

Customer focus critical for diversified Indian glassmaker

Pradeep Kheruka, Vice Chairman at Borosil Glass Works, spoke exclusively to *Glass Worldwide* about the Indian family dynasty's specialist activities and recent diversification initiatives.

Borosil Glass Works Ltd has emerged as a diversified specialist glassmaker and processor in recent decades, with interests spanning a growing number of sectors. It is the market leader for laboratory glassware and microwavable kitchenware in India, for example. The Scientific and Industrial Products Division sells laboratory glassware, instruments, disposable plastics, liquid handling systems and explosion-proof lighting glassware, while the separate Consumer Products Division sells microwavable and flameproof kitchenware and glass tumblers. Subsidiary company Gujarat Borosil Ltd is the only manufacturer of solar glass in India, operating a 180 tonnes/day low iron patterned glass furnace for the manufacture of high transmission glass used in the solar industry.

Collectively, the organisation provides employment for approximately 2000 people and in 2015, was recognised by Forbes as one of Asia's 200 best performing companies under a billion.

FAMILY DIRECTION

The origins of Borosil Glass Works date back to 1962, when local glass scientist, Dr S R Lele started to make borosilicate glass in partnership with the USA's Corning Glass Works. The international glassmaking innovator ultimately bought out its local Indian partner and ran the business until 1988, when its controlling interest was transferred to the Kheruka family, which has not only maintained but successfully built the company's brands ever since. By the late 1980s, Borosil specialised in the manufacture and processing of consumer ware and tubing, although its production and market profiles have evolved quite significantly in the intervening 28 years.

Today, three generations from the same family are responsible for managing and directing a successful international business, headquartered at Bharuch, Gujarat. Mr B L Kheruka is now Executive Chairman, his son Mr P K Kheruka is Vice Chairman and

Shreevar Kheruka (grandson) is Managing Director and CEO.

The family has been in the Indian flat glass business for more than five decades and Pradeep Kheruka has been involved since 1968 when, as a 17 year old, he joined Window Glass Ltd, a company founded by his father. "I would go to the factory with him when I was 12 and was always very interested" he recalls "so I had a very good understanding of the principles of glassmaking in my early teens. Even then, we were very customer-centric, as well as being very technical... it was always our challenge to do the job right, at the lowest cost."

SOLAR FOCUS

Over the years, the company has operated four different manufacturing sites in India but latterly, production has been consolidated at a single location in Gujarat to optimise management and technical expertise. The Bharuch plant was originally commissioned in 1994 to make sheet glass but before this activity ceased in 2010, it had already been replaced with India's first and only solar glass production facility. "Our glass has an iron content of just 0.006%, which is very impressive" said Pradeep Kheruka, who also confirmed that the SPF Institute in Switzerland has awarded an efficiency rating of 95.2% to its solar glass, making Borosil solar glass the world's highest rated product.

According to Mr Kheruka, the best manufacturing equipment was imported from Europe to guarantee the



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Pradeep Kheruka believes ongoing co-operating between AIGMF, Kanch and Glass Worldwide is very helpful for the development of India's glassmakers.



success of this installation. This includes German rolling machines, a CNUD lehr, a batch house supplied by Lahti Precision and a cutting line from Grenzebach. "The furnaces are also of European design and we have the latest generation Benteler grinding line that is absolutely state-of-the-art. It's a major investment that I can justify to myself and to my board because we're very focused on what we are doing and why we are doing it. There are 60 similar configurations elsewhere, especially in China but where the other 59 draw about 110 tonnes/day from each line, we draw 180 tonnes/day." Also impressive is the company's fuel consumption, which is estimated at approximately 1300 kilocalories per kilo of glass compared to about 1800-2300 kilocalories at competitive producers.

"To prove our glass, we established a 300kW installation on a roof top installation on a warehouse adjacent to our factory. This gave us the opportunity to employ modules made using our glass together with units made with other people's glass. Modules with our glass have outperformed all others!"

Furthermore, the company has shown that it is possible to make high performing glass without using antimony, permitting solar panels to be crushed at the end of their life and used safely as a landfill material. "If the landfill is permanently exposed to rain, it will be a permanent source of antimony leaching into the ground and poisoning water" Pradeep Kheruka explained. "We've already encountered this problem with other poisons in India, so we need to appreciate the horror that will be created for future generations if the use of antimony continues elsewhere. People need to wake up! We are proud to have produced high performance solar glass without antimony and we now have a number of initiatives whereby we are trying to press governments to take notice of antimony being a poison... everybody uses it except us."

Among the company's latest initiatives is a project involving the combination of 2mm fully tempered solar glass with 2mm laminated float glass to make a solar panel that can be used as a roof sheet called Building Integrated Photovoltaics (BIPV), where solar panels made with glass on both sides can be used as a roof and produce electrical energy. "In the future, aluminium and steel roofs will be unnecessary, replaced by a glass roof that also produces energy" Mr Kheruka commented.

