

Machining with vision, driven by technology

Since forming in 1989, India's Jyoti CNC Automation has many firsts to its credit, from manufacturing gear boxes to developing high precision geared head lathe machines. The Huron parent later shifted focus and became a manufacturer of CNC machines.

Thriving on cutting-edge innovations and lateral thinking, India's Jyoti CNC Automation has proved true the saying, "Big thinking precedes great achievement". Having started his machine tool career with job works in 1989, Parakramsinh Jadeja, Jyoti's chairman and MD, forayed into manufacturing conventional lathe machines and special purpose machines in 1993.

Recently, he took a look back. "It served as a learning curve for me and my team. I wanted to change with time and learn new things. Hence, in 1998-99, we entered into manufacturing CNC machines, and since then have grown rapidly." Winning the IMTMA Vinod Doshi

Outstanding Entrepreneur Award from Imtex 2013 is a testimony to this man's vision and determination to take home-grown technology to the international market.

In pursuit of vision

Jadeja talked of a focal shift. "In 2003, we witnessed the biggest change in our ambitions after attending a three-day 'Vision Exercise' [held] by the Indian Machine Tool Manufacturers' Association (IMTMA). We did some serious brainstorming for almost eight months to generate the company's vision statement and finally arrived at the conclusion that

it's the technology drive inside us that keeps us going."

He explained the mission of the company - Propelling Technology, Prospering Life. "We believe in constantly contributing towards innovative technology for better human comfort and higher productivity. Our products are equipped with automation and multi-tasking abilities to enhance productivity [on] customers' shop floors."

Having carved a niche for itself in the global machine tool space, the company presently has a workforce of 1,200. Around 90 of its design engineers are engaged in R&D in India and 15 at its French subsidiary Huron. ▶



A look at one of the production sites. Capacity was expanded a few years ago.

Source: Vogel Business Media

Innovation is the key

Talking of technology being the game changer and a contributing factor to its success, Jadeja said, "We are pioneers in the concept of linear motors for higher dynamics/better accuracies in machines. Our CNC oval turning centre is one of our unique offerings for non-circular turning of pistons." The company has other machines, too. "Our CNC universal machining centers with multi-tasking operations and CNC twin turret/twin spindle machine, displayed at Imtex 2013, were much appreciated by the industry."

Manufacturing excellence

Presently the company has three manufacturing facilities in Rajkot of 36,000, 3,000, and 3,00,000 square metres that produce 3,000 machines annually. As a long-term production strategy to avoid dependability and quality issues, the company has adapted the process of backward integration across the manufacturing cycle. "We have our own state-of-the-art machining facilities, sheet metal shop, paint shop and a world class mechanized foundry with a capacity of 1,000 tonnes / month," Jadeja said. In order to produce 5,000 machines by 2015 and 8,000 machines by 2020 annually, the company has recently expanded its infrastructure to manage its growing volumes. In this context Jadeja pointed out the details. "The assembly lines are differentiated according to the product mix and complexity of machines. We have even separated and created an exclusive assembly shop for R&D to avoid any kind of interference in production lines." The company also plans to start making their own controllers soon.

R&D initiatives

Pushing the technology drive forward, the company takes a lot of initiatives to create awareness towards propagating technological education by demonstrating and explaining technical aspects to the end-users through industrial exhibitions, seminars and training programs at its tech centre. The centre has been dedicated to Leonardo da Vinci, who is credited with designing the first lathe machine in the early 16th Century. The centre has been established to design and develop technologically advanced



In the background, the accolades won by the company with two of the core team members - (r.) Hiren Jadeja, executive director & Arun Nene, channel support, Jyoti CNC.

Source: Vogel Business Media

world-class machines for better quality, reliability and productivity; to cater to sophisticated aerospace, automobile and defense applications; and to meet high level of accuracies and reliabilities. "Around five per cent of revenue is parked from the annual turnover for R&D," he said.

Academic-industry initiatives

On the academic front, Jyoti has taken the innovative path of selling the ma-



Source: Vogel Business Media

"We believe in constantly contributing towards innovative technology for better human comfort and higher productivity," said Parakramsinh Jadeja, chairman & MD.

chine tool concept through robotics to the youngsters. "Today's youth is fascinated by robotics. We tell them about high-end metal cutting robots, CNC and how knowing programming can make the job easier".

Apart from this, the company also makes an effort to help students understand that a manufacturing plant is not a place filled with oil and grease. "Around 1,000 students visit us every year from schools and colleges. We also provide apprenticeship to college students. Thus, while they are completing their education they also get [...] exposure to shop-floors and live projects and get a stipend too."

Industry sectors

With its wide array of offerings, such as CNC turning centres, CNC machining centres (3, 4, and 5-axis), CNC HMCs, vertical line CNC machines and so on, the company caters to diverse industry sectors from aeronautics, defense, die and moulds, allied, jewelry, automobile, textile, power and medical segments.

Drawing a roadmap for the near future Jadeja, outlined the company's direction, "We are [...] looking at 35 per cent year-on-year growth. We aim to be one of the top 10 machine tool manufacturers in the world by 2020."

This article originally appeared in MMI, Modern Manufacturing India, a partner magazine in India belonging to the MM Group and was written by Soumi Mitra.