "But sometimes life has a funny way of telling you that there are bigger things out there. And if there is anything I can do to help

along diabetes research, I'll certainly give it my all." **CM**

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Machine Tool Systems Inc. www.machinetoolsystems.com

Sputtek Inc. (TiAlN Coatings) www.sputtek.com

Walter Grinders www.grinding.com

Keeping the work in-house

One of the biggest challenges facing conventional re-grinding shops is that many of them are seeing business slip away from them, toward full-service operations. "Regrinding is a business model that is fading," says John Manley, president of Machine Tool Systems Inc. "That's because while many shops that use manual equipment do regular tool regrinding, they are

often not competitive when it comes to original manufacturing."

However, in recent years the problem has become more acute. "As many new shops equip themselves with CNC grinders, the productivity spikes they are seeing are tempting many to seek out the re-grind work in addition to tool manufacturing," says Manley. "That leaves shops that only do

regrinding work in a vulnerable position."

The upshot, says Manley, is that machine shops like Affut-Mill, which upgrade to CNC equipment not only open the door to new markets, in addition, their enhanced productivity also puts them in a better position to hold on to existing accounts as well.