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## GemAtlas Interviews Eminent Personalities from 4 Leading Diamond Grading Laboratories

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There are in truth not a vast number of organisations that operate in the field of diamond grading. The few that exist have in their own way set ground-breaking paths – be it with setting standards in diamond-evaluation; researching and developing cutting-edge equipment and methodology for detection and testing, keeping pace with new treatments and strides in synthetics-manufacturing; educating new generations of gem professionals and customers alike; and above all protecting and enhancing the reputation of the product and confidence of consumers and the trade.

GemAtlas spoke to a few eminent personalities from leading independent diamond grading laboratories, GIA, IIDGR, HRD and IGI, to find out about the technology and grading processes that make their companies perceived as among the most reliable grading laboratories in the world by leading jewellers and consumers, what they think about the possibility of a common standard and more.



Nirupa Bhatt, MD, GIA, India & Middle East



Ramit Kapur, GM, IGI Worldwide



Jonathan Kendall, President, IIDGR



Ravi Chhabria, MD, HRD Antwerp in India

### GA Q1: Have you recently introduced any new technology for grading?

**Nirupa Bhatt, GIA:** As you and your readers are aware, GIA (Gemological Institute of America) is the creator of the 4Cs of diamond quality and the International Diamond Grading System™. For decades, GIA has undertaken gemmological research, collecting and analysing data on gems and their characteristics. Findings from this ongoing research have helped and will continue to help GIA develop instruments to support the grading process.

**Ramit, Kapur, IGI:** The grading standards have always remained the same. However, to ensure consistency, IGI labs in India are assessed and accredited in accordance with the standard of ISO/ IEC 17025:2005 by NABL (National Accreditation Board for Testing & Calibration Laboratories). The regular audits ensure that the equipment and expertise is updated with the recent developments to evaluate and identify diamonds & colored stones.

IGI has developed its own screening equipment to identify type II diamonds in mounted and loose condition. Every piece of jewelry submitted in the lab is screened for possible contamination with lab grown diamonds.

**Jonathan Kendall, IIDGR:** We use proprietary colour and clarity grading technology that allows us to be more accurate and consistent in our grading.

**Ravi Chhabria, HRD, Antwerp:** State-of-the-art technology has always been at the core of our business. Each one of our labs is equipped with an extensive set of modern tools and machines, some of which have been developed in-house. -- As a consequence, consistency is guaranteed, no matter in which lab of ours a stone has been graded. Our grading reports have the same value anywhere across the world.

One of our pioneering equipment tools for grading is our popular microscope – the D Scope. It is a very well-regarded tool in the industry which is also preferred by many in the industry. We have recently launched a new version of the microscope, called the 'D-Scope+'. Every aspect of the D - Scope has been further optimized in the D - Scope+, offering not only the best, but also the most innovative diamond analysis experience in the market.

We also have a range of equipment for analysing natural versus synthetic diamonds. Our globally recognized equipment the 'M-Screen+', is a superfast automated melee screening device which automatically feeds, screens and sorts round brilliant diamonds at a super speed of minimum 3 diamonds per second or 80 to 100 carats per hour. Depending on the size of the stones and the size of the batch, the speed can be as high as a staggering 15,000 diamonds per hour. This provides a super-fast screening solution, enabling traders and manufactures alike, to screen large melee parcels.

Our equipment range also includes hand-held portable devices such as the D-Screen, that distinguishes natural diamonds or HPHT colour enhanced diamonds, from stones that are potentially laboratory grown or had their colour improved by means of HPHT.

**GA Q2: Could you tell us what is unique and different about your technology?**

**Nirupa Bhatt, GIA:** GIA's diamond grading standards have been in place for more than six decades. We continue to use the latest technology and instrumentation to support this standard. GIA's dedicated team of scientists and researchers work tirelessly to bring about a difference to the gemstone industry and ultimately the jewellery-buying consumer. What's unique is our research-backed insights and information are easily available to the trade through our quarterly journal, *Gems & Gemology*, other scientific journals, free of charge on our website GIA.edu and at our regular seminars on various topics in several cities across India and around the world.

