

Pakistan Gems and Jewellery Development Company

Writeup for PGJDC's webpage on Wikipedia

The Company:

Pakistan Gems and Jewellery Development Company (PGJDC) is a subsidiary of Pakistan Industrial Development Corporation, Ministry of Production, Government of Pakistan. The charter of the Company is to enhance the value chain productivity of gems and jewellery industry of Pakistan from Mine to Market. The Company aims to enhance exports through facilitation, technology up-gradation, skill development and marketing/branding initiatives.

History of PGJDC:

Despite its abundant reserves of precious and semi-precious gemstones and rich history of jewellery manufacturing, Pakistan has been unable to develop an internationally competitive gems and jewellery industry. Capitalizing on its vast natural resources, low labor costs, skilled craftsmen, and growing national and international demand Pakistan has the potential to become a regional hub for precious stone cutting and jewellery manufacturing.

Keeping in view the above facts, the Pakistan Initiative for Strategic Development and Competitiveness (PISDAC) Project was launched by the United States Agency for International Development (USAID). The project was implemented by J.E. Austin, a US management consultancy company in partnership with Pakistan's Small and Medium Enterprise Development Authority (SMEDA). As part of the initiative a group of committed industry stakeholders from gems trading and mining, jewellery manufacturing, jewellery retail and wholesale, training institutions, technical service providers, raw material suppliers and other allied industries agreed to form a Strategic Working Group (SWOG) to address how the industry could reposition itself through a better strategy. Within 16 months from its inception, the SWOG had developed a strategy shared and agreed to by the private sector and the Government of Pakistan. The SWOG itself has become a recognized private sector platform on which all key players in the value chain including the public sector have come together. One of the major features of the strategy put forth was the formation of a separate company for this sector which would undertake to implement the strategies spelled out for the sector. In the light of this recommendation Government of Pakistan formed Pakistan Gems & Jewellery Development Company (PGJDC) in June 2006 as a non-profit public/private entity for the development of the Sector. The company became operational in April 2007. The main objectives of PGJDC are to ensure the implementation of the Strategy formulated by SWOG, SMEDA with USAID for general uplift of the industry and increasing the competitiveness of Gems & Jewellery Sector.

Vision:

The Company endeavours for the development of the Gems and Jewellery Industry of the Country from mine to market and to enhance its competitiveness internationally by Facilitation, Technology Up-gradation, Skill Development and Marketing/Branding.

Mission:

To work together across regions and activities for establishing Pakistan as high value added, internationally competitive, world-class hub for precious stone cutting, jewellery manufacturing and designing by focusing on development of female gender and skill development.

Gems & Jewellery industry of Pakistan:

Introduction:

Pakistan is a country with a population of more than 150 million. Labour force is available at relatively cheap rates hence offers a competitive edge. In this part of the world women love to wear gold jewellery. On occasions of marriage and other ceremonies a lot of jewellery is bought and worn. Secondly, gold is also bought for investment purposes, and considered a security as well. Historically Pakistan has a rich tradition of jewellery designs and craftsmanship, being handed down from Ghandhara civilization, Alexanderian period and various other dynasties which ruled the subcontinent and finally the Mughal era. We find a mark from all these periods.

The two major ancient civilizations namely; Indus Valley civilization and Ghandhara civilization used to be the centre of spiritual influence and cradle of the world famous heritage of art and culture. Gems & Jewellery industry in Pakistan is as old as the history of Indus valley and Ghandhara civilizations, which is the true mirror of its past, reflecting the social and historical change. The artifacts of gemstone pieces and beads pertinent to those eras can be witnessed in most of the museums in Pakistan and abroad. The present Pakistani jewellery is a combination of traditional as well as modern jewellery.



Gemstone sector:



Pakistan has extra-ordinary export potential of gemstones due to its abundant natural resources. Pakistan is home to many varieties of gemstones, some of which make it prominent in the gemstones world, such as emerald, ruby, peridot, aquamarine, pink topaz, sphene, tourmaline and quartz.

