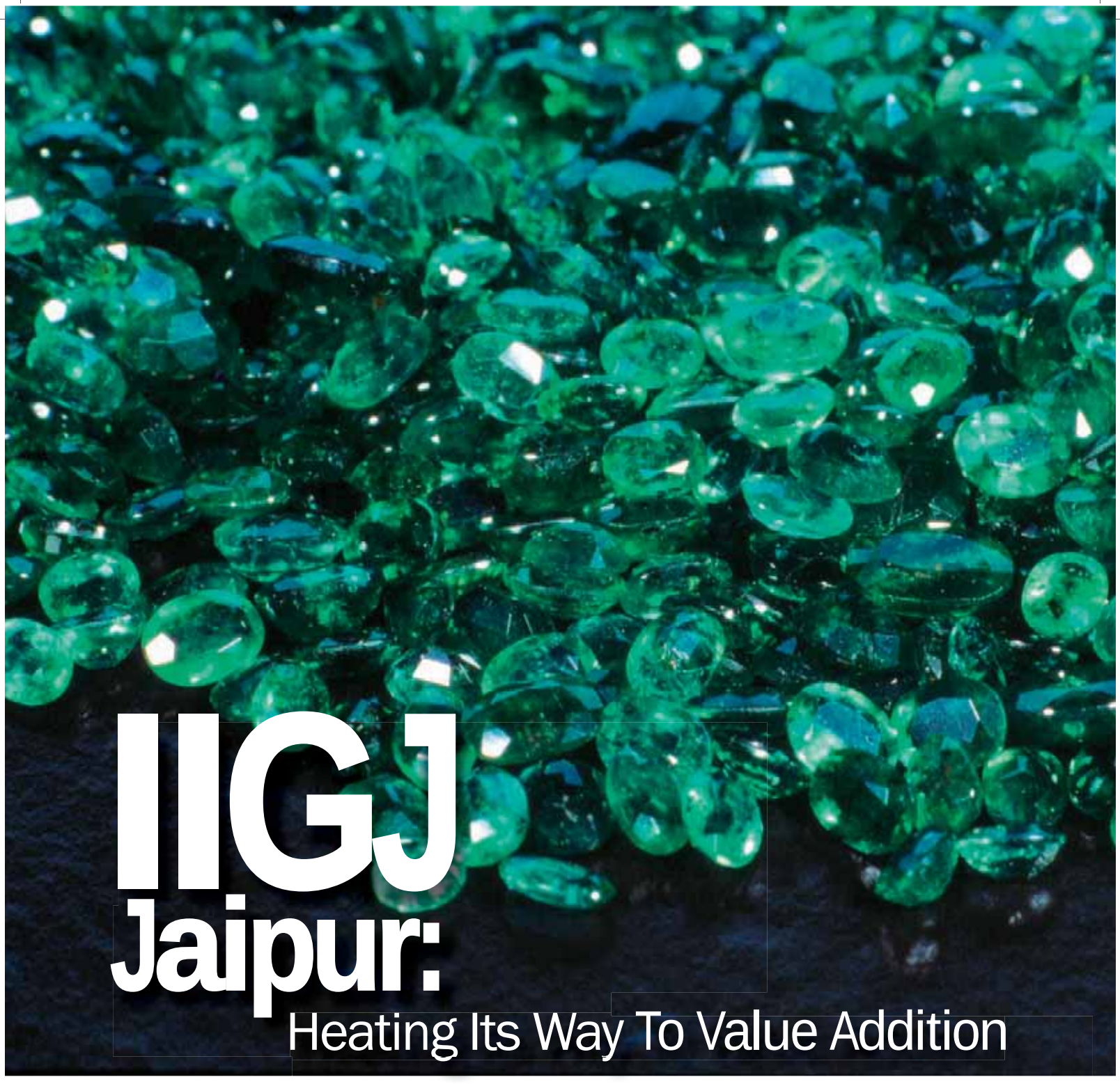
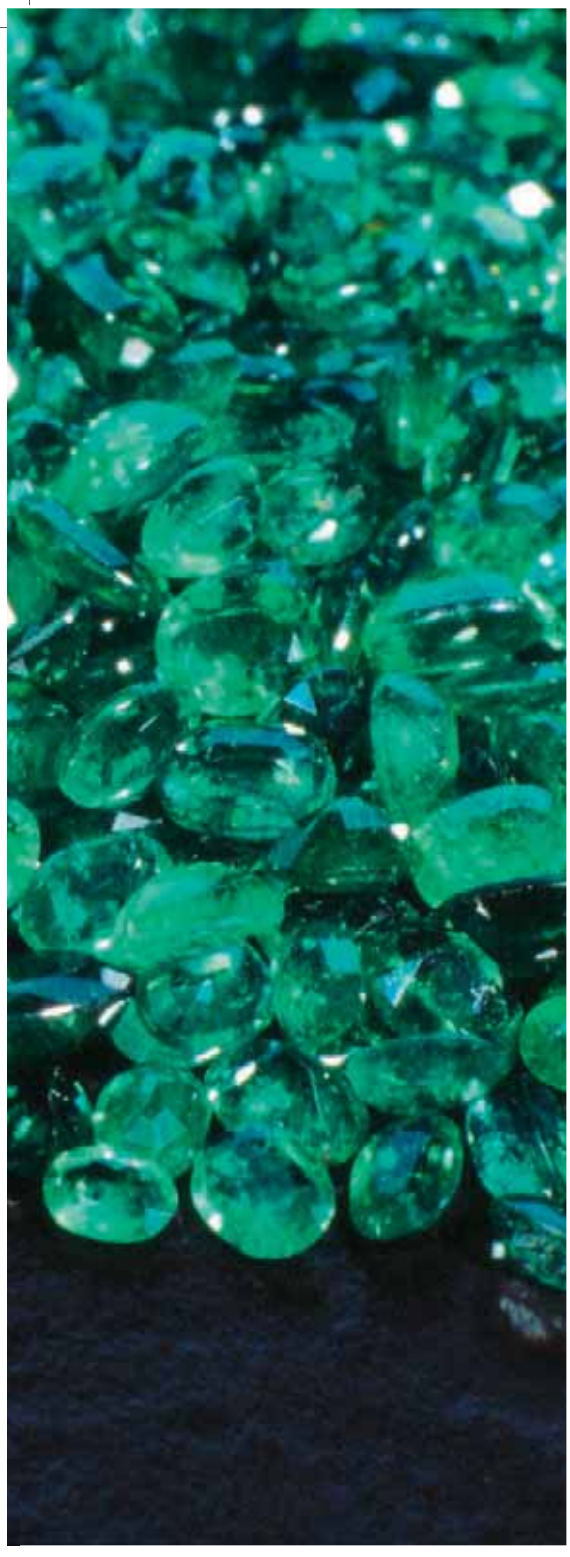