**Ramit, Kapur, IGI:** Although all IGI labs are equipped with the latest instruments and technology, the human element plays an important role. One of the examples of this is seen in the area of the Finish Grade. During observation, if the numbers and parameters of the stone are in place, but on visual observation the light return seems affected, the stone is awarded a lower grade thus ensuring the beauty of the stone is not compromised.

**Jonathan Kendall, IIDGR:** It has been developed by De Beers scientists. We have the largest group of Diamond scientists in the world, which allows us to develop unique and World leading equipment. E.g. Synthdetect our new Jewellery testing machine.

**Ravi Chhabria, HRD, Antwerp:** Our equipment and research departments, based in Antwerp, Belgium invest massively in research & development to offer world-class equipment tools and solutions to our customers worldwide. Innovation, quality, user-friendliness and service are keywords in HRD Antwerp's business strategy.

HRD Antwerp Research is an institution staffed by highly experienced scientists and engineers, specialising in fundamental and applied research for the diamond sector. It supports the diamond sector and enhances consumer confidence by offering scientific advice. Practical solutions are provided to solve scientific problems such as the identification of synthetic and treated diamonds, the evaluation of rough stones and type determination of diamonds.

Our equipment department commercialises the sophisticated systems and devices that are conceived, designed and fine-tuned in the laboratories of HRD Antwerp. These instruments are brought to the market for the benefit of the diamond industry and trade, both in Belgium and around the globe. Our products include highly specialised microscopes, cutting machines and devices that can efficiently screen for treated and synthetic diamonds.

In India, we have a representative office in Surat to serve our local clients.

**GA Q3: Up to what detailing does your grading technology capture and what specification is your existing technology unable to capture?**

**Nirupa Bhatt, GIA:** Technology is constantly evolving; GIA's research team monitors these technologies. This is an ongoing process.

**Ramit, Kapur, IGI:** In today's time, expertise and technology exists to identify any kind of treatment and origin for all types of diamonds in both loose and mounted condition. Simultaneously, our Research department is constantly building data and upgrading equipment for detection and identification of any new generation of lab grown diamonds.

**Jonathan Kendall, IIDGR:** Our technology is highly scientific and we can use it to make a grading call... when diamonds are borderline the technology tells us so, and we use more human engagement in the process of deciding a final grade.

**Ravi Chhabria, HRD, Antwerp:** Our technology is kept up to speed for all categories.

**GA Q4: What does your grading process entail?**

**Nirupa Bhatt, GIA:** Being an independent and impartial entity for evaluating the quality of gems and delivering unbiased information on them, GIA's grading process emphasises complete anonymity to ensure objective and independent grading. Client information is not visible to GIA graders. All stones - regardless of size, origin or ownership - benefit from the same careful service and undergo the same rigorous testing and grading procedures.

To ensure a rigorous and reliable scientific analyses, GIA laboratories maintain rigorous calibration standards for all lab instruments. In addition, every gemstone submitted is tested and screened at multiple steps during the grading process. Control stones for diamond grading standards also move anonymously through GIA's worldwide system to ensure uniformity of grading practices.

Teams of highly experienced quality control staff rotate through GIA laboratories worldwide training staff and ensuring adherence to consistent practices.

**Ramit, Kapur, IGI:** The grading & Identification system is in accordance with IGI worldwide standards and ISO 17025:2005 norms and every piece of diamond and jewelry passes through this process and procedures.

**Jonathan Kendall, IIDGR:** This is proprietary information.

**Ravi Chhabria, HRD, Antwerp:** We understand that anonymity and objectivity are of great importance in the certification process. This is why we use a double coding system, which leaves no room for mistakes. One set of numbers is given to the client and one set of numbers are used internally and hence the grading process is totally anonymous.

We use a combination of advanced scientifically developed technological instruments as well as the human eye to be objective in our analysis.

The process includes verifying whether the stone submitted is firstly a natural diamond and then we follow the 4 Cs of grading.