Emeralds excavated from Swat Valley rank amongst the best the world. Their colour, with a pure verdant hue and a high degree of transparency, is comparable to high quality Columbian emeralds. Topaz from Katlang is believed to be equivalent in quality to those found in Brazil. Peridots coming from Sput Kohistan are considered to be the best in the international market.

The most extensive ruby deposits are located in Hunza valley. Ruby produced from here ranges in colour from light to deep red. Other major potential areas of ruby are located at Azad Jammu Kashmir, Hazara and Dir. Aquamarine is found in Shigar valley of Baltistan, Kaghan, Chitral and in the Neelum valley in Azad Kashmir. Aquamarine is mostly transparent and ranges from sky blue to sea green in colour.

World class crystals of minerals like bastnaesite, brookite, xenotime and other rare minerals, make Pakistan unique in the international markets. The major hubs of gemstone trading and processing are Gilgit, Mingora, Peshawar and Karachi.

Jewellery Sector:



Jewellery manufacturing became a part of sub-continent's cultural heritage during the Mughal era, in which the goldsmith attained a distinct status as an artisan. The most famous genres that evolved in the sub-continent include Minakari, Kundan and Nauratan. Traditional jewellery comes in the form of *Sola Singhar* (sixteen adonements), beginning with *Teeka* on the forehead to the *Payal* (anklet). The large domestic market is driven by demand for 22kt traditional jewellery; however, international demands are fulfilled in line with requirements by the international market. Karachi and Lahore are the main hubs for jewellery manufacturing. Major occasions for the purchase of jewellery in Pakistan are marriages, nevertheless it is also purchased for investment purposes as gold is perceived as a form of savings and it is acquired for this purpose over centuries.

Nevertheless, with increasing awareness and education, along with other emerging investment opportunities, jewellery is becoming a symbol of fashion and prestige. This new trend has opened up avenues for new entrepreneurs especially women resulting in diversification and adoption of jewellery designs in addition to use of traditional jewellery.

There are more than 30 major cities and nearly 300 smaller cities and towns where jewellery manufacturing and trading cater to domestic demand. In addition there are about 45,000 villages where jewelers operate as single shops, manufacturing and selling units to meet the demand of rural population. It is estimated that approximately more than 500,000 people are employed by the gems & jewellery sector in Pakistan.

In recent years Pakistani gems & jewellery exporters have successfully tapped markets of modern jewellery in western countries and UAE by investing in latest production techniques. Expatriates from South Asian countries settled in Canada, USA and UK are the major markets of traditional jewellery manufactured in Pakistan. With greater targets in mind the local manufacturers have now started to take keen interest in exports. Interventions by Ministry of Production, Government of Pakistan through PGJDC in the areas of skill development and technology up-gradation has given the sector new dimensions. PGJDC has contributed to develop interaction between local business community and the international market, as such, the business community from here, have initiated to develop innovative and internationally competitive products targeting international markets by showcasing the same at international gems & jewellery shows.



Major trading and manufacturing hubs of gems and jewellery in Pakistan:



Each of the major cities of Pakistan has a *sarafa bazaar* (jewellery market), consisting of various showrooms, bullion dealers and manufacturing workshops. Presently, the metropolitan cities of Karachi and Lahore are the major hubs for jewellery manufacturing in Gold, Silver and other metals. Since independence, Karachi remained the hub of commercial activities. Skillful labourers and market access were the key factors which contributed greatly in the establishment of this industry in Karachi. Besides jewellery trading and manufacturing, Karachi is also well-known for gemstone trading and processing. Rawalpindi is also

considered to be one of the major centres for jewellery manufacturing and trading in the country. One of the major hubs of gemstone trade in Pakistan is the namak mandi, Peshawar. Originally the first organized market for salt trade, this compact network of streets and alleys has flourished as the perfect place for the local and international traders. Hundreds of shops and offices in namak mandi sell exotic stones to buyers from all parts of the world. Ruby, emerald, tourmaline, topaz and aquamarine are some of the most popular gemstones in the market. Fine crystals and mineral specimens are also easily available from specialized dealers. Other important centres for gemstone trading and processing include Gilgit, Swat and Quetta which will potentially be one of the major hubs in future.