IIGJ Jaipur:

Heating Its Way To Value Addition

A vast quantity of rough gemstones is rejected because the colour is far from ideal or a large amount of 'silk' clouds clarity. Even if some of this rough is processed, the polished doesn't fetch very much in the marketplace. An industry-sponsored heat-treatment facility in Jaipur has brought about some astonishing changes in the situation, reports ERUM ALI QURESHI.



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The research and development centre in Jaipur for the heat treatment of coloured gemstones set up by the Indian Institute of Gems and Jewellery (IIGJ) in conjunction with the Gem & Jewellery Export Promotion Council (GJEPC) and the Jaipur Jewellery Show (JJS) has been fully operational for quite a while now. Established with the specific aim of adding value to the large volume of low-end stones processed in India, the facility has so far been able to achieve this aim albeit within a limited range – that of the corundum twins, rubies and sapphires.

According to industry sentiment, the institute has more than lived up to expectations with respect to rubies and sapphires so far. Although it is difficult to put a figure on how much the value of lower-end stones has appreciated, traders report an increase of almost 50 per cent, particularly that of glass-filled rubies. With a through-put of almost 50,000 carats per month, the centre's two machines are running to full capacity and there is reportedly a long queue to avail of the services.

Rajneesh Bhandari of the IIGJ Jaipur's Research & Development Committee says, "Large volumes of commercial grade rubies and sapphires used to be treated exclusively in Thailand and Sri Lanka while it is India that is the largest consumer of these goods. As the rough for these gemstones can now be treated in Jaipur itself, the rough is being directly imported, treated and processed in

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the city. This will help Jaipur become more competitive."

For years, Indian gemstone dealers have been dependent on the Thais, who excel in this procedure. But now, with the opening of the R&D centre, these dealers can now have the rough processed in India. There is currently good demand for glass-filled rubies both in India and abroad. In addition to this, the present US import ban on rubies from Burma (Myanmar) has resulted in a surge in demand for Indian and African stones. Earlier, large volumes of low-value stones either went unprocessed or were taken to Thailand for treatment. Rajiv Jain of Sambhav Jewels explains, "Since stones meant for the domestic market are being cut and polished here in India, this in itself is a value addition."

