2015 for Global Diamond Industry
A Collection of Articles on Major Events that shaped the industry

By Better Diamond Initiative
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# Table of Contents

ABOUT BETTER DIAMOND INITIATIVE .............................................................................................................. 3

1  INDUSTRY’S MISERIES ARE FAR FROM OVER .................................................................................................. 4
   1.1  DIAMOND MINING COMPANIES TOO RECORD NEGATIVE RESULTS .................................................. 5
   1.2  Winter is coming for the Diamond Industry? ............................................................................................ 7
   1.3  Half of India’s diamond processing sector faces extinction ................................................................. 9
   1.4  Money laundering, fraudulent practices in Diamond trade on rise ..................................................... 11

2  MINING COMPANIES ACTING AGAINST THE INDUSTRY’S BEST INTEREST ............................................. 13
   2.1  The Rough Diamond Bubble is Busting: Rapaport .................................................................................. 14
   2.2  Industry’s New Business Model may wipe out smaller players ........................................................ 19

3  SUPPLIES ARE DEPLETING AND LAB-GROWN DIAMONDS SEEM TO MAKE UP FOR THE DEFICIT ................................................................................................................................. 21
   3.1  Why diamonds will run out sooner than you think ................................................................................ 22
   3.2  A 278 million carats Demand-Supply Gap by 2050: Frost & Sullivan .............................................. 25
   3.3  Lab-grown diamonds set to fill projected deficit as mined production declines ......................... 27
   3.4  New research report predicts stellar future for Lab-grown diamonds .............................................. 32

4  MINING COMPANIES CONTINUE THEIR EFFORTS TO DESTROY LAB-GROWN DIAMOND MARKET ....... 34
   4.1  Diamond mixing has never taken place: Surat Diamond Association ................................................. 36
   4.2  Undisclosed Lab-grown diamonds – reality, rumor or fear mongering? ........................................... 39
   4.3  Ample and affordable diamond detection machines galore .............................................................. 41
   4.4  A new diamond association and its irrational orientation ............................................................... 43
   4.5  How ISO failed to live up to its own “standards” for Lab-grown diamonds ................................... 45
   4.6  What lab-grown diamond industry thinks about ISO 18323? ............................................................ 48

5  LAB-GROWN DIAMONDS: MORE ACCEPTANCE, MORE SUCCESS ............................................................. 56
   5.1  Jewelry retailers are increasingly selling Lab-grown diamonds ....................................................... 57
   5.2  Lab-grown diamond industry crosses 10 carat milestone ............................................................... 59
   5.3  Largest diamond greenhouse inaugurated in Singapore ............................................................... 61
   5.4  Leonardo DiCaprio bets on Lab-grown Diamonds .............................................................................. 63

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ABOUT BETTER DIAMOND INITIATIVE
Better Diamond Initiative (BDI) is a leading portal in diamond and jewelry industry, which presents a collection of analysis, opinions and viewpoints based on news, facts and reports published around the world.

Since our inception earlier in 2014, one of our earliest focus has been to highlight the problems, challenges and threats faced by Global Diamond Industry in near term and long-term. We perform rigorous research and analysis on various facts and data gathered from different sources globally, in order to make our articles insightful for the readers.

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1 Industry’s miseries are far from over

Diamond industry globally is facing multitude of issues since some time now. Demand for diamonds having decreased and stagnated, especially with a slump in China, has amplified the problems of the industry. Players across the diamond pipeline are facing severe challenges.

For diamond miners, cost of mining rose significantly as mines go deeper and underground. De Beers’ projects are costing USD 3 billion while ALROSA spent USD 1 billion each to develop its three underground mines. Due to various issues, De Beers recently either sold or shut down three diamond mines. Major diamond miners are also recording negative results. (See ‘Diamond Mining companies too record negative results’, Pg. 5)

Profit margins of diamond manufacturers have almost vanished and their profit share fell by 100% from last year, coming down to USD 100 million against the 2010 level of USD 900 million. (See ‘Winter is coming for the Diamond Industry?’, Pg. 7)

Apart from 300,000 diamond processing workers that India and China laid off, half of India’s diamond processing sector faces extinction, with 50% of the existing 700,000 cutting & polishing workforce facing threat of job losses. In past four months, more than 2,000 diamond cutting and polishing units in India have shut shop, while many are declaring bankruptcy and defaulting. Cost of jewelry operations also rose significantly and jewelry retailers are also feeling the heat. (See ‘Half of India’s diamond processing sector faces extinction’, Pg. 9)

Besides, money laundering and fraudulent practices in diamond trade are on rise. Several cases of corruption, overvaluation, tax evasion, round tripping etc. have surfaced. (See ‘Money laundering, fraudulent practices in Diamond trade on rise’, Pg. 11)

Moreover, Japanese consumers are selling their diamonds for cash to buy other luxury goods indicating a very serious downward trend for diamonds.

Diamond industry is expected to remain distressed, sales to remain weak and diamond traders and manufacturers to struggle. Diamond industry’s miseries are far from over.
1.1 Diamond Mining companies too record negative results

Jul 23, 2015

Effects of market slowdown in the diamond industry seems to have not just hit hard the intermediaries and manufacturers but diamond mining companies as well. In past couple of months, many diamond mining companies have reported declining sales and revenue and some of them have even reported widening losses. The latest to join the list of such diamond mining companies recording negative results is the world’s biggest diamond miner by volume – ALROSA.

ALROSA

- In the first half of 2015, ALROSA sold only 18 million carats of diamond roughs for USD 2.1 billion, a significant drop of 22% from 2014’s first half year when it sold 21.1 million carats for USD 2.7 billion

De Beers

- Sales in first half of 2015 was 14 million carats, 26% down from same period last year when it sold 16 million carats
- Its diamond production also decreased by 6% to 8 million carats
- Moreover, at its latest sight initially estimated at USD 200 million, Sightholders rejected 65% of goods, despite the company cutting the size of its sight

Okavango Diamond Company (ODC)

- The Botswana government owned company recorded 23% sales decline in first half of 2015 to USD 231 million
- Its sales by volume also dropped by 21% to 1.296 million carats

Rockwell Diamonds

- Gross revenue plunged by 39%, from USD 15.1 million in first quarter of last year to USD 9.2 million only during Q1 FY 2015-16
- The company also reported a gross loss before depreciation and amortization of USD 3.1 million during the period against the corresponding period last year’s profit of USD 4.3 million
- Net loss of USD 5.1 million was recorded during the quarter
- The company also recorded loss attributable to the owners of the parent company of USD 65.1 million, against loss of USD 345,000 last year
Lucara Diamond Corp

- Revenues for first 3 months of 2015 declined by 10% to USD 29.6 million
- Operating margins also reduced by 10% to USD 169 per carat
- Its Karowe diamond mine produced 90,077 carats, 7% less than planned
- It was in the process of disposing its Mothae project to Paragon Diamonds

Gem Diamonds

- In the January to May 2015 period, sales from Letseng mine declined 9% to USD 77.1 million through its first 3 tenders of the year
- Production at Letseng mine also declined by 8% in the January to April period at 31,369 carats compared to preceding 4 months

Zimbabwe diamond miners

- A recent governmental audit report revealed that most of the diamond mining companies operating in Zimbabwe are facing huge losses, with the overall financial situation in red

Apart from the diamond mining companies, worldwide markets are also witnessing similar slump.

- Antwerp’s trade recorded exports decline of diamond roughs by 15% in volume and 21% in value in first half of 2015
- Zimbabwe’s diamond exports fell by 34% in 2014 to 5.9 million carats with an export earnings of USD 350 million compared to previous year when diamond exports contributed USD 453 million to the country’s revenue

Some of the diamond mining companies are even shutting some projects. Kimberley Diamond Company unexpectedly suspended operations and closed down its Western Australia-located Ellendale mine, which used to produce fancy yellow colored diamonds, raising fear among workers that their unpaid wages will not be met. While the diamond slowdown continues and depressed conditions in the industry expected to prevail at least for some time, apart from diamond manufacturers and players across the pipeline, diamond mining companies are also losing in a big way.

[Source: http://betterdiamondinitiative.org/diamond-mining-companies-record-negative-results/]
1.2 Winter is coming for the Diamond Industry?
Jul 9, 2015

Decades ago, De Beers’ game changing ad campaigns induced a behavioral change in the Japanese wedding market where engagement rings were almost non-existent. However, today the scenario has dramatically changed when Japanese are selling their stockpiles of diamonds gathered over the years for cash to enjoy travel, technology products and unique experiences. This says a lot about the global trend of diamond demand. Most of the earlier industry forecasts had predicted a linear diamond demand growth to be lasted for years and a huge demand-supply gap due to falling diamond production. Though diamond supplies have indeed fallen over the years – 26% down since 2005 levels, demand hasn’t exactly picked up as estimated leading to a much less diamond shortage.

Cost of diamond mining has risen significantly in recent years, as many of the mines are turning underground. De Beers’ current projects are costing more than USD 3 billion, while Alrosa spent USD 1 billion each to develop its 3 underground diamond mines. Increased cost of operations has led to drastic increase in the prices of diamond roughs, which rose by 63% in the past decade. At the same time, prices of polished stones have not increased proportionately due to jewelry retailers’ pressure of trying to maintain retail prices to keep sales going, especially true in a weakening demand scenario and rising cost of jewelry retail operations.

Caught between all this, the biggest casualties have been the diamond manufacturers whose profit margins have almost vanished. Global profits share of diamond manufacturers by cutting, polishing and other related activities was only USD 100 million in 2015 out of a total USD 80 billion diamond jewelry sales, 100% down from last year and against the 2010 levels of USD 900 million.

This has resulted in laying off an estimated 300,000 diamond processing workers in China and India alone. In India, around 2,000 diamond processing units have been shut, with around 70-80% of the workers in the sector affected by pay cuts, reduced working hours and retrenchments. Since past one month, almost no diamond rough purchase has happened in Surat – India’s diamond processing capital. The manufacturer’s woes are further multiplied by lack of liquidity and access to credit crunch. Defaults in the Indian diamond industry are now a commonplace. Since 2013, 42 diamond firms have defaulted and many have either already declared or are on the verge of declaring bankruptcy.

The effect of the diamond slowdown is seen across the industry pipeline and geographies as well. A recent Zimbabwe government audit report has revealed that most of the diamond mining companies operating in the country are facing huge losses with the overall financial situation in red. Sluggish market conditions
have also had an adverse effect on the recently concluded Hong Kong Jewellery & Gem Fair.

**Stuart Brown** – CEO of Firestone Diamonds and former finance chief at De Beers, expects the diamond industry to remain depressed, sales to remain weak and traders and manufacturers to struggle. While the industry is indeed going through a period of turmoil and with no respite in retail prices of diamonds for consumers, many are shifting to more affordable artificial jewelry. As it is, the industry is facing innumerable problems, which it has not been able to satisfactorily address, but the weakening demand and market slowdown aggravates the situation and indicates that a long dark winter is coming for the diamond industry.

[Source: http://betterdiamondinitiative.org/winter-coming-diamond-industry/]
1.3 Half of India’s diamond processing sector faces extinction
Dec 18, 2015

Problems in the entire global diamond industry are well known but the diamond processing sector (cutting & polishing) especially in India has been the worst hit. Despite the recent insignificant drop in rough diamond prices, half of India’s diamond processing sector faces extinction.

