

Dip in demand for its famed glass bangles sees Firozabad embrace all glassware

SPOTLIGHT

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In the back lanes of Firozabad's Imam Bara bangle *mandi* (market) in western Uttar Pradesh, a dozen clay *bhattis* (furnaces) burn inside the Nadar Bux & Co. glass factory. Built by Aijaz Azeem's grandfather in 1948, it has a capacity to hold 80 kg of recyclable waste glass piled in glistening mounds. The *bhattis* burn round the clock at 1,200 degrees Celsius. Azeem, who is in his 60s, says, "People of my generation just took on what our parents had started. My children don't want to work here. There just isn't enough money anymore."

In the rudimentary factory, men called *gulliwalas* carry red-hot gobs of glass on long, metallic pipes. They walk them across the mud-and-brick floor of the *karkhana* casually, either taking the glass to the fire or carrying it away to dump onto the small glass hills.

Amid the din, some pull out the molten glass from the furnace and hand it over to the *karigars*, who wrap it like a thick wire around a *muttha* (iron rod) and rotate it on a motor to form glass coils. Each *muttha* will yield 368 bangles. Every day, Azeem's factory churns out 38,000-64,000 bangles, going over 1.5 lakh bangles during festivals.

Changing times

Until about two decades ago, Firozabad was known as Suhaagnagari (*suhaag* meaning a sign of being married; *nagari*, a town). Today, the city of 20 lakh people is called Kaanchnagari (glass town), as the demand for glass bangles has dipped to one-fifth from the early 80s.

Simultaneously, there was a rise in the production of glass bottles, mainly for alcohol, and other glassware like lights and home accessories. Given the sector's unorganised nature, there is lack of official data, but according to a member of the Uttar Pradesh Glass



Skilful handling: A worker carries red-hot gobs of glass on a long, metallic pipe at a glass factory in U.P.'s Firozabad. RICHARD KUJUR

Manufacturers' Federation, trade estimates indicate that Firozabad's bangle industry may now be less than ₹1,000 crore. On the other hand, the turnover of the entire glass industry is pegged at more than ₹15,000 crore, according to a manufacturer.

The number of *bhattis* that handcraft bangles or use the mouth-blown process to mould decorative glass has reduced from 180 to 60 today, according to Devendra Sah, former director of the Centre for Development of Glass Indus-

try (CDGI). "Other businesses of glass products have come up," Sah says, adding that there are three reasons for this. One, technology has allowed mass production of glass bottles, yielding a higher income, while bangles still need to be handmade. Secondly, traders and manufacturers say as women's incomes go up, their preference for glass jewellery has been replaced by more expensive metal ornaments. The third is a more complex reason.

Azeem's *bhattis* are

about 40 km from Agra, where in the 80s, people began to see the yellowing of the Taj Mahal. In December 1996, the Supreme Court directed industries in the 10,400 sq km Taj Trapezium Zone (encompassing Mathura-Firozabad-Makhanpur-Agra) to shut down, relocate, or opt for a technology upgrade to prevent the yellowing of the monument's marble structure.

This impacted over 1,000 small to big *karkhanas*. The technology upgrade involved switching the running of furnaces from firewood and coal to natural gas. With the government mandating gas furnaces and the court deciding on a sanctioned quota (4,000 metric cube to 30,000 metric cube per day depending on the unit size) at a subsidised rate from GAIL, the *bhattis* were compelled to switch to this cleaner fuel by 2006. Gas, as a fuel, was more expensive than coal or wood, and the whole industry came to be more government-regulated. A fallout of this was

that the small bangle *bhatti* owners no longer found their businesses viable.

In Nagla Bhau industrial estate, some families of Firozabad came together to form Rachna Industries. They provide *bhattis* on rent to manufacturers of crockery, lamps, etc., using the mouth-blown process.

Rajesh Sharma is one of those who shut down his coal-based bangle *bhatti* and shifted to the rented gas furnace, hiring daily wagers to make glass products. "Though small scale, it is easy on us this way, as we now manufacture glass products only when we receive a bulk order. In the off-season, we focus on farming," he says.

"Initially, gas was offered at ₹4 per metric cube under the Administered Pricing Mechanism. The cost of fuel rose to ₹12 per metric cube when GAIL changed its policy to Uniform Pricing in 2012, and the average rate of gas got revised periodically, benefiting bigger units," says Parsa, a member of CDGI's governing

council.

"Between 2022, when the Russia-Ukraine war broke out, and now, the cost of gas has touched ₹42 per metric cube, making the bangle business non-profitable," he adds.

New businesses for old

Third-generation manufacturers at Pooja Glass Industries, Chaitanya Singh and Ashish Bansal, both in their 20s, explain that as the bangle industry struggled, many glass manufacturers sought to transform their businesses. "We had 10 small *bhattis* but our families decided to take a leap and invest in fully-automated big furnaces in partnership. It opened our business links with the alcohol, food, and cosmetics industries," says Singh.

"Today, 80% of all utility-based glass products for the domestic market is produced in Firozabad. More than 50% of all glass products, from lanterns and headlight lamps to float glass for cars, filaments for thermos flasks to premium

liquor bottles and crockery, are major export items now," says Bansal. He adds that alcohol bottles now constitute 80% of all products produced here, so the industry is B2B (business-to-business) driven. His uncle Rahul Singh says the export market has grown from ₹200 crore to ₹1,000 crore in the last 12 years.

Devansh Gupta, managing director of Tiger & Sons Glass, says there is a shortage of skilled workers. Also plaguing the industry is the pricing and shortage of raw materials like silica, quartz, borax, limestone, calcite, feldspar, and dolomite, which come from Odisha, Rajasthan, Madhya Pradesh, and Gujarat. Gupta adds that businesses are impacted by global factors as well, such as economic downturns, wars, etc. Though many manufacturers hope the cost of fuel becomes an electoral matter, there is hardly any talk of it.

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