Services being provided by PGJDC to the Sector:

Pakistan Gems and Jewellery Development Company (PGJDC) endeavors for the development of Gems & Jewellery industry of the Country from Mine to Market and to enhance its competitiveness internationally by Facilitation, Technology Up-gradation, Skill Development and Marketing/Branding. Its aim is to establish Pakistan as a high value added, internationally competitive, world class hub for precious stone cutting and jewellery manufacturing by means of supporting the value chain and ancillary trades. PGJDC has established five Training Centers and Gem Identification and Certification Labs in Karachi, Lahore, Gilgit, Peshawar and Quetta. Two Gem Exchanges one each in Quetta and Peshawar have also been established to provide business opportunities to the traders under one roof. The company is in the process of developing Assaying & Hallmarking Centers one each at Karachi and Lahore to analyze and authenticate the Gold content of the jewellery article.

So far, PGJDC has trained over 5000 individuals across the country through more than 400 training programs in different cities including Karachi, Lahore, Peshawar, Quetta, Gilgit, Islamabad/Rawalpindi, Faisalabad, Sahiwal, Mehmund Agency, Garam Chashma Chitral, Abbottabad, Newshehrah, Skardu etc. In order to translate skills into business development very recently entrepreneurship development programs supported by incubation facilities have also been initiated. It would no doubt create employment and income generation opportunities for the sector.

In line with the strategy, the interventions being made by PGJDC are having a significant impact on the development of Gems & Jewellery Industry of Pakistan. The company is acting as a platform for the local

talent and creativity to flourish. Continuous reinforcement of Gems and Jewellery Pakistan as a brand has transformed Pakistan's position in the international regional as well as domestic market. As an integral part of Marketing/Branding efforts, PGJDC has most successfully organized a grand event of international standard, "Pakistan international Gems & Jewellery Exhibition – PIGJE 2012". Through the development of B2B linkages with the international buyers, the Exhibition was poised to be one of the major contributors to increase export earnings of the Country, targeted to U.S. Dollars 1.5 billion by 2017.

Additionally, in line with the government's strategy of women empowerment, Pakistan Gems and Jewellery Development Company is providing training to the women of Balochistan irrespective of any gender discrimination, for their technical development in different fields of Gems & Jewellery. The Company staunchly believes in empowerment and equality of women.

A number of training programs, specifically designed for women, covering various areas of Gems & Jewellery have been initiated by the Company in its Gems and Jewellery Training and Manufacturing Center in Quetta Balochistan. Women have been imparted training in the fields of Manual Jewellery Designing, Gemology, Gemstone Processing, Faceting and Carving, Soumak, Patwa and Computer Aided Jewellery Designing at the Quetta Training Center.

Moreover, the Company has also developed an online portal for trading, which is bound to stimulate the Country's international trade in the sector and will provide due international exposure to local dealers and traders of Gem & Jewellery. In the first phase, portal will be facilitating about 40,000 dealers of the trade. The portal is also in line with company's philosophy of easing the trade for locals by providing them with sufficient international exposure. A turnkey online trade solution, first of its kind in the industry, is bound to flourish trade and add value to our industry's international standing.

PGJDC furthermore provides the facility of an RP machine to local manufacturers of jewellery. The sole purpose of this machine is to aid the manufacturers in making of jewellery with almost 100% precision. A wax mold of the required design is fed into the machine which is imitated by the machine to about 100% precision. Additionally, there is no limit to the number of duplicates the machine can produce. Company rents the machine to jewelers as and when required.