In the recent Investor Day presentation of Anglo American, De Beers’ CEO Phillipe Mellier emphasized, “the challenges in the diamond market predominantly lie in the midstream”.

Lower consumer demand has led to stockpiling of 4 – 5 months of diamond inventory at the processing units, against the normal 1 – 2 months.

Diamond processing units, which lie in midstream of diamond pipeline, have to buy rough diamonds at upfront payment and sell the polished stones either on consignment basis or mostly on long-term credit. Thus, they are squeezed in between the diamond miners and traders at the upstream and the jewelry manufacturers and retailers at the downstream. Besides, lower bank financing and higher interest burden has added to the working capital and financial woes.

Furthermore, lower profitability at the diamond midstream pipeline has remained an issue since several years. However, in past few years, profit of diamond processing has plummeted significantly. Bain – AWDC’s recently released 5th annual report “The Global Diamond Industry 2015” mentions the profit range of diamond processing sector at 0 – 3% and expected to continue fall further. Many of the mid-segment companies are operating at close to 0% margins, while some are even running at 5% losses. The report predicts a 10 – 15% fall in revenues of diamond processing sector in 2015.

India’s export of cut & polished diamonds plunged by nearly 14% in the first seven months of 2015-16; 28% in September and 17% in October. This scenario is however not just pinching the Indian government exchequer but also the small-to-medium cutting and polishing units and their workers.

In the last 4 months, 350 diamond processing units have shut shops resulting in over 20,000 job losses.
Besides, post-diwali vacations, 15% of the units are still to reopen and the remaining have dropped their production by up to 80%. Since most of diamonds processing workers are paid on piece-meal basis, drop in production has affected their wages by almost 50%.

Apart from the 30% job losses happened in the past 3 years, half of Indian Diamond Processing sector that employs around 700,000 skilled and unskilled workers face the threat of job losses and shutdown this year.

The grim situation has resulted in numerous bankruptcies. Recently Sai Impex – a cutting & polishing unit in Varacha shut down rendering another 200 workers jobless. Suresh Lalan, who ran a diamond unit established 25 years ago, had to cut 120 jobs and close 30 of the 35 emery wheels at his unit. It is estimated that around 50,000 workers from Bihar have moved out of Surat – India’s diamond processing capital due to substantial cutback of polished diamond manufacturing. From Surat and Mumbai alone, diamond industry has witnessed default cases of more than INR 3,000 crores (~ USD 450 million).

The grave threat faced by Indian diamond cutting and polishing sector is also evident from the 25% decline in import of rough diamonds during the April – October period. Though business model revaluation, business processes optimization and operational efficiency improvement have been suggested by some experts to deal with the crisis, small to mid size companies, which constitute majority of India’s diamond processing units, are not in a position to effectively do it.

Which means only thing – a big-scale consolidation in the sector, resulting in shutdown of more than half of the diamond processing units and the bigger players taking more share of the pie, is on the horizon.

[Source: http://betterdiamondinitiative.org/half-of-indias-diamond-processing-sector-faces-extinction/]
1.4 Money laundering, fraudulent practices in Diamond trade on rise

Jan 22, 2015

Responsible Jewellery Council (RJC) — Dalberg report identifies 2 out of 5 serious issues in the diamond industry as Money Laundering and Corruption including overvaluation, tax evasion and manipulation, round tripping etc. The report mentions that low level of regulations, diamond prices being unregulated and unstable, and diamonds being non-fungible and untraceable makes it relatively easy to change ‘dirty’ money into diamonds and transport them across borders.

Per a 2013 FATF report, a case was recorded against a company concealing funds received from illicit transactions and being transferred into diamond trade. In another case, 4 diamond importers from Surat and Mumbai were found to be involved in fraudulent gross overvaluation of 28 packages of roughs, aimed at transferring huge amounts of foreign exchange outside India. The report also highlights a tax evasion case wherein diamond consignments were shown to be transported to Surat where sales tax levy is exempted, despite being imported locally in Mumbai.

Lower taxes prevail in Special Economic Zones (SEZ) but many companies take undue advantage of the same and engage in falsification of paper work and commit large-scale tax frauds. Cases of ‘Round Tripping’ where same goods are traded over and over in order to raise cheap capital have also been recorded in the past.

Similar such cases involving illicit activities, fraudulent practices and underworld kingpins are rising globally.

On a much larger level though, a recent news article highlighted a possible USD 14+ billion (INR 89,000 crore) fraud by the diamond trade. Till 2006-07, India’s net export of diamonds was positive and suddenly since then it turned negative. When India is the largest cutting and polishing center in the world, which according to GJEPC cuts 10 out of 11 stones globally, net import of diamonds points to only a large scale fraud. It emphasizes that “… diamond industry could have been one of the largest generators of black money…”
Besides, India’s Enforcement Directorate (ED) has filed a charge-sheet before Special Preventions of Money Laundering Act court for a **USD 850+ million** (INR 5,300 crore) ‘hawala’ (money laundering) scam involving a Surat based trader. Though the names are not disclosed, some of those traders may be De Beers’s sightholders and even office-bearers of GJEPC, as per the article.

Unless more stringent policies and regulations are enforced globally, some industry players will keep taking advantage and continue engaging in such fraudulent practices.

[Source: http://betterdiamondinitiative.org/money-laundering-fraudulent-practices-in-diamond-trade-on-rise/]
2 Mining companies acting against the Industry’s best interest

Rough diamond bubble created by diamond miners including De Beers and some unscrupulous traders is busting and in turn affecting the entire diamond industry. While De Beers increased prices of rough diamonds over the years (~63% increase in rough diamond prices globally in past decade), prices of polished diamonds have not increased proportionately, creating a huge gap between the prices of rough and polished diamonds.

This has made doing business for the midstream players including traders, manufacturers, diamond processors unfeasible, forcing many of them out of business. However, after the bubble is busting, the ponzi scheme made by De Beers is not just affecting others in the industry but itself too, with its 2015 second half sales expected to plummet by over 60%. (See ‘The Rough Diamond Bubble is Busting: Rapaport’, Pg. 14)

Diamond mining companies like De Beers don’t care even about their own customers – sightholders, let alone the end consumers. Earlier this year, De Beers’ CEO Philippe Mellier made the following comment in an interview:

“I have a business. I am not a banker. I am not a supporter of customers. This is not sound, to support a customer base.”

Such comments speak volumes about the objective and attitude of diamond miners.

Additionally, diamond miners and jewelers are tying up directly and the entire diamond middle-market intermediaries including traders, cutters & polishers etc. are getting bypassed. By acquiring mid-stream capabilities in-house, diamond miners and retailers are creating a vertical integration in the industry. With emergence of the new business model, mid-market players that employ tens of thousands of people globally are running for shelter, while diamond miners continue their foray in the downstream market. (See ‘Industry’s New Business Model may wipe out smaller players’, Pg. 19)

The greatest threat to the diamond industry is that the mining companies will continue to ignore the needs of the trade. Clearly, mining companies are acting against the industry’s best interest.
“The rough diamond distribution system is collapsing as De Beers and other mining companies attempt to force unsustainable artificially high rough diamond prices on the diamond trade.” said Martin Rapaport of Rapaport Group in his latest article “Rough Bubble Bust”. Rapaport further added, “The mining company’s refusal to lower rough prices is destroying the diamond trade, creating severe financial losses, illiquidity, supply shortages, and the loss of tens of thousands of jobs.”

“The major mining companies and the banks have milked our trade dry by systematically supporting rough prices that were significantly higher than polished prices. This effectively moved profits from the trade to the miners. The banks helped the miners squeeze profits out of the trade by showering money on firms that boosted rough prices to speculative unprofitable levels.”

Expecting De Beers’ second half rough diamond sales to fall by over 60%, Rapaport has called for drop in rough diamond prices by 30-50% by De Beers to infuse profits and liquidity in the industry and has also called for resignation of De Beers’ CEO Philippe Mellier.

BDI had earlier pointed out that De Beers was losing its grip on reality. Its March 2015 sight also resulted in 30-40% refusal of its allocated goods.

The economic meltdown of 2008 has shown us, the idea of “Too big to fail” doesn’t hold anymore. It’s high time for governments, ministers, banks and trade to stop relying on mining companies, question their decisions and weigh their actions against long term economics of survival of trade.
Over the years, diamond mining companies including De Beers kept the rough diamond prices high and continued increasing it, to the point that since some time now they were even higher than the prevailing polished diamond prices in the market. The cutting & polishing units, traders, jewelry manufacturers, designers, retailers and everyone else in the diamond pipeline though found the prices unviable but were supported by bankers.

Banks extended huge amounts of loans to the tune of billions of dollars to the mining companies as well as to the diamond intermediaries till the time rough prices kept increasing, considering only the short-term profits through interest receipts and ignoring the fact that those huge loans are not backed by sufficient asset value.

This essentially created a bubble in a ‘Ponzi scheme environment’ where many of the intermediaries bought roughs at unprofitable high prices but continued to be financed by banks and financial institutions and in effect were moving money to the diamond mining companies.

As Rapaport puts it “They did not buy rough to make money cutting it, they bought rough to get money from banks.”

Easy access to money facilitated many intermediaries to pay any prices that De Beers asked.
Though the diamond miners earned enormous profits through this bubble but they in turn destroyed the fundamentals of the diamond business. Genuine players in the diamond pipeline, unable to sustain the artificial high rough prices and make a legitimate profit were forced out of business.

“... As long as the rough kept flowing, the loans kept flowing, the interest payments got made and the bubble grew bigger and bigger. In this Ponzi scheme the mining companies made out like bandits because it did not matter if rough prices were too high. Rough was simply an excuse to get money.”

Busting of The Bubble

Apart from the legitimate diamond trade getting out of business, the banks also eventually felt the pinch when the liquidity in the market evaporated and the banks realized that the diamond companies they financed were unable to payback the principal loan amounts. While some banks focusing on diamonds went out of business, others restricted and reduced their riskier diamond portfolio. Bankruptcies and check bouncing have already started.

While the short-term issues of declining diamond demand and other macroeconomic factors, termed as the ‘perfect storm’, compounded the problem, Rapaport argues that it is not the real issue facing the industry. The systemic collapse of the diamond trade structure caused by the rough bubble is the real problem.

However, it is not only the diamond pipeline and the bankers who are facing the heat. The implications of the bubble bust have also started reaching the diamond miners. De Beers’ last November sight realized USD 527 million, whereas the 2015 November sight was only about USD 70 million, strongly indicating that not just the industry is facing liquidity issues but players in the trade are now not ready to buy roughs at unjustified high prices. Rapaport expects De Beers’ 2015 H2 sales to plummet by over 60% to around USD 1 billion from last year’s nearly USD 3 billion second-half sales.
As Rapaport rightly says “Ponzi bubbles are not good for anyone, even those that create them.”

“A great threat to the diamond industry is that the mining companies have exploited the legitimate diamond trade for so long that the trade is giving up on diamonds as a realistic way to make a living. The mining companies are killing the goose that lays their golden eggs.”

**De Beers, The Clarion Call & The Threat**

The genuine profit margins meant for the diamond pipeline was sucked by diamond miners like De Beers, instead of being spent on marketing and sales to further the industry. De Beers’ business attitude has raised several questions whether the company wants the trade to survive at all or does it wants to keep the whole pie for itself.