**GA Q5: What do you incorporate in your grading process that makes you different from other grading laboratories?**

**Nirupa Bhatt, GIA:** GIA has the world's most comprehensive gemmological research program; a staff with academic training and gem-testing experience; modern scientific instrumentation; and a superb collection of gem materials. GIA has a team of experienced technical experts who ensure the consistency and accuracy of all its instruments. For more than 80 years, GIA researchers have studied the scientific properties of gems to develop new methods of identifying natural, synthetic and treated gems. As creator of the 4Cs of diamond quality and the International Diamond Grading System™, we established the common language for describing the qualities of D-to-Z diamonds.

That said, our grading process ensures every stone is tested to determine its natural or synthetic quality, using the GIA DiamondCheck™ and other instrumentation. What makes GIA unique is that it is an independent, public benefit and nonprofit entity with a mission to ensure public trust and consumer confidence in the gem and jewellery industry.

**Ramit, Kapur, IGI:** Same as mentioned earlier.

**Jonathan Kendall, IIDGR:** Our own technologies and security so we are the most accurate, consistent, and can never suffer from fraud.

**Ravi Chhabria, HRD, Antwerp:** Besides what I have already covered, I would like to add that our labs have gained the diamond industry's confidence by offering highly reputable diamond and jewellery grading reports, state-of-the-art innovative solutions and extensive in-house expertise.

**GA Q6: On what points can a retailer convince the customer to pay a higher price for a diamond graded by your lab even when the rate of similar graded stone of the other top grading agencies may be lower?**

**Nirupa Bhatt, GIA:** We do not comment on pricing. A GIA grading report isn't an appraisal; it is an assurance of the gemstone's quality, with clear disclosure if the material is synthetic or if it has been treated to enhance or alter its appearance. A GIA report provides the kind of evidence that is vital to a confident gem or jewellery purchase.

**Ramit, Kapur, IGI:** A loose stone or a piece of jewelry graded by IGI passes through the highest levels of tests/ re tests before it leaves the laboratory and the retailer / consumer can be at peace of mind when trading/ buying an IGI certified piece of jewelry.

**Jonathan Kendall, IIDGR:** IIDGR, as part of the De Beers Group, epitomises TRUST, and consumers will pay more when they know they are secure in their purchase.

**Ravi Chhabria, HRD, Antwerp:** Having served the diamond industry for more than four decades, the company commands a leadership position in issuing one of the most respected diamond grading reports.

To reassure a consumer's faith in their products, jewellers sell certified diamonds which are often sold loose or mounted in jewellery. An international grading laboratory such as HRD Antwerp aids in providing an unbiased grade for the diamonds that are certified. Other than only certifying a diamond, each diamond that is submitted to us is checked for being a natural, treated or synthetic diamond. This gives the consumer as well as the jeweller a boost of confidence. An additional benefit that comes along with an HRD Antwerp diamond certificate is the international brand value of the grading lab.

There is huge demand for certification today in India and we are an independent third party whose certification adds on to the confidence of the jeweller. Although the jeweller gives his guarantee on the diamond quality, he needs a backing of an international company which also assures the same quality. Since we are an independent company, we have no favourites. We do what we do best. So, certification is an additional tool to sell, though not the only tool to sell. A jeweller would enhance his quality, his brand and his market but we would give the jeweller a sort of international trademark to sell.

**GA Q7: Do you see the top 4 or 5 grading agencies coming together with the same grading principles/ rules and references/standards? If so, by when?**

**Nirupa Bhatt, GIA:** To understand how the GIA standards of diamond grading emerged, one has to look at the history. Prior to 1940s, there were no standard terms or factors that defined diamond quality. In the early 20th century, GIA's founder Robert M. Shipley, a former retail jeweller, undertook the task of professionalising the American jewellery industry. To that end, he established GIA in 1931 to provide formal gemmological training to aspiring jewellers.

Shipley standardised the descriptive diamond terms to colour, clarity, cut and carat weight and called them the 4Cs, a mnemonic device to help students and jewellers learn about, remember and explain the factors that determine a diamond's value. Under Shipley's direction, the term 4Cs became part of industry vernacular through GIA course materials and advertising GIA prepared for AGS-member retailers. GIA's second president, Richard T. Liddicoat, then transformed these terms into the GIA grading system. Other global grading laboratories followed suit and many of them continue to use the GIA nomenclature and some apply the GIA standards.