PGJDC Initiatives

1- Marketing and Branding:

The Branding strategy of Pakistan Gems and Jewellery Development Company strives to upgrade the industry's marketing and branding efforts for the domestic as well as international market. In order to enter the international market, Pakistan needs to establish itself as a source of high value gemstones and quality finished jewellery. This requires a distinct voice and a strong national campaign. The strategy called for a national branding initiative under the umbrella of Gems and Jewellery Pakistan. The brand was launched at the Gem and Jewellery Fair held in Bangkok on September 14 to September 19, 2005. This was the first time that Pakistan exhibited as a well organized integrated group with a branded presentation.

Consistent participation in international trade shows has been highlighted as an important requirement for sustaining Pakistan's visibility in the international market.

The potential for Pakistan to penetrate the international market with improved branding and marketing efforts is tremendous. Increased marketing efforts will lead to development of new market segments leading to an increase in domestic sales as well as export earnings.

Continuous re-enforcement of Gems and Jewellery Pakistan as a brand will transform Pakistan's position in the international market. Even domestically, consumer perceptions will change as fashion becomes the new driver of demand. Opportunities will emerge for specialized designer manufacturing outlets, giving entrepreneurial impetus to the growing number of ambitious graduates, independent artists, which will emerge from newly implemented training programs. New retail opportunities will create additional employment and promote the development of innovation in design and services.

Pakistan has been participating in International Fairs and Exhibitions either as Pakistan Pavilion or as a part of Pakistan Delegation under the brand: **GEMS & JEWELLERY PAKISTAN**. These include:

- Bangkok Gems and Jewellery Show, Bangkok, Thailand
- Hong Kong Gems and Jewellery Show, Hong Kong
- Dubai International Jewellery Week, Dubai, U.A.E
- Munich Mineral Show, Munich, Germany
- Gem, Mineral and Fossil Showcase, Tucson, USA
- Indian International Jewelry Show, IJS Mumbai, India
- Indian International Jewelry Show, IJS Signature Goa, India

In continuation to its Branding efforts, PGJDC successfully organized the First Pakistan International Gems & Jewellery Exhibition on 7 – 10 June 2012 at Pearl Continental Hotel Karachi. The Event highlighted the inherent potential of Pakistan in terms of gemstone processing and jewellery manufacturing in front of a discerning targeted audience of International and local B2B and B2C customers. Keeping in view, the overwhelming response from both local and international gems & jewellery stakeholders, PGJDC has decided to hold this Event annually.

PGJDC also regularly organizes Gem Bazaars in Peshawar, Quetta, Islamabad and Lahore every month.

In addition to the international branding, focus is also being laid on domestic marketing. The local market, manufacturers and retailers are being facilitated in finding new consumer segments, diversifying their product base and capitalizing on higher margin market opportunities. This is being implemented by upgrading design and manufacturing capabilities of the industry. Local institutions are being assisted in curriculum development. The Gems & Jewellery Training and Manufacturing Centers are facilitating in skill development and up-gradation of technology, enabling the industry to move into more sophisticated production and diversifying their existing product base.

Pakistan International Gems & Jewellery Exhibition (PIGJE):

Pakistan Gems and Jewellery Company (PGJDC) successfully organized, "Pakistan international Gems & Jewellery Exhibition – PIGJE 2012" from June 7 – 10, 2012, at Pearl Continental Hotel in Karachi. It was a four day extravaganza, showcasing the best of Pakistan's Gems & Jewellery products, with a blend of traditional and contemporary class.

The Event highlighted Pakistani Gems & Jewellery products in the most versatile manner where the international buyers were introduced to the rich Pakistani market. PIGJE 2012 focused on providing a productive platform to the thriving Gems & Jewellery sector of the country.