“It looks like De Beers has been playing a double game and two-timing the diamond trade. They have been consistently perusing the idea that they can make more money cutting the diamond trade out and selling their diamonds directly to the consumer. Since they cannot do this completely and quickly, they have been using the diamond trade in a transitionary capacity.”

Apart from discussing other issues, Rapaport also makes a clarion call to De Beers on two counts. First, to reduce the rough diamond prices by 30 – 50% to inject the much needed liquidity and profitability in the trade and second, for Philippe Mellier – De Beers’ CEO to step aside and be replaced by a better leader who is concerned for the future of the diamond trade.
However, Rapaport lays out the threat to the industry despite the bubble bust,

“The greatest threat to the diamond industry is that the mining companies will continue to ignore the needs of the trade. They will keep their rough prices higher than polished, starving the diamond trade of vital profits and liquidity. More and more cutters will stop cutting, diamond supply will plummet, more dealers and retailers will leave the industry, forever.”

[Source: http://betterdiamondinitiative.org/the-rough-diamond-bubble-is-busting-rapaport/]
2.2 Industry’s New Business Model may wipe out smaller players
Dec 22, 2014

As Diamond miners and Jewellers start tying up directly, the entire middle-market intermediaries - traders, cutters & polishers are getting bypassed. Miners and retailers are acquiring mid-stream capabilities in-house, leading to a vertical integration and emergence of a new business model.

Diamond miners and retailers are directly entering into strategic tie-ups in a bid to protect bottom lines and ensure a steady supply of roughs. Consequently, clear cut distinctions in the upstream and downstream part of the diamond pipeline are getting smudged to yield to the creation of a new business model in the diamond industry and possible obliteration of the smaller market intermediaries.

Like the mining companies, retailers, facing rising operating costs and shrinking margins, in addition to risks of rough scarcity and higher rough prices have entered into direct partnerships with miners, leading to the emergence of a new business model in the industry.

In the earlier version of the diamond pipeline (value chain), the upstream business took care of the exploration, production, sorting and valuation, after which roughs passed through the middle-market which involved trading, cutting and polishing, polished diamond sales and jewelry manufacturing, before the product reached the downstream business of jewelry retail sales. However, in the new business model, the upstream and downstream businesses are tying up directly, thus completely bypassing market intermediaries.

This change in business model was first pioneered by Tiffany & Co., when in 2011 it directly invested in a Sierra Leone mine. Since then, Tiffany has entered into several agreements for securing future output from mines in South Africa to Canada. Similarly, the world’s largest listed jeweler, Hong-Kong based Chow Tai Fook, after collaborating with Rio Tinto for Argyle mine’s pink diamonds and similar tie-ups with Alrosa and De Beers, is now exploring investments in individual mines in Canada and other places. On the other hand, Firestone Diamonds, for its Liqhobong mine in Lesotho, tried to tie up with multiple retailers for direct supply deals.
This new business model is not only about simple tie-ups between miners and retailers. A two-way vertical integration is happening in the industry. Miners are doing a forward integration by getting into mid-stream and downstream businesses. Global mining major De Beers has already ventured into jewelry retail business and runs its own jewelry business – ‘De Beers Diamond Jewellers’ (JV with LVMH) apart from ‘Forevermark’ brand. Retailers, on the other hand, are undergoing a backward integration, as evidenced by some direct investments in mines to secure future rough supplies, and also entering the middle-market business by acquiring or developing in-house mid-stream capabilities. Tiffany & Co. started a new polishing center in Cambodia in 2013.

As more beneficiation takes place and more players adopt this new business model, the middle-market players – traders, cutting and polishing centers, which employ hundreds of thousands of people, will be running for shelter. Only the bigger intermediaries having the financial muscle to adopt similar forward or backward integration will thrive, while the smaller mid-market players will face the threat of getting obliterated.

[Source: http://betterdiamondinitiative.org/industrys-new-business-model-may-wipe-out-smaller-players/]
3 Supplies are depleting and Lab-grown diamonds seem to make up for the deficit

Not just mines are going deep and underground and supplies are dwindling but 30 major diamond mines will reach End of Life by 2030. Expert analysis including those of Bain, McKinsey, De Beers and Frost & Sullivan predict falling rough supply – more than 50% by 2030. While some major mines including Argyle (Australia), Ekati (Canada), 3 in South Africa and in more in Botswana have less than 10 years of life left, no new viable mines have been discovered in the past 2 decades and exploration budgets of miners have also reduced by over 50% since 2007 levels. (See ‘Why diamonds will run out sooner than you think’, Pg. 22)

Besides, Demand-Supply gap is predicted to hit 278 million carats by 2050 according to Frost & Sullivan. Since the 2006 peak of 176 million carats, global annual diamond production has fallen to around 125 million carats. Whereas, leaving the short-term temporary demand slump aside, diamond demand is expected to reach 178 million carats by 2022 itself and 292 million carats by 2050. (See ‘A 278 million carats Demand-Supply Gap by 2050: Frost & Sullivan’, Pg. 25)

As mined diamond production declines, the only sustainable source to fill the projected deficit are Lab-grown diamonds. Though the current estimated production of Lab-grown diamonds globally is only 360,000 carats, by 2018 it is expected to reach 2 million carats. (See ‘Lab-grown diamonds set to fill projected deficit as mined production declines’, Pg. 27)

A new research report by PHD Chamber of Commerce & Industry predicts stellar future of Lab-grown diamonds. Annual production of Lab-grown diamonds is expected to cross 20 million carats by 2030, which will help in addressing 13% of the demand-supply gap. (See ‘New research report predicts stellar future for Lab-grown diamonds’, Pg. 32)

Supplies of Earth-mined diamonds are falling tremendously, leaving a wide demand-supply gap, and Lab-grown diamonds seem to be the only viable solution to make up for the deficit.
3.1 Why diamonds will run out sooner than you think

Apr 6, 2015

More than 30 major diamond mines reaching their End of Life by 2030, accelerating conditions of dwindling rough supply and resources and other similar indicators are reasons enough to send jitters among the earth mined diamond producers and manufacturers, and which strongly signal why diamonds will run out sooner than one can fathom the gravity of the situation. Such a scenario not only adversely impacts the diamond miners but also other industry players across the pipeline.

Major analysis forecasts falling Roughs supply

- Rough diamond production is forecasted to fall by more than 50% by 2030, from their current levels.
- The scenario will further aggravate by 2050, when only 14 million carats of global rough diamond production is predicted, by Frost & Sullivan.
- Bain report has predicted that diamond production will decline by 2% annually from 2019.
- McKinsey and De Beers have also made similar forecast.

Exhausting diamond mines

- Mines like Argyle (Australia) and Ekati (Canada) now have reserves for only 7 years.
- Argyle, the third largest diamond mine by volume, will reach its End of Life by 2020.
- Major mines in South Africa (Venetia, Kimberly, Voorspoed) and in Botswana have less than 10 years of reserves.
- Voorspoed mine has life only till 2021.
- Venetia mine has already exhausted its open pit resources.
- De Beers is ending its Kimberly operations, is currently retreating its tailing dump and the mine would come to end of life in 2018.

No New Mines

- No new economically viable mine has been discovered since last 2 decades.
- Success rate for finding new economic diamondiferous mine is very meager, at less than 1%, according to De Beers’ estimates.
Charles Skinner – De Beers’ head of exploration had mentioned during last year’s Kimberley Diamond Symposium that out of the 8,000 kimberlites found till date, only 67 have diamonds that make the mine economically viable. Many of the earlier finds have not been able to successfully commercialize. Finds like Bunder mine in India is yet to see the light of the day. It takes decades to start full-fledged operations for any new find. Liqhobong diamond mine has been around for 60 years but its production has just begun.

Exploration budgets of major miners have reduced, who are undergoing asset sale

- Overall diamond exploration budgets of miners have reduced by around 50% from their 2007-08 levels.
- Major miners including Rio Tinto are reducing their CAPEX and exploring asset sale.
- De Beers sold its Kimberly Underground to Petra Diamonds due to economic unviability.
- Stephen Lussier, executive director of De Beers had mentioned that “It looks like the world is getting to the end of that period of diamond production expansion”.

Mines going underground

- Many of the open pit mines are now converting into a more expensive and sometimes unfeasible underground operations in order to find the last left diamonds.
- But underground resources yield fewer diamonds and have high operating costs associated.

Declining diamond production

- Alrosa, world’s biggest diamond miner by volume, witnessed a decline in its production capacity in first half of 2014
- Newly operational Ghagoo mine is forecasted to produce only 200,000 carats, far less than Kimberly’s 2012 capacity of 755,000 carats
Widening Demand-Supply Gap

- The demand-supply gap is increasing and is expected to widen in coming years, as predicted by Bain.
- Demand for roughs is expected to rise gradually to 292 million carats by 2050, leaving a tremendous 278 million carats Demand-Supply gap. A 41 million carats gap is forecasted, by Frost & Sullivan by, 2022 itself.

Reducing Inventory

- Inventory of roughs is also declining since its peak in 2005.

[Source: http://betterdiamondinitiative.org/diamonds-will-run-sooner-think/]
3.2 A 278 million carats Demand-Supply Gap by 2050: Frost & Sullivan

Jan 19, 2015

In a recently released report, Frost & Sullivan has estimated that the global supply of mined roughs will fall to 14 million carats while the global roughs demand will rise to 292 million carats by 2050, leading to a humongous 278 million carats Demand-Supply gap.

Since its peak of 176.7 million carats in 2006, global annual production has fallen by ~26% to 131 million carats in 2013. Since past 2 decades witnessed more diamond production than in the rest of history, diamond mines exhausted their resources faster. All major diamond mines that produce 5+ million carats have crossed their peak production levels and some mines like Argyle and Diavik are looking to reach the end of life within a decade itself.

Even though, for some mines, life may be extended by converting into underground mining, it is a highly expensive and less viable option. Till date more than 8,000 kimberlites have been discovered but only 67 of them were economically viable. Diamond miners have realized this and major producers have already reduced their exploration budgets. Overall global diamond exploration budget has nose-dived to around 50% of its 2007-08 levels.
Bain had predicted that mined diamond production will start declining by 2019 itself, dipping by 1.9% p.a.

However, at the same time, the demand for diamond roughs is estimated to grow gradually to 292 million carats, fuelled by robust jewelry growth in China and India. This will lead to a demand-supply gap of 278 million carats, with shortfall rising to 41 million carats by 2022 itself.

*Figure 7 – Rough Diamond: Demand-Supply Gap*

[Image Courtesy: Frost & Sullivan]

In 2014, prices of diamonds rose by around 7% and are expected to either way rise by 5-7% p.a. for next few years, as per BMO Capital Markets report. But, the predicted supply-demand shortfall will further increase diamond prices. Frost & Sullivan’s report also details that Lab-grown diamonds’ production is expected to surge and how they can help address some of this shortfall.

[Source: http://betterdiamondinitiative.org/a-278-million-carats-demand-supply-gap-by-2050-frost-sullivan/]
3.3 Lab-grown diamonds set to fill projected deficit as mined production declines

Sep 22, 2015

[This article was originally published by Creamer Media’s Mining Weekly on 18th September 2015]

JOHANNESBURG (miningweekly.com) – Technological developments that enable manufacturers to produce grown diamonds have presented the industry with a significant growth opportunity, with a noticeable influence on the economy and the diamond value chain, as researchers predict the demand for grown diamonds to double in the next ten years.

