

stones larger than 10 carats. In terms of carat, India's share in this sector is about 80 per cent of the world market. Employing over 90 per cent of the global diamond industry workforce, India also accounts for 90 per cent of the volume of diamonds processed in the world.

"There has been a significant reduction in the wastage of diamonds after I started using the sawing, bruiting and planer machines of SLTL," says Vachhraj, a leading diamond

crystal, mark its outline and cut out the surrounding waste material within a few minutes, as against a full day, when carried out manually.

"We first introduced laser sawing machines to cut the rough diamond, then the plainer to mark out the exact shape of the crystal and, later, the bruiting machine to cut the diamond in its optimal shape," says Patel. While three separate machines are available to carry out these three different operations, the company

decided to help it out in these areas, besides providing additional funding to help it grow," says Vishnu Varshney, managing director, Gujarat Venture Finance Limited.

GVFL has not just invested in the company but is also helping out Patel in establishing accounting and marketing systems. "We are also helping the company in establishing business alliances with other companies, which require laser technology to carry out various processes," points out Varshney. SLTL has acquired six patents for the laser machinery it has designed and developed.

The company recently set up a diamond cutting and polishing unit in the gems & jewellery park in the Gongzhou Special Economic Zone in China to take advantage of the growing gems and jewellery business in that country. The company has also acquired a German laser source development company, ELS GmbH, at a consideration of € 200,000. "After the acquisition, we will now be able to cater to the European market," says Patel.

Having established a near monopoly in the diamond industry – with no Indian company manufacturing laser machines for the gems and jewellery industry, the company has now undertaken a research and development project involving solar energy. "The prototype solar heating equipment developed by us is in a testing stage and we hope to introduce it in the market in near future," says Patel, without divulging details due to confidentiality commitments. "The solar project will have a path-breaking impact in the field of non-conventional energy," concurs Varshney of GVFL, which is funding the project. "However, because of provisions of confidentiality, we are unable to divulge further details," he adds.

SLTL has also won the hearts of the people of the villages around Gandhinagar by employing young graduates from the local industrial training institutes and polytechnics. The company has its manufacturing plant in the industrial estate set up by the state government in Gandhinagar especially for electronic units.



Diamond cutting machines: innovative use of technology

processor from Bapunagar, Ahmedabad. "Earlier, when the rough diamonds were sawed and bruited manually, there used be a sizeable wastage, on account of human error in judgement," he adds. With the help of laser sawing, plaining and bruiting machines, one gets not just higher yield from a rough diamond but also the optimum shape of the crystal.

"The use of laser machine in diamond cutting results in weight loss of hardly 2 per cent, as against 8-10 per cent in the manual process," points out Gurmeet Singh Bagga, the owner of a diamond processing house in Ahmedabad. A typical SLTL laser machine can process 8-10 carats of diamond per hour. With the help of a computer software programme, also developed in-house by the company, this machine scans a rough diamond to determine the exact shape of the

recently introduced a machine, brand named 'Gizmo' to carry out all the three operations.

Wider applications

Exploring avenues of wider applications of the laser technology (outside the diamond industry), Patel decided to make machines for engraving, marking and cutting sheet metals. These machines are used as precision tools for automobile parts manufacturing. "One of our main customers is Telco," says Patel. Among the other customers are Indian Pistons and a score of smaller auto parts manufacturing units in Pune, Chennai and Bangalore.

"Arvind Patel combines in him the skills of a technologist, the enterprising spirit of an entrepreneur and the acumen of a businessman. What the company lacked was organisational skill and marketing strategy. So, we