

China Curbs Hit Production of Lab-grown Diamonds in India

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Kolkata: A lockdown in China has affected the production of lab-grown diamonds in India, as the supply of the main raw material, graphite, has come to a grinding halt.

China is the only supplier in the world for the kind of graphite that is transitioned to diamonds in the lab under high pressure and high temperature (HPHT).

The supply constraint has come at a time when India is witnessing rapid growth in the production of lab-grown diamonds — output this month was projected to be 3.6 million carats, more than double a year earlier. These diamonds produced in India are exported to the US, Singapore, Israel, Belgium and China. In fiscal year 2022, exports of lab-grown diamonds totalled Rs 9,764.53 crore, more than double the previous year's Rs 4,688.31 crore.

According to the Gem & Jewellery Export Promotion Council's projection, India's exports of lab-grown diamonds may go up to Rs 40,000 crore in the next five years.

"This (shortage of graphite) is a problem that the producers are facing. But we are hopeful that it will be sorted out soon," said Shashikanth Dalichand Shah, chairperson of the Lab Grown Diamond & Jewellery Promotion Council.

Production of lab-grown diamond takes place in a small capsule inside an apparatus capable of generating a very high pressure. Within the capsule, a carbon starting material, such as graphite, dissolves in a molten flux consisting of metals such as iron, nickel or cobalt, which lowers the temperature and pressure needed for diamond growth. The

carbon material then migrates through the flux towards the cooler diamond seed and crystallises on it to form a synthetic diamond crystal.

Demand for lab-grown diamonds is witnessing phenomenal growth in India as well as in the world markets. In 2021, the market for this in India was worth Rs 2,200 crore. Cur-

rently, India contributes around 15% to the global production of lab-grown diamonds. Globally, the market was valued at \$19.3 billion in 2020 and it is expected to reach \$49.9 billion by 2030, said Shah. He said India was showing good demand for lab-grown diamonds.

India is typically a market for small diamonds, primarily less than 10 pointers and known technically as stars and melees. Nearly 88% of Indian consumption is for this type of diamonds.

With growth in lab-grown diamonds, people will aspire for larger diamonds, said Shah.