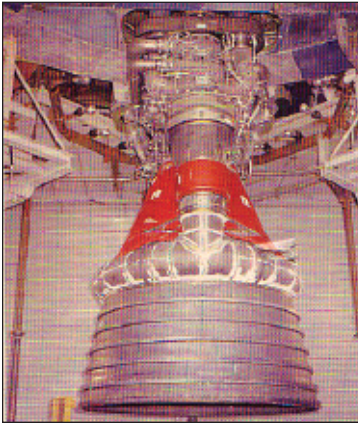


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STELLAR TECHNOLOGY



(l-r) Dmitry Kaplin, V.P. Manufacturing, and Bob Haefner, V.P. Sales, Stellar Technology Inc.



Yaro Grinchinshin, Machine Shop Manager, Stellar Technology Inc.



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Technology Key to Stellar's Growth

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"It is not just a matter of being willing to pay for technology but what is important is knowing how to use that technology to improve products and increase profitability," said Bob Haefner, sales manager for Stellar Technology. This philosophy has resulted in impressive growth of Stellar Technology, Inc. from its beginning in 1991 with five employees to 46 employees today.

The company manufactures highaccuracy pressure and temperature transducers that are used in the aerospace, automotive, pharmaceutical, energy, and military markets. A pressure transducer is an electromechanical device that combines tight tolerance mechanical parts with electronics to measure and transmit pressure

readings via an electrical signal. Stellar products can be found in critical applications from the Space Shuttle to drilling rigs tapping into the ocean floor.

Three years ago the companyexpanded and moved into its newmodern 27,000 sq. ft. facility and is now planning to triple its Machining Division's space to make room for new high technology machining centers. In addition to Stellar Technology's belief in investing in state-of-the-art technology its work force is made up of over

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25% degreed engineers. "Our engineers have the expertise that ensures quality designs that maximize durability and accuracy even in the most severe operating conditions," said Haefner.

Stellar Technology has in recent years been able to transfer this technological expertise in manufacturing to new customers for its Machining Division. Many of the companies Stellar Technology sells to need the same kind of machining quality work that Stellar Technology had developed for manufacturing its own products. "The success the company is having is truly exciting," said Dmitry Kaplin, product engineering, manager. "We are filling a niche that is finding more and more customers who need low-cost machined parts, at high tolerances and high quality."

This has resulted in Stellar Technology purchasing a new DMG CTX 410 CNC lathe. "In 1993 we purchased a CNC machine that was made in 1985. When I look back at the technology that was in that machine and its control and what is in modern machines today the technological leaps have been phenomenal," said Haefner. "We have a lot of innovation going on in our products, innovation that requires high technology manufacturing. To meet this challenge we looked at a variety of new CNC lathes and features that would help us meet our growing machining needs. All machines appeared to be faster but some are truly better than others. We decided on the DMG CTX410 lathe because we believed it offered the greatest balance of technology versus cost. What intrigued us was that this lathe had as standard equipment an integrated spindle motor. This concept offers very dynamic acceleration and deceleration of the spindle that we considered our opportunity to reduce cycle times. What we got was more than we had expected. The machine's spindle is certainly very quick but we consider the greater advantage of the CTX410 to be its thermal stability. One of the higher volume components we machine requires us to hold a tolerance of ± 0.0002 ". We were currently doing this on our existing equipment but at a high operator cost. During the first two hours of operation as the machine's temperature stabilized we had to have an operator closely watch the part-to-part vari-

ance and continually adjust the machine offsets. Once the machine came to temperature and stabilized we could then go to our standard part sampling checks. Some of the machine variation we saw with Stellar Technology, is a source of high accuracy, extremely stable and long-life pressure transducers for Aerospace and High-Rel applications. Transducers from Stellar Technology qualify to meet the parameters of acceleration, vibration, shock and thermal conditions for rigorous environments. Stellar Technology's units solve exacting pressure sensing requirements for missile and rocket testing, jet engine testing and satellite programs and are man-rated for the Space Shuttle.

Our existing equipment was as much as ± 0.001 ". Now with the DMG machine we have seen no more than ± 0.0001 " variation through machine start-up and operation. This has reduced the burden to our operators allowing them to do more with a reduction in part rejection. Our overall review of the machines operation has shown a 25% reduction in operation time. This includes both a reduction in operator monitoring as well as a reduction in cycle time. Our parts are made from some of the harder stainless steels along with Inconel, Monel, and Hastelloy and we have found the machine produces excellent finishes with increase tool speeds and tool life due to its rigidity. It's our first lathe to use grease versus oil, which has decreased our coolant maintenance."

Stellar Technology's Machining Division capabilities include turning, milling, surface grinding, heat treatment, plating, welding, wire EDM and RAM EDM. The company also has ISO quality inspection and measuring systems.

For more information contact:

Bob Haefner VP of Sales

Stellar Technology, Inc.

237 Commerce Drive Amherst, NY 14228 716-250-1900 Fax: 716-250-1909
www.stellartech.com E-mail:
info@stellartech.com