**Ramit, Kapur, IGI:** The major labs like IGI & GIA have very similar parameters and grading standards except in certain areas like the cut grade, where the guidelines are slightly different. This way the customers are not confused and have the convenience of accepting Reports from either labs.

**Jonathan Kendall, IIDGR:** No, as they all work differently. Our standards are at the same level as GIA.

**GA Q8: The Indian government was considering a common standard for diamond grading, which could potentially be rolled out similar to old hallmarking.**

**a) Do you feel such a step will increase customer confidence and help grow the diamond industry in India?****b) What are the challenges that need to be overcome to achieve such a standard?**

**Nirupa Bhatt, GIA:** GIA has created the 4Cs of diamond quality and colour and clarity scales of the International Diamond Grading System, which today is the globally-accepted standard in the industry. GIA adheres to processes and systems to maintain the standard across all its locations. Disciplined staff, continuous investment in training and rigorous quality control are other mechanisms to ensure adherence to the standards. Ultimately, the focus should be on building consumer confidence in the industry by providing consistent quality service.

**Ramit, Kapur, IGI:** Unlike gold where only the purity is tested, there are at least 14 parameters on which a diamond is evaluated and identified. It seems unlikely that this standard can be achieved accurately by a government body for whom the subject is very new and extensive.

**Jonathan Kendall, IIDGR:** I don't think it is feasible to implement, and it is more likely that there will be fewer grading labs in the long term that have invested enough money to provide accurate and consistent grading globally ...they will be the winners.

**b) What are the challenges that need to be overcome to achieve such a standard?**

There won't be one... the standard already exists – IIDGR and GIA.

IIDGR is the only lab that has published its standards... so they already exist for all to see. The Indian government may wish to use these. They have already been used by government related bodies in other parts of the world.

IIDGR and GIA are at the same standard and represent the bulk of global grading.

**Ravi Chhabria, HRD, Antwerp:** It would be difficult to state if the confidence of a customer will increase with the common standard grading if implied within India.

It is a huge challenge for retailers, wholesalers and grading laboratories to have the same grading rules and references. Further, all the traders, retailers and consumers will need to be re-educated about the standard grading system that will be used in India vis-à-vis the internationally accepted grading system. To conclude this question, unless the challenges are overcome, it would be difficult to achieve such a standard.

**GA Q9: Would you like to add, share or discuss anything else, in conclusion?**

**Nirupa Bhatt, GIA:** The possibility of undisclosed synthetics – particularly melee size – is a concern for the industry across the globe. In December 2016, GIA introduced the Melee Analysis Service that separates natural diamonds from simulants and potentially synthetic or treated diamonds. We're now offering complimentary pick-up and drop-off for stone parcels between the GIA laboratory in Mumbai and locations within Mumbai (BDB), as well as Surat, Jaipur, New Delhi, Kolkata, Hyderabad, Coimbatore, Thrissur and Chennai.

With the growing availability of synthetic diamonds in the marketplace, full disclosure and confidence in knowing what you are buying is now more important than ever. GIA has developed a sophisticated and easy-to-operate desktop instrument to screen for these stones – loose as well as mounted. The GIA iD100™ combines advanced spectroscopic technology with GIA's decades of diamond and gemstone identification research to distinguish natural diamonds from synthetic (HPHT and CVD) diamonds and simulants. This new instrument will give the trade – including retail jewellers – the ability to have immediate confidence in their diamonds.

**Ramit, Kapur, IGI:** It is crucial to audit local labs who are not equipped to grade or identify diamonds / colored stones and whose reports are being provided to customers. This in the long run will remove the confidence of third party authentication from the customer's mind who will feel cheated.

**Jonathan Kendall, IIDGR:** The industry understands which labs are the most accurate and businesses need to revert to using these labs.

**Ravi Chhabria, HRD, Antwerp:** To talk about future plans of HRD Antwerp India –Presently, we are based in two places - one is Mumbai and second is Surat. We definitely are looking at expanding our footprint and we are considering setting up full-fledged jewellery lab in SEEPZ, for the export market. We are also looking at opportunities to be located within BDB premises as well.

The priority is to be closer to the industry in general, customers and business partners and continue to provide the highest levels of quality and consistency.

**- By GemAtlas Team**

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