

Where Gods Watch Over Technology

In India tradition and progress go hand in hand. Schott Glass India is a good example.

For one moment you might almost forget you're in India. After extensive modernization, the factory in Jambusar in the northwest Indian state of Gujarat is state-of-the-art in every respect after being taken over nearly three years ago by Schott Glass India (SGI). The complex of buildings, where 340 employees manufacture special glass tubing for pharmaceutical packaging, is smartly painted in white and blue and embedded in a luscious green landscape. But then, in one of the production buildings the visitor's attention is caught by something that is typical of India: the picture of a blue-skinned, lavishly adorned god, as can be encountered anywhere in the country, from the taxi to the general store around the corner. High-tech and a thousand year old tradition – in India the two go side by side.

With a growth rate of eleven percent in the year 2000, the pharmaceutical industry is – after information technology – the most dynamic sector of the market in this country of holy cows and cyber cafés. The business of medicines calls for very strict regulations, after all, human life is at stake. Highly sensitive products have to be packaged so that the drugs are protected adequately. At the same time the packaging material must remain absolutely neutral, having no effects on the contents. Ampoules and vials for pharmaceutical products, ranging from vaccination serum to vitamins, are made from special glass tubing. Jambusar and the city of Baroda 50 kilometers away, where sales and administration are based, are regarded as the best address in India for pharmaceutical packaging. In Jambusar the Tubing Division of Schott Glass India makes Neutral Glass Clear (NGC) and Amber (NGA) tubing of type 1 glass for pharmaceutical packaging manufac-



turers in all parts of India. The company has managed to position itself as the market leader in this sector. For pharmaceutical packaging that has to meet exceptionally high standards, customers can order "Fiolax" special glass tubes manufactured at Schott Group tubing plants in Spain and Germany. Schott supplies all the leading pharmaceutical companies on the subcontinent, including E. Merck, Pfizer, Novartis, and GlaxoWellcome. Exports to China, South Africa and the Commonwealth of Independent States (CIS) are also showing a positive trend.

New Standards

"Our vision is to be always one step ahead in terms of performance and quality," explains Andreas Reisse, Business Segment Vice President of Tubing. He means it too. Right after the plant was taken over, SGI launched a large-scale project to improve product quality, quality assurance, industrial safety, and environmental protection, actively supported by Schott Rohrglas in Germany. Experts travel to Gujarat regularly in order to pass on their know-how, and at the same time Indian staff are sent to Germany for training.

In the process of modernization and expansion, melting furnaces, production facilities, and the quality assurance system were upgraded with state-of-the-art technology. Product quality has thus improved significantly, as has the packaging due to the introduction of the "Densopack" system of shrink-wrapped glass tubing bundles. In June 2000 Schott Glass India became the first glass tubing manufacturer in India to publish its Technical Terms of Supply (TLB SGI) for NGC and NGA. One year later SGI was issued with the ISO 9002 certificate by Rhineland/Berlin-Brandenburg Technical Inspectorate ("TÜV"), again the first in India. At the beginning of 2000 a new sand processing unit was put into operation. In India the sand has

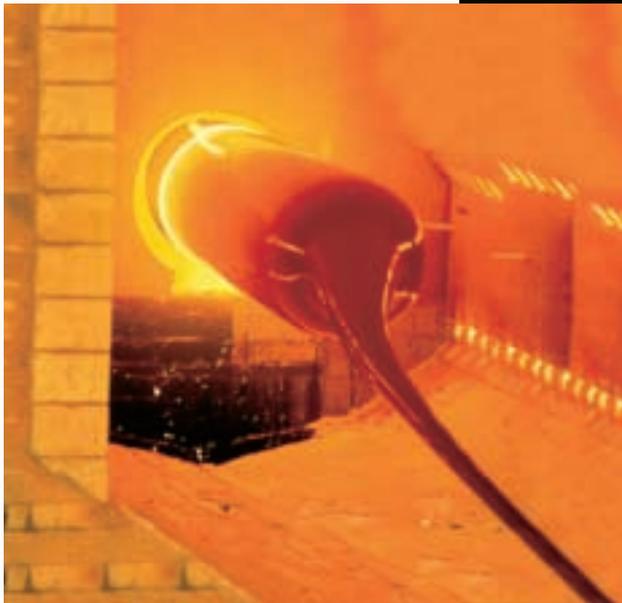
Schott Glass India produces Neutral Glass Clear (NGC) and Amber (NGA) tubing of type 1 for pharmaceutical packaging customers throughout India.

to be dried and sieved before it undergoes further processing. "In addition we built a new fully automated batch plant. This has reduced the level of dust pollution for staff to an absolute minimum," explains R.N. Banerjee, Director of Schott Glass India.

Escaped the Earthquake

High-quality packaging material, that enables products to reach the customer in perfect condition, plays a key role in light of the enormous increase in competition and the concentration process in the Indian pharmaceuticals market. SGI has a declared objective of maintaining and improving its market leadership as a major supplier in this sector – even though in India there may occasionally be adverse conditions to contend with, which are virtually unknown in many other countries. For the 360 employees in Baroda and Jambusar, the devastating earthquake in Gujarat at the beginning of 2001 was a close call. Felt by all, the Indian staff's confidence in divine assistance was obviously effective. Apart from a few cracks in the factory buildings, SGI sustained no serious damage ■

Leading pharmaceutical manufacturers on the Indian subcontinent insist on using ampoules and vials made from tubing produced by Schott Glass India.



A continuous strand of molten glass flows onto the slowly rotating Danner mandrel. At the lower end the already formed tubular glass is drawn off and directed horizontally.

Visual inspection of the finished tubes.