Enabling environment was created both for local and international traders to interact and promote business. Jewellers, gem dealers and manufacturers of Gems & Jewellery related machinery, tools, equipment and accessories also displayed their products during the Show.

Through the development of Business to Business (B2B) linkages with the international buyers, the Exhibition played a significant role towards increasing export earnings of the Country, which are targeted to be U.S. Dollars 1.5 billion by 2017.

The event was inaugurated by the then Prime Minister of Islamic Republic of Pakistan, Syed Yousuf Raza Gillani on 7th June, 2012, at Pearl Continental Hotel, Karachi. He extended his full support for PGJDC and specifically for the sector. Governor Sindh - Dr. Ishratul Ebad Khan, Chief Minister Sindh - Syed Qaim Ali Shah, Federal Minister for Production - Chaudhry Anwar Ali Cheema and Federal Secretary for Production – Gul Muhammad Rind were also present at the Inauguration Ceremony.

A total of 40 foreign buyers and delegates of trade bodies/associations from India, U.A.E, U.K, Sri Lanka, USA, Hong Kong and France visited the event and developed B2B linkages.

A 20 member delegation from Gems & Jewellery Export Promotion Council of India also attended the Event and developed business relationship with the exhibitors, had meetings with the industry players and engaged with the Pakistani Gems & Jewellery industry through institutional arrangements as well. Additionally, PGJDC also had productive meetings and engagements with delegates from other countries including Sri Lanka, Hong Kong and UK.

The Exhibition also encompassed a Seminar where world renowned speakers on Gems & Jewellery including Mr. Jean Claude Michelou – Vice President International Colored Gemstone Association “ICA”, other Gems & Jewellery Consultants and local experts shared technical information, knowledge and experiences with the audience.

After the phenomenal success of PIGJE 2012, PGJDC is honored to announce Pakistan International Gems and Jewellery Exhibition (PIGJE) - 2013. The mega event will be held from 9th to 12th May, 2013 at Pearl Continental Hotel, Karachi, Pakistan.

The four-day event will showcase Pakistani Gems and Jewellery products in all their vivacity for international dealers, and will also provide international dealers with a platform to explore the potential of Pakistani market.

PIGJE being an international exhibition will provide great business development opportunities to local and international dealers associated with Gems & Jewellery trade. The event is specially designed to provide a facilitating environment to promote B2B trade.

Open to all international traders of Gems & Jewellery industry; jewellers, gem dealers and manufacturers of machinery, tools, equipment and allied products are welcomed to exhibit and promote their products/services at the grand show.

Event Details:

- Venue: Pearl Continental Hotel, Karachi.
- Date: 9th – 12th May, 2013
- Timings: 10:00 am – 06:00 pm

PIGJE 2013 will showcase:

- Precious/semi-precious gemstone dealers
- Branded jewellery dealers
- Jewellery manufacturers
- Diamond and pearl dealers
- Mineral Specimen dealers
- Gemstone carving, made-ups and table ware dealers
- Ornamental stones and beads dealers
- Manufacturers/suppliers of Gems & Jewellery machinery, tools, equipment and allied products.
- Software developers and service providers related to Gems & Jewellery.

The visitors at the event will include:

- Delegates from around the world (40 delegates from different countries attended PIGJE 2012)
- Diplomats and foreigners
- Policy and decision makers
- Members of trade associations
- Gemstone miners.
- Jewellery manufacturers/dealers
- Gem & Jewellery merchants
- Gem & Jewellery exporters
- Gem & Jewellery agents
- Gemologists and academia

The Company will continue these efforts and undertake initiatives to develop ties with international and regional agencies and institutions. In addition, Pakistan Gems and Jewellery Development Company publishes newsletters after every six months.

2- Gems & Jewellery E-Commerce Portal:

To develop B2B and B2C relationships between the Gem and Jewellery stakeholders of Pakistan and the world, the Pakistan Gems and Jewellery Development Company has taken the initiative of developing an E-Mall B2B and B2C web application through which the Sector stakeholders will be able to establish electronic and virtual linkages globally, to facilitate their products' trade and share their knowledge and experiences.

