

CASE STUDY



NEMESIS, Dubai (UAE)

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PRODUCT

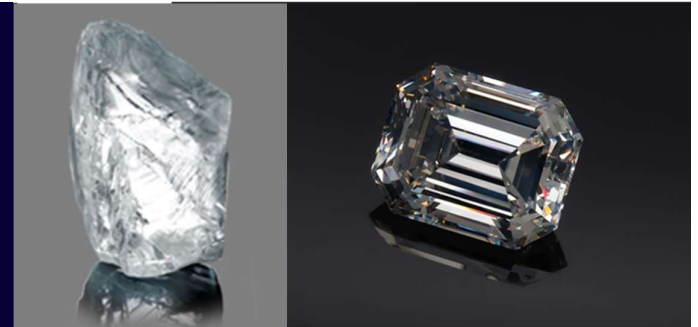
The Constellation

The 813-carat Constellation Diamond is the most expensive rough diamond in the world, sold for 63 Mio USD.

The resulting 313-carat 'Constellation One' is the largest D color emerald cut diamond in the world today.

LMJ used for:

- Cutting rough diamond



CHALLENGE

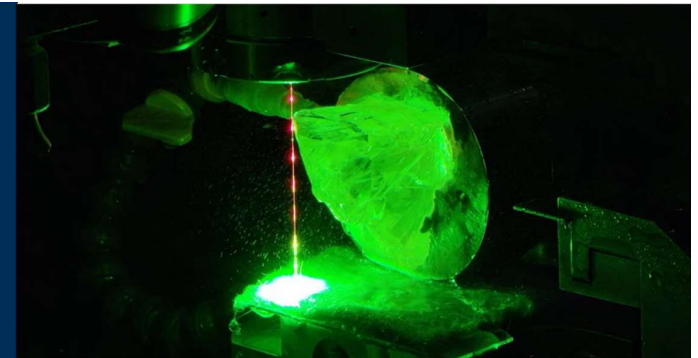
Perfect cut on a very expensive and valuable diamond

Main processing criteria:

- Minimal weight loss
- Highest yield
- Minimal or no diamond damages
- Smooth surfaces

Machining technologies able to reach these criteria:

- Laser MicroJet (LMJ)
- Conventional dry laser



SOLUTION

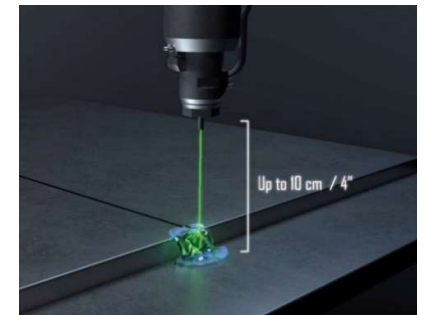
Laser MicroJet Technology

LMJ advantages:

- Very large cut depths (26-33 mm)
- Extremely low weight loss (0.04%- 0.32%)

Installed machine type:

- 1 x DCS 300
- 100 W green laser



Sources: Lucara, Synova