This is because, in addition to the jewellery industry, manufacturing and energy companies also use grown diamonds. Singapore-based grown diamonds manufacturer Ila Technologies (pronounced ‘2a Technologies) says this is a result of the projected decline of mined diamond supply, as the quality levels of mined diamonds are unpredictable for high-technology applications; further, almost all of the mined diamond production is absorbed by the gems and jewellery industry. Owing to this, grown diamonds are filling an important gap in the diamond industry as a new source of raw material.

Consulting firm Frost & Sullivan’s ‘Grown Diamond Impact 2050’ report, published last year, indicates that mined diamonds are a finite resource, considering the extreme and rare occurrence of the natural surroundings in which they are formed. Therefore, the sustainability of the mined diamond industry as a primary source for the industry is declining.

State of the Diamond Industry

Based on the Frost & Sullivan report, global mined diamond supply is estimated to drop to 13-million carats in 2050, from the projected 133-million carats in 2014. Further, despite the implementation of technological developments in mining exploration, rough diamond production looks bleak.

South African diamond miner De Beers estimates that more than 8 000 kimberlites have been found; however, only 67 of those kimberlites have enough diamonds to justify the economics of establishing a mine.
Globally, seven major mines were generating 65% of the world’s rough diamond production by value. Major diamond producers have, therefore, reduced exploration budgets, while junior exploration companies face increased difficulty in obtaining new finance, owing to kimberlite feasibility issues.

Frost & Sullivan further mentions in the report that only 3% of exploration budgets was allocated for diamond exploration in 2013, compared with 46% and 33% for the exploration of gold and base metals respectively.

Diamond exploration budgets, meanwhile, have been reduced to half of what it used to be in 2007 and 2008.

Nevertheless, Frost & Sullivan notes that, while mined diamonds supply is declining, demand is steadily rising. This is evident in the US – which represents the largest share of global jewellery sales – where there is consistent demand growth. The growing middle class in China and India has also driven demand in recent years, with leading retailers, such as Chow Tai Fook, in China, reporting 32% higher retail revenue over the 2014 Chinese New Year.

Frost & Sullivan predicts that this steady increase in demand is likely to lead to a shortage of about 248-million carats by 2050. The report also notes that China and Hong Kong are expected to register an 18% diamond jewellery sales increase by 2017.

**About Grown Diamonds**

US grown-diamond company Renaissance Diamonds Corporation CEO Neil Koppel describes grown diamonds as “chemically, optically and physically identical to mined diamonds”. He tells Mining Weekly that the only distinction between a mined diamond and a grown diamond is that a grown diamond comes from above the earth, whereas a natural or mined diamond comes from below the earth.

Additionally, global consulting firm Bain & Company’s ‘Global Diamond Report 2014’ highlights two broad categories of grown- diamond production technology – high-pressure high-temperature (HPHT) technology, which emerged in the 1950s, and chemical- vapour deposition (CVD) technology.
HPHT diamonds are mainly used as abrasives in the construction and manufacturing industries, while CVD diamonds are of a jewellery-quality size, colour and clarity, which makes it possible to customise the characteristics of individual diamonds using additives.

Bain & Company’s report indicates that, in 2013, grown-diamond producers produced about 7-billion carats of industrial diamonds, while natural diamonds accounted for less than 0.7-million carats of industrial diamonds in the same year.

Moreover, the construction industry uses between 60% and 65% of the world’s grown diamonds in cutting, grinding, drilling and polishing procedures, while manufacturers and energy companies use 15% to 20%, with high-tech applications accounting for 15% to 25%.

Companies in the industrial diamond market indicate that the prices for most industrial diamond powders range from $0.25 to $0.50 for each carat, while prices for high-quality CVD diamonds are much higher, as they can reach several thousand dollars for a single flawless stone.

**Additional Technological Advances**

IIA Technologies tells Mining Weekly that advances in CVD technology has presented the diamond industry with a significant opportunity, as it has allowed for the creation of large synthetic stones of jewellery-quality colour and clarity.

IIa Technologies believes that technological advancements in the grown-diamonds sector has necessitated the development of a sustainable, commercially viable diamond-growing process to truly explore the supermaterial-like qualities of diamonds.

“IIa diamonds are the purest grade of grown diamonds and are extremely rare in nature, as 2% of all diamonds in the world are type-IIa grade,” says IIa Technologies CEO Vishal Mehta.

He explains that the process of developing IIa-grade diamonds begins with diamond seeds – which are, in effect, natural diamonds – being placed inside a growth
chamber, which is also known as the diamond greenhouse. There, a diamond-growing environment is conditioned and maintained for between 12 and 14 weeks.

Mehta points out that, at the end of this period, diamond seeds have undergone natural crystallisation – just as they do below the earth when they are mined, resulting in a rough-type IIa diamond being formed. “The beauty of the IIa grown-diamond process is that we have developed this technology to culture only the rarest type-IIa diamonds, which are known to have the least amount of impurities and are extremely rare in the diamond industry,” he says.

Mehta indicates that the carbon emissions for mined diamonds are estimated at 57 000 g/ct, while those of grown diamonds are 0.028 g/ct.

**Economic Outlook**

Mehta believes that grown diamonds provide a solution to the expected decline in the supply of mined diamonds – which is likely to affect the diamond industry’s economy – as supply of high-quality grown diamonds is projected to grow steadily in years to come.

He notes that the global mined diamond industry employs more than ten-million people directly and indirectly. However, mining diamonds is more expensive, with mines literally having to dig deeper for the diamonds. This affects the whole industry – from the cutting and polishing to the retailing of natural diamonds.

Nevertheless, grown diamonds can also create a distinct employment roadmap for South Africa and, subsequently, impact positively on the local economy by creating high-value occupations and skills.

Mehta points out that the grown-diamond industry needs the same cutting and polishing skills currently available in the mined-diamond industry, along with next-generation skills of engineers and scientists.

Drawing data from last year’s statistics, Frost & Sullivan’s report indicates that the current scale of grown-diamond production is estimated to be about 360 000 ct. Production is estimated to reach almost two-million carats by 2018 and is expected to be more than 20-million carats by 2026.
The report also states that, in the next 30 years, grown diamonds will become a dominant player in high-technology applications and can prove to be a very significant source for the diamond jewellery industry.

Mehta says this will be an interesting move for the grown-diamond industry, as trends of accepting grown diamonds as a legitimate diamond product are emerging.

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3.4 New research report predicts stellar future for Lab-grown diamonds

Sep 22, 2015

A recent study conducted by PHD Research Bureau of PHD Chamber of Commerce and Industry, an Indian body, has corroborated a wide held view – Lab-grown diamonds have a stellar future. The newly released report predicts that by year 2030, global production of Lab-grown diamonds will cross 20 million carats.

At the same time, production of mined diamonds will diminish from the current level of around 125 million carats in 2015 to only 62 million carats in 2030. Whereas the annual demand for diamonds worldwide will reach 221 million carats by 2030.

Current production level of Lab-grown diamonds is only around 360,000 carats but the significant increase by 2030 to 20 million carats level will help in addressing 13% of the demand supply gap. Besides, according to the report, further scope to increase Lab-grown diamonds production and reducing the demand supply gap exists.

Instead of being mined from earth, Lab-grown diamonds are grown in ‘Diamond growing Greenhouses’ – laboratories and have the same exact physical, chemical, optical and other properties as Earth-mined diamonds. Though source of origin is the only difference between Earth-mined diamonds and Lab-grown diamonds, the latter have additional benefits of being completely eco-friendly, conflict-free and socially responsible.

However, lot of misnomers and misinformation exists surrounding Lab-grown diamonds, as they are incorrectly being perceived as ‘Synthetic’. This has also led to some legal fallout, like incorrectly classifying Lab-grown diamonds under a separate HS Code – 7104, which is for synthetic stones, instead of its recognition under HS Code 7102, meant for diamonds. The PHD report mentions that Lab-grown diamonds should be categorized under HS Code 7102 with a separate unique sub-category at 6th and 8th digit level for correct and transparent classification and differentiation from Earth-mined diamonds.
There is lot of confusion, rumors and unfounded fear in the diamond industry regarding Lab-grown diamonds. Gemological Science International (GSI) CEO Mark Gershburg and India’s Gem & Jewellery Export Promotion Council (GJEPC) chairman Praveenshankar Pandya both are of the opinion that better understanding of Lab-grown diamonds can dispel fear and avoid confusions.

Adoption of Lab-grown diamonds globally is swiftly increasing as they give consumers a choice. According to PHD Chamber, the sunrise industry can enhance a nation’s economy by employment generation, increased foreign exchange earnings and providing a sustainable, ecological and origin guaranteed diamond source.

Global Research and Consultancy firm Frost & Sullivan had also earlier made similar predictions about Lab-grown diamonds and PHD Chamber’s report confirms Lab-grown diamond’s stellar future ahead.

[Source: http://betterdiamondinitiative.org/new-research-report-predicts-stellar-future-for-lab-grown-diamonds/]
Mining companies continue their efforts to destroy Lab-grown diamond market

Considering Lab-grown diamonds as a threat, diamond miners and vested interests in the industry have been on a mission to destroy Lab-grown diamond sector.

False stories of diamond mixing surfaced sporadically in the media. However, none of them have any details or facts about the alleged mixing incidences and carry only rumors. Last year when similar story appeared, we reached out to the media house running the story and industry associations, only to learn a shocking truth that all these stories do not have an iota of truth. India’s two leading diamond associations including Surat Diamond Association (SDA) categorically told us that diamond mixing has never taken place and all stories including those in past are only rumors. (See ‘Diamond Mixing has never taken place: Surat Diamond Association’, Pg. 36)

Earlier this year when GIA mentioned that ‘there has been an increase in undisclosed synthetics’, we sought details of these ‘undisclosed synthetics’ from GIA. But GIA avoided answering our questions, quoting confidentiality. With lack of any names, dearth of any information and absence of any legal cases, possibility of GIA having a biased agenda on the issue cannot be ruled out. (See ‘Undisclosed Lab-grown Diamonds – Reality, Rumor or Fear Mongering?’, Pg. 39)

Last year, a study by Indian Diamond Monitoring Committee (NMDC) formed by GJEPC, concluded that diamond mixing was grossly exaggerated and it could be occurring only on a fairly small scale.

Additionally, ample and affordable diamond detection machines are available and widely used to check any cases of undisclosed Lab-grown diamonds. Several such instruments of companies like De Beers, GIA, HRD Antwerp, Diamond Services et al are available and starts at as low as USD 199. (See ‘Ample and affordable Diamond detection machines galore’, Pg. 41)

Marc Brauner – Co-CEO, IGI, in an address at Rapaport International Diamond Conference in 2013 had said

“... if SCIO Diamonds has the ambition to become the largest synthetic diamond producer in the world, I have a question for you, Do you really think the DeBeers is going to let them? I’ll tell you they are not, that’s my take.”