The Borosil director confirms that the development of solar energy remains a key government priority in India, with the potential for significant manufacturing capacity expansion in the future. He calls on the national government to impose anti-dumping duties on Chinese imports to protect his business, however. "At some point, the government will realise that dumping is not good for the nation and when that realisation dawns, our solar capacities at Borosil can expand by five times. We have a huge sheet glass furnace that could be converted to solar within 12 months if necessary and if even more than that is required, we have no shortage of land or expertise. We make such good solar glass that we deserve to succeed!"

As well as producing for domestic consumption, the glassmaker is also selling low iron solar glass to customers in Europe, the USA, Africa and Bangladesh.>



Precision cutting of solar glass at Bharuch.

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Pradeep Kheruka, Vice Chairman at Borosil Glass Works with *Glass Worldwide's* Dave Fordham at the recent glasstec 2016 exhibition in Germany.

PATTERNED GLASS SUCCESS

While demand for solar glass continues to expand, however, the Bharuch flat glass furnace also continues to produce high quality patterned glass at various times of the year. The high quality requirements of the solar sector permit Borosil to offer exquisite patterned products that are bright and sparkling, featuring geometrically perfect designs. "Previously when drawing glass, the pattern would go out of shape but our high end equipment maintains the shape, so a side-effect of our solar glass activities has led us to produce high quality patterned glass that we sell at a significant premium, mainly in India but some export work too."

DIVERSIFIED PRODUCTS

Also manufactured at the Bharuch location are products that form Borosil's traditional strengths in the field of household and laboratory glassware production, businesses that have both grown by some 30% annually in recent years. The company previously maintained separate operations in central Mumbai, one concentrating on the melting of borosilicate glass kitchenware and tubing, the other for the secondary processing of laboratory and scientific glassware. These premises were at the centre of highly populated residential areas, with no possibility for expansion and facing growing pollution control requirements.

Today, all borosilicate glass tubing is imported and is converted into various complex instruments and apparatus at the main Gujarat site. Alongside its traditional kitchen glassware, the company has also moved into the complementary area of electrical appliances, sourcing such equipment as cookers, grills, toasters, mixers and sandwich makers, which are built to the company's



The Borosil Glass Works Ltd site at Bharuch, Gujarat.

demanding requirements and those of its customers.

Borosil has also grown via two important acquisitions in recent months, with the possibility of others to follow, although Pradeep Kheruka is keen to emphasise that there is no urgency to expand. "We believe in growing organically and will do so when we're ready."

Complementing the existing business portfolio, this year's acquisitions have been Jaipur-based Hopewell Tableware (manufacturer of tempered opal glass tableware) for \$4 million and a 60.3% shareholding, for an undisclosed sum, in Klasspack Pvt Ltd of Nashik, manufacturer of glass ampoules and tubular glass vials. "The company generated some reserves when its property in Mumbai was sold in 2010. It has made these two acquisitions in 2016" Mr Kheruka commented. "Growth will be provided and our management culture absorbed by the teams at Hopewell and Klasspack. At Borosil, every member is a participant in the management. We have to bring these values into newly acquired companies. This will involve cultural changes, technical improvements and the streamlining of manufacturing processes."

FEDERATION INVOLVEMENT

Pradeep Kheruka was closely involved with the All India Glass Manufacturers' Federation for more than 25 years before becoming President between 2005 and 2007. "The glass industry is very close to my heart and it's a sunrise industry – every day we see more glass and its uses continue to astound... it is a fascinating material!"

Subsequently, his personal involvement has been limited by frequent international travel but Borosil continues to be an active member of the federation. "As well as government lobbying, AIGMF is very useful for setting safety and usage standards etc, while the International AIGMF Conferences during glasspex INDIA events have also traditionally been very beneficial. And the co-operation between AIGMF, *Kanch* and *Glass Worldwide* is very helpful because *Glass Worldwide* brings us expert information and education, such as new processes, development and equipment, without which we would be starved. We need this knowledge to continue to make better quality products at lower cost."



Pradeep Kheruka with the AIGMF's Vinit Kapur at glasstec 2016.

Mr Kheruka was proud to have served as AIGMF President, contributing his bit in helping to upgrade the quality of Indian glassmaking. "That's my dream and it's been a passion for me for a long time."

CUSTOMER FOCUS

Like any other forward-looking business, Borosil sees itself as a marketing organisation that is geared to meeting the demands of its customers, with a strong manufacturing back end. "We are very customer focused and employ extensive HR practices to optimise people's skills and competencies to keep them excited" Pradeep Kheruka confirms. "I think investment in people is the biggest of all our continuing investments and we are looking at a very people-centric organisation. Everyone is urged to pull their weight to take the company forward and we have been getting results."

Borosil is also conscious of its environmental responsibilities, monitoring and implementing environmental protection standards to match global requirements. "The Borosil brand is not a product brand, it is a philosophy" Mr Kheruka concludes. "We want our staff to feel a lot of self-respect and you cannot do this if your company is polluting the environment." ■

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