This Web Portal is a fully integrated Content Management System (CMS) Website Application that integrates E-Mall/E-Commerce facilities. It will be serving the SME business communities related to Gems and Jewellery industry across Pakistan by marketing their products and highlighting their services worldwide. The website visitors will be able to view and purchase one or numerous products from the vast product line displayed on the website using an easy to use e-commerce facility.

This web portal will uplift the business profile of the respective businesses in Gems and Jewellery sector in Pakistan. It will change the landscape of their businesses irrespective of their location and can exploit their business potential optimally and efficiently across the world. The E-Commerce through the web areas of each entrepreneur will act as a marketing tool for their business development.

Benefits:

- Global reach for the products of Gem and Jewellery stakeholders from Pakistan.
- Advertisement of products 24/7 throughout the world.
- Very economical for the stakeholders.
- Saves time and increases turnover.
- No technical expertise required from the stakeholders to manage the website.
- Control given to the stakeholders for uploading content.

Features:

- Shopping cart for buyers.
- Buyers and sellers will contact each other directly.
- Order tracking for the members
- Complete data of any specific category available on a single click.
- Refined search options.
- Search engine optimization.
- Separate admin panels for each user.
- Special promotions of businesses and hot products given on the main page.
- Order booking reminders through email.
- Email accounts for all users.
- Instant messaging option for bargaining before booking order.

3- Gems & Jewellery Training and Manufacturing Centers (GJTMCs):

Establishment of Gems & Jewellery Training and Manufacturing Centers (GJTMCs) is the result of one of the core strategic initiatives of Pakistan Gems and Jewellery Development Company (PGJDC), which is "Raising Value Chain Productivity." The objective of GJTMCs is to provide gems and jewellery training and manufacturing facilities for the technical development of the sector. The gems and jewellery sector of Pakistan though instilled with great talent have been lacking the modern education and techniques. In order to bridge the gap, PGJDC is providing quality education to the stakeholders of gems and jewellery industry enabling them to compete effectively in the international market.

GJTMCs offer the facility of ideal learning environment where the proven faculty members of PGJDC work hard to transfer knowledge to the participants of the training courses. PGJDC has set up its GJTMCs in Karachi, Lahore, Peshawar, Quetta and Gilgit. The prime motive of GJTMCs is to upgrade technology and skills in mining, gems processing and jewellery manufacturing through training and provision of required equipments and facilities with the following objectives:

- Equip the Industry with latest techniques and processes.
- Provide trainings on gems and jewellery designing and manufacturing with dual exposure to traditional and latest machineries like CAD/CAM technology.
- Provide state of the art training in cutting and polishing gemstones as well as common processing facilities in order to enhance the value of gemstones sold to the local and international markets.
- Modernize mining practices
- Reduce wastage
- Improve quality of extracted gems
- Increase income of miners
- Improve skills of those in mining industry and new entrants
- Increase overall productivity of workers and better quality output

Gems & Jewellery Training and Manufacturing Centers provide in depth knowledge in designing and manufacturing of jewellery to the students, training them in the spheres of diamond grading, gemstone identification, Gemstone Faceting, Gemstone carving, Manual jewellery designing, computer aided designing (Jewel CAD & Matrix), jewellery pattern making in wax etc.

Notwithstanding, apart from the above-mentioned training programs, GJTMCs have diversified their line of courses in jewellery manufacturing by introducing training programs of Patwa and Soumak, which run in parallel to the traditional casting, stone setting and bench-work courses, to well round the students in jewellery craft. The training programs emphasize on hands on tasks to improve dexterity in students. Moreover, applied courses in the fields of jewellery designing and manufacturing such as applied jewellery design – a combination of manual and computer based jewellery designing coupled with practical training in rapid prototyping are also being offered to enhance capabilities of the students.