Inline with this, Diamond Producers Association (DPA) comprising seven of the world’s largest diamond miners: De Beers, ALROSA, Dominion Diamond Corporation, Lucara Diamond Corporation, Petra Diamonds Ltd, Gem Diamonds Ltd and Rio Tinto
was formed earlier this year. The association was started with its first agenda to “counter the threat of expansion of lab-grown diamonds” as reported by The Wall Street Journal. (See ‘A new diamond association and its irrational orientation’, Pg. 43)

Not just that, mined diamond producers have successfully blindsided organizations like ISO, which unfortunately released a new standard ISO 18323:2015 defining incorrect nomenclatures and terminologies for Lab-grown diamonds. The new ISO standard (essentially a copy of CIBJO’s Diamond Blue Book) is evidently created to discourage retailers from selling Lab-grown diamonds and to mislead consumers. (See ‘How ISO failed to live up to its own “Standards” for Lab-grown diamonds’, Pg. 45)

Our exclusive qualitative survey of 19 players in the Lab-grown diamond industry strongly reveals that ISO 18323 is not just incorrect but also biased towards mined diamond players. (See ‘What Lab-grown diamond industry thinks about ISO 18323?’, Pg. 48)
4.1 Diamond Mixing has never taken place: Surat Diamond Association

Jan 20, 2015

In absence of any names, dearth of any info and lack of any legal action, it is highly unlikely that diamond mixing has ever taken place, as confirmed by SDA. India’s two leading diamond industry associations – GJEPC and SDA have said that mixing stories are only rumors. BDI brings you the truth behind the farce of ‘diamond mixing’

A recent news article published in an Indian media talks about instances of diamond mixing. It mentions that social media is abuzz with diamond mixing incidence that may involve few leading DTC sightholders.

The said news article also quotes two associations – Gems and Jewellery Export Promotion Council (GJEPC) and Surat Diamond Association (SDA) announcing that ‘stringent legal action’ will be taken against the culprits. But that leads to an interesting question – who should be punished in this case?

Beyond the mention of ‘some social media messages’ and quotes from GJEPC and SDA, there is no further information available. No names or any details of the incidents have been mentioned.

In order to find out more about such ‘omissions’ and ‘commissions’ we embarked on a series of enquiries. And what we found out was rather disturbing. It seems that the entire ‘diamond mixing’ stories are deliberate rumors spread by miscreants in the industry.

BDI reached out to Vipul Shah – Chairman, GJEPC and Dinesh Navadia – President, SDA, in hope of getting more details. We asked them several important questions, including:

- Which companies/industry players were involved in this mixing incidence?
- When did this mixing incidence take place?
- What was the volume in carats of this mixing?
- Who found this mixing and when?

More importantly, we also asked them what legal action have they taken till date against those found in mixing diamonds in the past?
We received a response from Dinesh Navadia who clarified that “No diamonds manufacturers are involved in the diamond mixing incidence as per our information. There were fake rumors in the market about companies mixing lab grown and mined diamonds.” He also mentioned “SDA is going to organise awareness programs in the diamond market to keep people from spreading such rumors.”

He further emphasized that “if any company is found guilty of such mixing..” then several actions will be taken including distributing photographs of the culprits.

On probing further, Dinesh Navadia said “If any story is published in the past of such incidence, then its not factual and was a rumor only.”

GJEPC also replied that “.. there were only rumours.” Vipul Shah, in another article also, is quoted having said “It is all just rumors. We have not received any official complaint”.

On one hand, GJEPC and SDA is giving a statement that they are taking ‘pro-active steps’ to ‘curb the menace’ and announcing that ‘stringent legal action’ will be taken and on the other hand, they are calling all such stories as rumors!! Against whom they intend to take legal action and distribute photos of? It all hinges on “if any company is found..”

To find that company, BDI also contacted the author of the article, in hope of getting some information but did not receive any response.

Our curiosity level increased and we went through similar stories published last year in anticipation of gaining some concrete information there. However, all such stories only contain vague references of some ‘clients’, some ‘DTC sightholders’, ‘local traders’ from Mumbai, Surat etc. with neither a single name nor any details of the incidences.

How come no action has been taken, no legal proceedings initiated or even no names of the culprits involved in the past mixing incidences disclosed, even after more than a year has passed?!!! Perhaps because no ‘culprits’ exist and perhaps because no ‘diamond mixing’ incidence has ever taken place, as confirmed by SDA President Dinesh Navadia.
During this quest, an interesting observation was made. **Almost all of the reported stories of alleged diamond mixing were published around October – January period.** Why? **Do the unethical traders who mix diamonds turn ethical for rest of the year!!**

Despite several stories being circulated about diamond mixing in the global media, it is **quite surprising that no one has asked the questions that BDI poses.** In May 2012, **International Gemological Laboratory (IGI), Antwerp** reported a parcel of 600 ‘**undisclosed synthetic**’ diamonds being submitted, which were seized by Antwerp Police and later turned out to be natural diamonds.

If diamond mixing is not happening, then it leaves one with a fascinating thought – why on earth will anyone run such a rumor mongering machine and try to create a **state of fear.** An obvious answer to it is the fact that mined diamonds segment is feeling threatened by better value and ethical diamonds, whose **popularity** and **acceptance** is only growing by the day.

**Philippe Mellier** – CEO, **De Beers**, in a recent interview, said that De Beers has “Best Practice Principles” (BPP) and if a sightholder is found selling undisclosed synthetics, it will **result in an immediate cancellation of contract.** “**And I will do it, without hesitation**,” he added “We cannot tolerate any deviation from the BPP”. Earlier and recent reports clearly mention ‘DTC sightholder’ involvement in diamond mixing. **Which sightholder’s contract has De Beers terminated over diamond mixing?** Either De Beers does not walk its talk (else a cancellation of a sightholder contract and probably legal proceedings too would have been reported) or the discussed media reports are delusional products of fabrication.

Till the time, any specific names and full details of the ostensible diamond mixing cases are disclosed in public domain, it only remains a work of ‘undisclosed’ fiction.

I think there was a spelling typo in the heading of a recent article, which should have correctly read as – **We Take Make New Reports of Undisclosed Synthetics “Very Seriously”.**

4.2 Undisclosed Lab-grown Diamonds – Reality, Rumor or Fear Mongering?

Apr 19, 2015

The Gemological Institute of America (GIA) has recently reported “…there has been an increase in undisclosed synthetics…”. Tom Moses, executive vice president of GIA laboratory and research, even mentioned law enforcement contacted GIA in one of the cases. GIA spokesperson Stephen Morisseau adds: “The quantity of undisclosed synthetics remains a very small proportion of the diamonds submitted to GIA for grading and identification.”

The issue of undisclosed lab-grown diamonds has been appearing in the news ever since they started becoming a commercial success in North America for last few years. What doesn’t add up here is the absence of details about such “reported” mixing incidents like – carats of diamonds found, parties responsible for submission, how the perpetrators were identified, who are the perpetrators and actions taken against them.

To find out the truth behind this reported observation from GIA and to ensure that the details of these incidences are brought out in front of the entire industry and the world, BDI tried to contact Susan Jacques (President, GIA), Tom Moses and Stephen Morisseau and asked them following questions:

1) So far how many “Undisclosed Synthetics” incidences have been identified by GIA?
2) Who submitted these undisclosed lab-grown diamonds to GIA ? (names of companies/ individuals)
3) When (date and time) and at which GIA labs (location), were these “Undisclosed Synthetics” submitted and identified?
4) What were the volume in carats of diamonds and/or lab-grown diamonds in each of these submissions?
5) Which law enforcement authorities contacted GIA and what actions have been taken against those involved in undisclosed lab-grown diamonds submission?
6) How does GIA plan to discourage such practices from happening in future?
Of the three, only Stephen Morisseau responded saying, “GIA does not disclose details of submissions to our laboratories”, and avoided answering any of the questions. GIA being an important stakeholder in the industry with the responsibility to protect consumer’s interests must take an unbiased stand and should provide complete details about the “reported” incidences of mixing, if any. Their reluctance to provide details of undisclosed lab-grown diamonds indicates the possibility of GIA having a biased agenda on the issue. Whether that agenda is to protect the interest of mined diamond producers, or fear mongering to discourage lab-grown diamond adoption by trade, or simply spread rumors so more people get their diamonds tested resulting in more business for GIA, or are they really unbiased, only GIA would be able to tell.

The situation is even more confusing with trade associations in India. Recently Surat Diamond Association (SDA) has mentioned (yet again) in media that Undisclosed Lab-grown diamonds have been “spotted” in India. Only few months back, Dinesh Navadia, SDA President had categorically confirmed that no diamond mixing has ever taken place and “if any story is published in the past of such incidence, then its not factual and was a rumor only”. During the same period, even the Gem & Jewellery Export Promotion Council (GJEPC) chairman Vipul Shah stated “It is all just rumors. We have not received any official complaint.”

Important industry stakeholders like diamond associations – SDA and GJEPC going back and forth on their statement time and again only indicates that their sole agenda is to confuse and mislead consumers and trade. Besides, till date, none of these industry stakeholders including GIA has been able to provide any details of the rumored diamond mixing cases. It does not then come as a surprise that the truth behind Undisclosed Lab-grown diamonds happen to be a pure work of fiction.

[Source: http://betterdiamondinitiative.org/undisclosed-lab-grown-diamonds-reality-rumor-or-fear-mongering/]
4.3 Ample and affordable Diamond detection machines galore
Jan 27, 2015

Even though the stories of diamond mixing have been revealed to be a farce, it is important that people in the diamond trade are mentally secured and satisfied about the issue. In this regard, lot of technological progress has been made in the past few years. Several companies have introduced range of user-friendly diamond detection machines that does away with the need of expensive certifications in a grading laboratory. These machines can be used by anyone without being a gemologist or a spectroscopy expert. Furthermore, many of these machines are quite affordable.

Last year, De Beers and GIA came up with new diamond detection machines. GIA’s “DiamondCheck” is priced at USD 23,900. De Beers supplies “Diamond Sure”, “DiamondView” and “Automated Melee Screening (AMS)” devices. AMS is able to detect stones from 0.2 carat down to 0.01 carat and can take up to 500 carats at a time. Lease Fee for one unit of AMS for a 3-year contract was earlier USD 75,000. (Post original publication of this post, we’ve received a mail from IIDGR UK stating that this info is now almost a year old and AMS is now available for purchase for USD 55,000. Besides, there is a 3-year service and support fee of USD 10,000 per year)

Besides, there are several other diamond detection machines that are much more affordable even for small jewelers. ‘Gemlogis TAUPE’ is purported to be a better version of the HRD Antwerp D-Scope technology and is available online for USD 485.

Diamond Services Ltd., a Hong Kong based firm, provides ‘Diama Pen’ – a pen shaped laser beam pointer that is able to detect both HPHT and CVD stones. J. Kuzi, EGL Asia CEO mentioned that they had conducted series of tests using this instrument and found that “in all cases the testing results are consistent and highly satisfactory.” Diama Pen was offered for only USD 199.

WTOCD and HRD Research has also developed ‘D-Screen’ device that can detect all forms of diamonds from 0.2 to 10 carats at ~200 stones/ hour. Though exact price of the same is not known, it is termed as one of the most affordable diamond detection machines.