Richard Drucker, president of Gemworld International, listed blue sapphire at the top of a 'best-buy' list during his Top Colored Gemstones seminar at JCK Las Vegas. "Prices for heated stones of good and top quality have held. Commercial-quality goods, however, have softened in price by between 5 and 10 per cent, while prices for large stones are strong, up between 10 and 15 per cent over last year," Drucker said.

The Indian coloured gemstone industry was earlier incapable of processing these gems. However, with the launch of the Jaipur facility, there has been considerable processing of hitherto unwanted rough into usable material. Jain explains, "Previously, jewellers had to import from Thailand and this involved paying duty, which made these stones an expensive proposition. Cutting and polishing the stones here is also cheaper than in Thailand."

The facility has also opened up new vistas for medium and small dealers like Anil Jain, who owns Jaina Jewellers in Meerut.

"Earlier, we simply sold the untreated rough. This facility has opened up the possibility of getting it treated. Earlier, it was a foregone conclusion that these stones would have to be rejected as to think about getting them treated meant shipping them to Bangkok, which of course made them economically unviable for smaller gemstone dealers. Now smaller players too can benefit from this expertise and increase their profit," he explains.

The centre offers a variety of treatments apart from heating, including flux treatment, glass filling and bulk diffusion with beryllium. Glass filling remains at the top of the list. A major contributing factor for this is the Burma ruby ban. With this restriction on Burmese stones in the US, Indian and African rubies are selling very well there.

There is now an influx of large quantities of lead-glass-filled rubies in both international and domestic markets. This material is easily available, high on aesthetic value as well as being affordable. With marginal investment [rubies being treated at Rs.1.50 per carat ($0.03) and sapphires at Rs.2 ($0.42)] the potential returns are enormous. Dealers reports profits of upto 25 per cent. Rahul Phophalia of RJP Jewellers in Jaipur, confirms, "We have been able to command a premium of more than 25 per cent on our stones after treatment. This has reduced our dependency on Bangkok and increased our profits considerably."

New frontiers

Although traders are ecstatic about the range of opportunities the institute has opened up commercially, many opine that there are still more avenues to be explored. For instance if the facility were to extend treatment options to emeralds, it could be a one-stop shop for many who trade specifically in the big three – rubies, emeralds and sapphires. Says Phophalia, "We send at least 10,000 carats of rubies and sapphires per month for treatment at the IIGJ and if there was some way to treat emeralds too, the setup would be a one-stop solution for us."

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Emeralds have been making a comeback over the last six to eight years, and production is good in Colombia and Zambia. Controversies over polymer fillers such as Permasafe linger, but many dealers now think the threat is overstated and assume that most emeralds are treated with oil, Drucker said.

What the facility now needs to do is extend its repertoire to include stones such as topaz, amethyst, aquamarine and tanzanite.

Most gemstones do occur in the ideal colours that they are known and valued for. However, large quantities of commercial quality gemstones are very different from their required 'ideal colours' when mined.

For example most blue sapphire is either too pale or dark inky blue in colour. Tanzanite being mined today is rarely of the startling violet-blue colour, but occurs in a non-descript brownish hue. Similarly most commercial quality aquamarine, topaz and amethyst owe their rich colours to something more than just nature. In these cases, heat treatment is a permanent and (usually) non-reversible process that alters the colour of the rough, bringing it closer to the desired – or at least acceptable – colour. Heating gemstones in the presence of appropriate chemical compounds can lighten or deepen their colour, induce chatoyancy (generate the "cat's eye" effect) and dissolve 'silk', thus improving the clarity of the gemstone.

Jain says, "With other gemstones such as blue topaz, the colour is altered by irradiating the stone, a procedure that is prohibited by the Indian government. Bulk diffusion, an alternative to this, is a possibility that we are interested in and are actively exploring with the help of the technical team at IIGJ Jaipur."

Considering the economy, the overall coloured stone market seems to have held up with the top and low ends doing well while the middle sector felt a crunch. However, the growing number of synthetics, new treatments, and improved older treatments such as HPHT (high pressure, high temperature) and oiling, are growing more sophisticated. It is important for the industry to keep abreast of this rapidly changing situation. The IIGJ Jaipur is the first step in this direction and what is needed now is to maintain this momentum going forward. ■