Almost all the leading diamond bourses and industry bodies globally have installed such diamond detection machines. HRD had distributed its D-screen to all diamonds bourses worldwide. GIA had given its Diamond Check machines to several bourses and associations like GJEPC has acquired AMS to be installed at Diamond Detection and Resource Centre (DDRC) in Bharat Diamond Bourse (BDB).
Though some questions have been raised earlier regarding the efficacy of these machines, De Beers “is confident that its technology detects all synthetic diamonds”. GIA has also supported this claim while its own ‘DiamondCheck’ machine is asserted to be 100% accurate with an ability to determine the results in 10 seconds. Many of these detection machines are also able to detect any treatments done to diamonds.

There are numerous diamond detection devices easily available in the market from as low as USD 200 to a few thousand dollars. Instead of loosing sleep over any mixing dreams, it’s best to get a diamond detection instrument.

(This post was originally published on 27th January 2015. However, after receiving the mentioned updated info from IIDGR UK, the post was modified and re-published on 09th February 2015)

[Source: http://betterdiamondinitiative.org/ample-and-affordable-diamond-detection-machines-galore/]
4.4 A new diamond association and its irrational orientation

Mar 18, 2015

Some of the world’s largest diamond mining companies, reportedly, recently met at Rio Tinto’s headquarters in London to ruminate the formation of a new ‘diamond association’. This may sound like good news for the industry that is facing multifarious issues including dwindling rough supplies, liquidity crisis, stiff competition from other luxury goods, rise of money laundering and fraudulent practices, and a legion others.

For an industry that is going to be a spectator to a 278 million carats demand-supply gap by 2050, a focused group that will attempt to solve the plethora of problems is just what the industry needs. But the proposed ‘diamond association’ unfortunately started on a wrong note. Instead of tackling the real issues, it is baffling that the ‘diamond association’ theorizes the imaginary issue of undisclosed lab-grown diamonds mixing as the industry’s ‘Key Challenge’.

India’s two leading diamond industry associations – GJEPC (Gems and Jewellery Export Promotion Council) and SDA (Surat Diamond Association) have categorically said that all mixing stories were only rumors. Not just that, as confirmed by SDA, diamond mixing has never taken place. Besides, there are numerous affordable diamond detection instruments available worldwide. When it is quite clear that the stories of undisclosed mixing are nothing but work of fiction deliberately spread by miscreants in the industry, the premise on which the ‘diamond association’ is starting is wobbly and its foundation unstable.

Chronic issues like environmental concerns, failure in stopping conflict diamonds entering the pipeline, inhuman labor practices, societal damage and so on, endanger the already precarious scenario of the industry. In such times, this ‘diamond association’ is going through a befuddled illusion of problem solving when in reality it is running away from the true threats. Because of industry’s nonchalant attitude towards the legitimate problems and its loosing connect with customers and reality, even simulants are now outperforming diamonds.
The secretive meeting of the ‘diamond association’ was supposedly attended by representatives of De Beers, Alrosa, Rio Tinto, Petra Diamonds, Gem Diamonds, Lucara Diamond Corp., Dominion Diamond Corp., OAO Lukoil et al and conducted in a clandestine manner.

The initial enthusiasm and hope, of a ‘diamond association’ trying to solve genuine problems of the industry, dies down with its irrational orientation.

[Source: http://betterdiamondinitiative.org/new-diamond-association-irrational-orientation/]
4.5 How ISO failed to live up to its own “Standards” for Lab-grown diamonds

Sep 1, 2015

The International Organisation for Standardisation (ISO) after 7 years of ‘commitment’, along with coalition with The World Jewellery Confederation – CIBJO; De Beers, Rio Tinto, BHP, International Diamond Council among others, recently published a new standard – 18323:2015 Jewellery – Consumer confidence in the diamond industry. The standard essentially defines the nomenclature and terminologies that should be used for Lab-grown diamonds, treated diamonds and Earth-Mined diamonds.

Why ISO standards are important?

ISO sets up international standards for best practices in industries globally. For consumers, their objectives include standing for improvement in choice, fair competition, transparency in production information and credibility of standards to support consumer protection laws. For trade, their objectives include enhancing consumer satisfaction, level the playing field, set up guidelines for ethical industry practices and facilitate free and fair global trade.

How does ISO develop standards?

According to ISO, “Our standards are developed by the people that need them, through a consensus process. Experts from all over the world develop the standards that are required by their sector. This means they reflect a wealth of international experience and knowledge.”

How ISO 18323:2015 fails to comply with its own “standards”?

Unfortunately, the new ISO standard fails to follow its own guidelines in drafting the standard as it undermines its objectives enlisted above, for both consumer and trade. For consumers, the restricted use of the term “Synthetic” to refer Lab-Grown diamonds will spread confusion and deception leading into believing that they are fake diamonds like Cubic Zirconia (CZ), Moissanite etc., which is not true. Lab-grown Diamonds has emerge as a new choice for ethical and conflict free diamonds, but the perception that they are fake will eliminate them as a choice for consumers wanting to buy ethical diamonds.
Besides, as per ISO’s own stated process for developing a standard, ‘a consensus process’ involving ‘experts from all over the world’ is adopted. Isn’t then it is outlandish that a new ISO standard on Lab-grown diamonds was developed without any representation or consultation from any Lab-grown diamond producers or retailers!!!

‘Synthetic’ is an inaccurate term: US FTC and various experts agree

The necessity to distinguish the origin of diamonds is essential for consumers and trade, but at the same time any description or nomenclature should be an accurate reflection of the true characteristics of any product. ISO in its new standard defines a ‘synthetic’ diamond as “an artificial product...”. This is where ISO, like everyone else, starts on a misplaced note.

Federal Trade Commission (FTC), US in its 21 July 2008 order has explicitly stated “... the term ‘synthetic’ is a potentially confusing term i.e., consumers associate synthetic diamonds with imitation stones...”. Various experts including global management advisory and research firm – Frost & Sullivan also prescribes that ‘Synthetic’ is an inaccurate term to describe Lab-grown diamonds and hence it should be dropped.

ISO has, in fact, gone against US FTC guidelines by allowing only the usage of terms ‘synthetic diamond’, ‘laboratory-grown diamond’ or ‘laboratory-created diamond’ and bars the use of terms ‘cultured’, ‘cultivated’, ‘real’, ‘genuine’, ‘precious’ and ‘gem’ to describe Lab-grown diamonds (oops... ‘Laboratory-grown diamonds’... it does not even allow abbreviations).

ISO 18323 is narrowly drawn from a single source – CIBJO’s ‘Diamond Blue Book’

The new ISO standard is apparently heavily influenced from CIBJO’s ‘Diamond Blue Book’ and seems to be furthering mined diamond producers’ intentions of destroying Lab-grown diamonds as a choice for consumers. No wonder why the Mined diamond industry professionals and organizations including The World Federation of Diamond Bourses (WFDB), CIBJO et al have hailed the new standard.

Since, CIBJO is the only “Organization in Liaison” with the ISO committee, it is highly likely that its “Diamond Blue Book” would have served as the only source of
information for all purposes. Gaetano Cavalieri, CIBJO President takes pride in this fact, “We are particularly proud, because the ISO standard essentially codifies our Diamond Blue Book rules.” CIBJO has no representation from Lab-grown Diamond producers and serves the interest of only Mined Diamond producers.

It also seems that the ISO committee responsible for this standard did not consider publicly available information on consumer choices.

Take for example this data from a survey conducted by Frost & Sullivan. It clearly reveals that Jewelry retailers are hardly interested in selling Lab-grown Diamonds (diamonds grown above earth) if they are described as “Synthetic Diamonds”. Pushing of the term “Synthetic Diamond” after looking at this information would only mean that ISO wants to discourage retailers from selling Lab-grown Diamonds and mislead consumers into believing that they are fake diamonds.

If ISO committee wants to ensure compliance to fulfilling their objectives they must involve experts and producers from Lab-grown diamond industry and understand the truth about Lab-grown diamonds. Rather than getting blindsided, shouldn’t ISO take up its responsibility of disseminating the right message of ethical and eco-friendly diamonds to consumers, through its standards?

[Source: http://betterdiamondinitiative.org/iso-failed-live-standards-lab-grown-diamonds/]
4.6 What Lab-grown diamond industry thinks about ISO 18323?
Oct 14, 2015

[Exclusive] - Qualitative opinion survey of major players in the Lab-grown diamond industry

With regard to the recent developments in the diamond industry including ISO 18323, it is important to understand what the Lab-grown diamond industry thinks about it and other practices, considering the fact that the new ISO standard was developed in coalition with CIBJO (The World Jewellery Confederation) and mined diamond industry players, without any representation or consultation from any stakeholder of Lab-grown diamond industry.

We reached out to 19 players in the Lab-grown diamond sector – producers, manufacturers, retailers, wholesalers and suppliers, and received detailed comments and insights from many of them including House of Eleonore/Royal Asscher Diamond Company, Washington Diamonds Corporation, IIa Technologies, Chatham Created Gems & Diamonds, Pure Grown Diamonds, MiaDonna, Golconda Cultured Diamonds, Soni CVD Diamonds et al.

1) On ‘comments on the recently published ISO 18323: Jewellery?’

Almost all the respondents were shocked and aghast on ISO 18323, expressing that the new ISO standard is biased, unfair, poorly informed and against consumer interests. Some of the respondents fear that this is just a beginning of even more unlevelled playing-field in the diamond industry.

Anna-Mieke Anderson – CEO, MiaDonna says “...the one truly consistent theme has been a bias push towards the best interests of the diamond mining industry, not the diamond consumer.”
Vishal Mehta – CEO, Ila Technologies believes “... vested interests of the leading diamond miners, complete exclusion of grown diamond companies and erroneous opinions shared in the media have probably played a major role during ISO 18323’s conception... We strongly believe that a reputed body like ISO has unknowingly been used as a tool to damage the prospects [of] the Grown Diamond industry.”

Tomy Florencio – CEO, Golcondia Cultured Diamonds and Owner, TFlorencio Jewelry comments “It is very alarming because the body that was present in discussions was purely from the mined side. I believe this is only the start of something that is brewing.”

Tom Chatham – CEO, Chatham Created Gems & Diamonds, while terming the new ISO standard as ‘anti trust violation’, agrees “I could see that CIBJO was at it again, sticking their nose into other peoples business to better their position, all under the banner of ‘protecting public confidence’. I see this as nothing more than restraint of trade in the form of creating regulations, which only effect their competition.”

Mike Asscher – VP, Royal Asscher Diamond Company on behalf of Bernd Damme – Founder & MD, House of Eleonore, which is associated with Royal Asscher, says “The final question is how this will reach the actual consumer... What I can not see if they have included the consumers perspective in their research.”

Malay Hirani – CEO, Soni CVD Diamonds says “The ISO guideline is biased towards natural diamond producers and does not take into account rough diamonds obtained by many companies from countries with conflict and civil unrest. Guidelines does not give any burden of ‘source disclosure’ on the natural diamond companies.”

While Clive Hill – President, Washington Diamonds Corporation emphasizes and supports the original FTC ruling on the use of the word ‘cultured’ than the incorrect term of ‘synthetic’ and goes on to say “The word ‘real’ is proscribed altogether by the standard, and it is easy to see how ‘real’ could be misused. However, if we are asked if our diamonds are real or a simulant like CZ the correct answer is clearly that they are real diamonds, the context showing that the questioner is aware that these are Lab-grown.”
Lisa Bissell – President and CEO, Pure Grown Diamonds says “... ISO 18323... was constructed without participation from the Grown Diamond Industry. That in itself speaks volumes about the fairness of the standard drafted... We believe the fact that it is ultimately the customer who is being misled on the various ‘genuine’ choices they have, and this is hurting the Diamond Industry.”

2) On ‘the nomenclature of Synthetic or Artificial to describe Lab-grown diamonds’

As Clive rightly mentions “The traditional mined trade likes these words because they confuse the consumer into believing Lab-grown diamonds are made of something other than diamond, and are pejorative... It is odd that a business that relies so heavily on trust and confidence conducts itself as if it were on a par with the most untrustworthy used car dealer. These terms should be put in the bin and the people who currently use them should think about how to deliver real value to their customers.”

Vishal says “There is enough research evidence to drive home the point that ‘synthetic’ is an erroneous term—technically and commercially.. Yet the ISO Standard 18323 fails to recognize the technical similarities between grown and mined diamonds, which we believe are critical to communicate to the consumer because it is for them that this standard has been designed.”

While getting troubled by the terms ‘Synthetic’ and ‘Artificial’, Anna-Mieke finds sub-section 2.14 of ISO 18323 ‘very misleading’ – “In fact, I’ll go as far as to say it creates even more confusion for the consumer. If the diamond industry wants to improve consumer confidence through product integrity and transparency, the terms set forth in 2.14 need to be re-evaluated.”

Lisa also carries a similar viewpoint “The terms synthetic and artificial are both incorrect, misleading, and designed to create false perception.”
Tom, Malay and Tom also believe that ‘Synthetic’, ‘Artificial’ or other similar nomenclatures are incorrect and misleading.

3) On ‘the terms that should be used to correctly describe Lab-grown diamonds?’

Various terms were suggested by the respondents to describe Lab-grown diamonds. The ones with most frequency are:

- Lab-grown diamonds
- Cultured diamonds

While, Clive likes the term “Lab-grown diamonds”, Malay finds “Lab grown and cultured diamond is the most suitable word.” Lisa also believe that “Lab Grown Diamonds, Grown Diamonds, or Cultured Diamonds appropriately represent the Lab Grown Diamond Industry.” Whereas Vishal is of the opinion that “… the words ‘Grown’ and ‘Cultured’ both accurately describe our diamonds…”

Most of the respondents believe that the terms ‘Lab-grown diamonds’ or ‘Cultured diamonds’ are fair representation of Lab-grown diamonds.

Tom however gives other options “… the best term to explain is ‘cultivated’, and ‘cultured’ is derived from this term.. I have been finding that the term requires so much explanation though so I am leaning on using ‘Non-mined’ now.”

Whilst Anna-Mieke’s customers commonly ask for ‘Man-made’ or ‘lab-created diamonds’, Mike personally believes “… ‘Non-mined’, ‘not-mined diamonds’ or ‘man-made diamonds’ would do justice to the product.”
4) On ‘Why the Earth-mined diamond producers insist on using the term Synthetic to describe Lab-grown diamonds?’

Anna-Mieke opines “I have seen the earth-mined diamond industry ignore, ridicule and underestimate the lab-created diamond industry. However, now that millennials are not buying into the ‘Diamond is Forever’ campaign, this old minded industry is concerned about the loss in sales. I personally believe these terms are set forth in an attempt to devalue lab-created diamonds and slow down consumer demand.”

Tomy says “Of course it is all business... they want to hold on to what they have been doing for so long..”

Malay agrees “… lab grown diamonds are not similar but they are as real as the diamond can get. Earth mined diamond traders obviously want to take advantage of uninformed consumer to divert their attentions.”

While, Clive simplifies the reason “They are protecting their own grubby commercial interests as they see them.”

Clarifying all the unfounded fears, Vishal however says “It’s important to note that we are disruptive only to the producers, but are complementary to everyone the entire supply chain that follows them... Grown diamonds provide rough diamonds for cutting and polishing and the only source of origin guaranteed, eco-friendly and conflict free diamonds for the retailer to offer to the customer.”

5) On ‘what should be done to change the scenario and correctly educate the customers?’

Clive thinks that “… time and exposure will help. ISO 18323 should be changed.” but worries that “Ultimately people will feel cheated by the mined guys, which may hurt all of us. Most people worry that they will be ripped off when they enter a jewellery shop.”
Anna-Mieke understands and respects “the need to set standards and guidelines for everyone to follow.” But, at the same time she emphasizes that “… these standards need to be fair and unbiased. Emotions need to be replaced with facts.”

She also highlights another issue of distinguishing Lab-grown diamonds and Simulants as “…the earth-mined diamond industry is putting both these products in the same category.”

While Tomy says “Also, I have suggested that everyone selling them has to market and educate as we do. The problem is a lot of people are selling simply based on the strength of their existing networks but are not really promoting it.”

Lisa mentions “… have to invest a lot of resources in informing and educating the consumer. We all have to ensure that impartial information in the quality and origin of the diamond is provided to him [consumer] thus allowing buyers to make a fair choice between diamond origin they prefer and price they are comfortable with.”

Mike suggests “Education is the most important part and responsibility of the entire industry. The laboratory created diamond industry and the natural diamond industry. They will have to work closely together. I believe they can go perfectly side by side. It can create great opportunities for both. Learn from each other and grow with each other.”

6) On ‘What are the key challenges/ issues for retailers and customers adopting Lab-grown diamonds?’

While Clive believes that “For retailers it is fear of change.”, Mike is of the opinion “…It is very important to create consumer confidence in such a beautiful product. The retailers will have a great challenge explaining the product. With the right training, education and focus this can be accomplished.”
Lisa believes “Lack of trade’s awareness, misleading definitions and insufficient consumer awareness regarding Lab Grown Diamonds..” are the important challenges.

Most of the respondents though emphasize that consumer education and awareness in general are the key challenges that need to be addressed.

Though, Vishal says “As we expand our distribution network, consumers are becoming aware of grown diamonds and how we are akin to cultured pearls.”

7) On ‘kind of marketing initiatives planned to increase adoption of Lab-grown diamonds?’

For most of the respondents, the marketing initiatives being currently run or planned range from ads in magazines and newspapers, printed press coverage, digital marketing, large social media plan, advertorials in posts, TV coverage, to personally advocating in events, local jewelry shows, talks with the jewelry industry and launch with online retailers.

While Pure Grown Diamonds have “… managed to expand its distribution network over the last two years” and “… also continued to open new retailers on a weekly basis.”, Lisa mentions “In the last year, we have seen huge excitement among consumers about our product.”

Dangers that ISO 18323 poses in its current form

Tom Chatham however, gives an example of one of his customer in Germany who used the term ‘cultured’ while clearly disclosing that the diamonds were ‘man-made’ but “The courts took the word of the ‘experts’ in the field, CIBJO, and found him guilty of fraud.” The customer ultimately went bankrupt because of the legal costs.

Fearing similar scenario, he sketches the danger that ISO 18323 poses and how it can be misused in its current form “If this ISO ruling is allowed to stand and CIBJO, (or anyone else like the JVC) decides that one of us is getting too successful, or too aggressive, they will go to that countries’ protective board, in my case the FTC and say, ‘this company is in violation of ISO 18323 and should be stopped and/ or
punished because they are breaking the rules the ‘industry’ agreed to. So the court takes the word of CIBJO or JVC as ‘experts’ in nomenclature for gemstones and goes after the dealer.”

This raises another question – Are CIBJO or JVC really ‘experts’ when it comes to Lab-grown diamonds?

However, as a silver lining in the dark clouds, a respondent said “… but I see things changing with suppliers down the pipeline, my old suppliers that have no more margins left, I feel, are starting to consider [adopting Lab-grown diamonds].”

Vishal concurs “The business continues to multiply even though we remain capped by our diamond production. We are committed to focus on ensuring that IIa Grown Diamonds are a value addition to both, consumers and trade. We believe that Grown Diamonds have that unique combination of life (purity in origin) and brilliance (quality par excellence) – a USP that remains unmatched by our competition.”

“Sustainability and unblemished history of a stone is a very powerful sentiment for consumers – one that Lab Grown Diamonds can justify confidently – as jewelry is almost always a sign of pure love or token of respect or a start of a lifetime of promise.” – Lisa Bissell

[Source: http://betterdiamondinitiative.org/lab-grown-diamond-industry-thinks-iso-18323/]
5 Lab-grown diamonds: More acceptance, more success

Meanwhile, Lab-grown diamond sector is meeting with more acceptance among consumers and retailers alike. More jewelry retailers are now selling Lab-grown diamonds. Scio Diamond Technology – a major Lab-grown diamond producer, is now selling its diamonds at US’s 4th largest jewelry retailer – Helzberg Diamonds. Scio has also collaborated with Renaissance Diamonds Inc., which cuts & polishes diamonds, to sell its polished Lab-grown diamonds to jewelry retailers through a JV – Renaissance Created Diamonds. (See ‘Jewelry retailers are increasingly selling Lab-grown Diamonds’, Pg. 57)

Several other reputed retailers/ brands including Brilliant Earth, Mia Donna, Robbins Brothers, Rebel Chique Diamonds (by Royal Asscher) etc are already selling Lab-grown diamonds. Besides, various jewelry e-tailers including Sam’s Club are also selling Lab-grown diamonds online.

Though smaller size of Lab-grown diamonds was a challenge earlier, New Diamond Technology LLC crossed the 10 carat milestone by growing a 10.02 carat Type IIa VS1 IGI-certified diamond, beating the previous record of 3.04 carats set by Pure Grown Diamonds. (See ‘Lab-grown Diamond Industry crosses 10 Carat Milestone’, Pg. 59)

As technology improves, Lab-grown diamonds production becomes more viable and beneficial not only for gems & jewelry purpose but for various scientific and industrial applications.

IIa Technologies inaugurated the world’s largest diamond greenhouse - a 200,000 Sq. Ft. Lab-grown diamond growing facility in Singapore and also established a Center of Excellence (CoE) – a diamond research center to generate and disseminate scientific knowledge and information. The company already has R&D collaboration with Cornell University, Rutgers University, IIT – Bombay and MoUs with Nanyang Technological University and NUS. (See ‘Largest Diamond Greenhouse inaugurated in Singapore’, Pg. 61)

Seeing the promising future of Lab-grown diamonds, Hollywood actor Leonardo DiCaprio along with 10 Silicon Valley billionaires invested in a California based Lab-grown diamond startup – Diamond Foundry. Its other eminent investors include Twitter founder Evan Williams, SUN Mircosystems founder Andreas Bechtolsheim, Facebook cofounder Andrew McCollum et al. (See ‘Leonardo DiCaprio bets on Lab-grown Diamonds’, Pg. 63)

With demand expected to rise by 25-30% YoY, Lab-grown diamonds are having more acceptance and more success.
5.1 Jewelry retailers are increasingly selling Lab-grown Diamonds

Jun 4, 2015

Lab-grown diamond industry is seemingly on a phenomenal rise. Russia’s New Diamond Technology LLC recently crossed the 10-carat milestone by growing an IGI certified 10.02 carat Type IIa Lab-grown diamond. Now Scio Diamond Technology, a major lab-grown diamond producer, is selling its stones at Helzberg Diamonds – 4th largest jewelry retailer in US. Similarly, several jewelry retailers worldwide are stocking up and selling Lab-grown diamonds.

Scio Diamond grows diamond roughs in the range of 3-5 carat and has collaborated with Renaissance Diamonds Inc. who processes (cuts and polishes) those roughs into finished diamonds. These diamonds, available in 0.5 carat to 2+ carat sizes are sold to jewelry retailers through a Joint Venture (JV) – Renaissance Created Diamonds.

By a national marketing program, Helzberg Diamonds is testing the demand and sales of Lab-grown diamonds in its 10 stores. However, Helzberg is not the only one adjusting to the shifting consumer taste and demand. Sam’s Club is also selling various Lab-grown diamonds on its website. Several other reputed retailers/brands including Brilliant Earth, Mia Donna, Robbins Brothers, Rebel Chique Diamonds (by Royal Asscher) et al are already selling Lab-grown diamonds.

Though the price-effective, eco-conscious choice offering remains the primary reason for jewelry retailers selling Lab-grown diamonds, pressure on retail margins has also influenced this adoption. As per New York based Natural Colored Diamond Association (NCDIA), colored diamonds are the highest growth segment in jewelry industry. The fact that Lab-grown diamonds are 30-70% cheaper than their mined counterparts and more so in the colored diamonds segment, helps ease the margin pressure on retailers.

With more awareness, Lab-grown diamonds is now catching the fancy of many people who are now turning away from environmentally damaging, socially detrimental and sometimes ‘conflict’ mined diamonds to a sustainable, eco-friendly and socially responsible choice of Lab-grown diamonds. Besides, unlike the exorbitantly expensive mined diamonds, cheaper prices of Lab-grown diamonds have allowed the sparkle in the reach of several consumers.
As natural economics principle in a Laissez Faire system, jewelry retailers are now gearing up to supply and sell what the market is demanding – Lab-grown diamonds. However, mined diamonds producers are still to come to terms to this fundamental shift in the industry and are trying their best to sabotage the growth of Lab-grown diamonds.

[Source: http://betterdiamondinitiative.org/jewelry-retailers-increasingly-selling-lab-grown-diamonds/]
5.2 Lab-grown Diamond Industry crosses 10 Carat Milestone
May 28, 2015

Ever since the technology first evolved to grow diamonds in a lab, Mined diamond industry has been apprehensive towards Lab-grown diamonds. Despite the various tactics tried by the mined diamond industry to stall their progress, Lab-grown diamonds are rapidly attaining more recognition and acceptance by the day. The technology behind Lab-grown diamonds has also kept on constantly evolving and recently, has reached a new level of significance.

Just a few days back, the International Gemological Institute (IGI) Hong Kong certified the largest lab-grown diamond developed by New Diamond Technology LLC, Russia. The magnificent stone was certified as a 10.02 carats, Type IIa stone with VS1 clarity, E color and very Good-Excellent finish grade. Two months ago, the same company created a 5 carats radiant brilliant cut diamond and broke the previous record of 3.04 carats, I color and SI1 clarity grown diamond created by Pure Grown Diamonds, the world’s largest producer of gem quality lab-grown diamonds.

Dr. B.N. Feigelson of US Naval Research Laboratory, a reputed expert in the field of grown diamonds, exclaimed “This is an important achievement. A psychologically important one. Linear growth rate of the crystal demonstrated by the company makes this a good result that is particularly impressive and important.”

This 10.02 carats mammoth diamond was cut from a lab-created rough weighing 32.26 carats developed using HPHT method in record breaking time of less than 300 hours. The stone was produced using experimental technology by a group of engineers under the guidance of Dr. A. Katrusha and Dr. A. Kolyadin.

New Diamond Technology (NDT), the company behind this achievement, is a child organization of INREAL, Russia’s leading manufacturer of technical products of diamond and diamond grinding powder. NDT was created with purpose of leading the industry in the way to mass production of Type IIa and IIb diamonds and is currently equipped with 30 of the industry’s most powerful 5,000-ton High Pressure High Temperature (HPHT) cubic presses. For the past 5 years, NDT has been conducting in-depth research in the field of growing Type IIa colorless (D-E-F) and
Type IIb (blue) pure single-crystal rough diamonds. Today the company grows large rough diamonds for both gem and industrial applications. Based on the success of the experiment, NDT anticipates that the new technology will enable it to grow 40 to 50 carats diamonds in near future.

Dr. A. Kolyadin, CEO of INREAL assures that fears of mined diamond industry is misplaced and present day laboratory facilities is such that they don’t pose any threats to mined diamonds. He recently said “It wouldn’t be right to say that laboratory-grown diamonds have started to replace the natural mined stones in the jewelry industry for a number of reasons. First, the total number of companies that can grow colorless, single-crystal diamonds does not exceed a dozen. Finally, the world’s production capacities for laboratory-grown diamonds are still quite limited. There are fewer than 1,000 of the sufficiently powerful HPHT and chemical vapor deposition (CVD) units used to produce synthetic diamonds in the entire world.”

Tamazi Khikhinashvili, the president of New Diamond Technology, is going to unveil the 10.02 carats diamond in the booth B2408 at JCK Vegas Show, which starts from 29th May and ends on 1st June. While the previous record holder, 3.04 carats SI1 clarity I color lab-grown diamond by Pure Grown Diamonds, had a price tag of USD 23,012, the new record holder 10.02 carats higher quality diamond is expected to fare much better.

[Source: http://betterdiamondinitiative.org/lab-grown-diamond-industry-crosses-10-carat-milestone/]
5.3 Largest Diamond Greenhouse inaugurated in Singapore

Mar 21, 2015

World’s largest Diamond Greenhouse – IIa Technologies’ newest state-of-art facility for producing high quality Lab-grown diamonds was inaugurated in Singapore on 17th March. The 200,000 square foot lab, located at Tukang Innovation Drive in Jurong, west Singapore, was officially launched by Tharman Shanmugaratnam – Singapore’s Deputy Prime Minister and Minister of Finance, and attended by Economic Development Board (EDB) representatives.

Popularity and adoption of Lab-grown diamonds have been on a phenomenal rise lately, being conflict free, eco-friendly, socially responsible and 30-40% cheaper than earth-mined diamonds, giving a new sustainable choice for diamond consumers. As per IIa Technologies prediction, demand for Lab-grown diamonds will rise by 25-30% YoY. In 2014, IIa Technologies grew around 300,000 carats roughs in its diamond greenhouse.

However, this is an insignificant number, considering global demand for diamonds in 2014 was approximately 134 million carats. Global diamond demand is forecasted by Frost & Sullivan, to go up to 292 million carats by 2050, but during the same time the production of earth-mined diamonds is forecasted to decline to 14 million carats only in base case scenario, leaving a humongous 278 million carats Demand-Supply gap. Increase in production of Lab-grown diamonds is expected to help fill up some of this gap.

Non-gem industrial applications are however more appealing than the gems and jewelry use of diamonds. Being high-quality, free of impurities, rarest Type IIa and purest form, Lab-grown diamonds are highly pertinent for several industries and applications including semiconductors, electronics, optical, medical, quantum computing, radiation detection, precision engineering etc. IIa Technologies’ facility, which uses MPCVD (Microwave Plasma Chemical Vapor Deposition) technique to grow diamonds, is set to focus on such next-gen applications. De Beers group’s Element Six already has an established presence in the industrial applications of diamonds segment. Many industry players are expected to set up similar diamond greenhouse in coming times.

Since its commencement in 2005, IIa Technologies has invested USD 110 million in its high-tech diamond greenhouse in Singapore. The company is also launching a Center
of Excellence (CoE) – a diamond research center that will generate and disseminate scientific knowledge and information. Besides, to augment its R&D capabilities and efforts, it is seeking more collaboration with universities and technical institutes. The company already has R&D collaboration with IIT (Indian Institute of Technology) Bombay, Cornell University, Rutgers University, MoUs with Nanyang Technological University and NUS (National University of Singapore), while a MoU with Arizona State University is under progress.

The scientific advancement and market progress of Lab-grown diamonds, and the opportunities they present for the entire industry and consumers, seem very interesting to look forward to.

[Source: http://betterdiamondinitiative.org/largest-diamond-greenhouse-inaugurated-singapore/]
5.4 Leonardo DiCaprio bets on Lab-grown Diamonds

Nov 12, 2015

Diamond Foundry, a lab-grown diamond company founded by Stanford alum, gets investment from Leonardo DiCaprio and Silicon Valley

Leonardo DiCaprio, along with 10 Silicon Valley billionaires, has just upped the ante for Lab-grown Diamonds in the $100 Bn Diamond Industry by proudly investing in a California based startup, Diamond Foundry.

Diamond Foundry was founded (in 2012) with the goal of reinventing the diamond industry from “mine to finger” by setting a new standard for social and environmental good. According to its Crunchbase profile, the company, “cultures diamonds in California with a zero carbon footprint and offers diamond jewelry from independent designers”. After three years of research, a team of MIT, Stanford, and Princeton engineers led by the founder and CEO, Martin Roscheisen, pioneered growing diamonds over a diamond seed, atom by atom through a plasma-based culturing process (known as Chemical Vapour Deposition process). Interestingly, Martin Roscheisen was in the same Ph.D. program at Stanford as Google’s Larry Page and Sergey Brin.

Diamond Foundry is not the first company to use the technique, known as chemical vapor deposition, to grow diamonds. Earlier this year, Ila Technologies inaugurated its 200,000 square feet Diamond Growing Greenhouse in Singapore which grew 300,000 carats of diamonds in 2014.

According to Business Insider, Diamond Foundry has closed three rounds of financing raising less than $100 million to date, from individuals including actor Leonardo DiCaprio, Twitter/Medium founder Evan Williams, Zynga founder Mark Pincus, One Kings Lane cofounder Alison Pincus, SUN Microsystems founder Andreas Bechtolsheim, Facebook cofounder Andrew McCollum, former Facebook COO Owen van Natta, Marc Benioff’s private-investment manager Mark Goldstein, Sequoia Capital’s David Spector, former eBay President Jeff Skoll, Scott Banister, Vast Ventures, Caspian VC Partners, and many others. The news received a wide coverage from global media – New York Times, Techcrunch, Wired, The Next Web, Forbes, CNBC, Dailymail (UK), Marketwatch, JCK Online, Inverse, New York Magazine, Epoch Times (Russia), Rusbase, Takepart, Ecouterre, Morning Ledger, Observer Leader, Today Online and many more.
This news comes as a jolt to all the mining companies and bourses which have tried to call lab-grown diamonds fake, ban them, spread rumours and manipulate ISO standards in order to block lab-grown diamond players. Diamond Foundry’s goal of reinventing Diamond Industry is driven by the fact that the industry, unfortunately, has been stained by human-rights abuses, child labor, ecological destruction, cartel-like pricing, and untraceable provenance.

Lab-grown Diamond’s endorsement from Leonardo DiCaprio and Silicon Valley Billionaires validates the fact that they are real diamonds. Mining companies and Diamond Industry Leaders have been misleading governments and consumers for a long time about the reality of Lab-grown Diamonds. With multi-billionaire backing, this definitely is going to change for lab-grown diamonds in coming years.

“"I’m proud to invest in Diamond Foundry Inc. — reducing the human and environmental toll of the diamond industry by sustainably culturing diamonds without the destructive use of mining.” – Leonardo DiCaprio

[Source: http://betterdiamondinitiative.org/leonardo-dicaprio-bets-on-lab-grown-diamonds/]