At PGJDC, it is staunchly believed that the students must prove their mettle once they have been imparted knowledge and skill. It is for this reason that is to test and to further hone their abilities, contests are arranged periodically in designing which invariably result in highlighting our students in Gems and Jewellery market both nationally as well as internationally. These contests are a practical manifestation of a concept based on value chain productivity starting from mine to the showcase, propounded by PGJDC.

In addition to mastering all tasks related with precious metals and gemstone, business acumen stand supreme in running a successful Jewellery enterprise. It is therefore all the more important to train the students in the areas of time and cost management. To cater for the same, Time & Cost Management courses are also being conducted at the training centers besides the mainstream courses.

4- Gem Exchanges:

Gem Exchanges and Gem Identification Laboratories have been established by PGJDC, primarily to facilitate linkages between buyers and sellers of gemstones. It is an integrated approach of providing all the services under one roof, reducing costs and increasing cooperation amongst different stakeholders of the value chain. Following are its objectives:

- Facilitate access to market
- Provide competitive sourcing to buyers
- Provide visibility to suppliers without marketing expenditures
- Improve cooperation between suppliers
- Enhance profitability by lowering transaction costs of suppliers
- Discourage informal trade
- Exposure to International Market

PGJDC has setup Gem Exchanges at Peshawar and Quetta which are fully functional. PGJDC also plans to setup Gem Exchange in Karachi in the near future. These Gem Exchanges have the following features:

- Shops for Gemstone dealers
- Gem Identification Laboratories
- Gem Bazaars

5- Gem Identification Labs:

Apt identification and thorough evaluation of precious and semi-precious gemstones make it convenient for the buyers and sellers to agree upon a business deal which is just, transparent and free of inaccuracy. Modern machinery and state-of-the-art technology can be used to get the best assessment of a gemstone. However, high prices and maintenance cost associated with the machinery makes it difficult for an average worker to afford it. Absence of Gem Identification Lab, on the other hand, limits the understanding of gemstones and subsequently leads to the underselling of precious stones.

Five full-fledged and well-equipped Gem Identification Labs are operational in the vicinities of Gem and Jewellery Training and Manufacturing Centers of Karachi, Lahore and Gilgit, and Gem Exchanges of Peshawar and Quetta. These Gem Identification Labs provide the facilities of gemstone testing and diamond grading. In these Gem Identification Labs, diamonds and other precious and semi-precious stones are examined according to their colour, shape, cutting style, weight, measurements, etc. Reports are generated and certificates are issued to the customers of these Gem Labs. PGJDC's Gem Identification Labs are designed to provide the following benefits:

- Testing and Identification of Gemstones
- Issuance of Reports and Certificates
- Introduction of latest techniques, tools and equipments for gemstone identification
- Awareness about the technology

6- Gem Bazaars:

Pakistan relishes the luxury of abundant and valuable gemstone treasures buried in its lands. The actual potential of gemstone industry of Pakistan is hard to grasp unless it is observed in the ardent environment of a Gem Bazaar. Gem Bazaar, an innovative concept brought forward by Pakistan Gems and Jewellery Development Company, has achieved meteoric popularity in a very short span of just one year. It has done wonders in terms of bringing together the number of buyers and sellers of gemstones under one roof. Gem Bazaars have opened the door of numerous opportunities to the local stakeholders of gemstone sector. This unique event of Gem Bazaar takes place almost every month at;

- Gem Exchange, Peshawar.
- Gem Exchange, Quetta.
- Islamabad.
- Lahore.

Gem Bazaar is a unique concept where buyers and sellers meet each other and engage in gemstone trade. It has been brought forward to expedite and substantiate the local trade among the trade members of gemstone sector. The availability of Gemstone Identification Laboratory ensures transparent and fair trade of precious/semi-precious gemstones and mineral specimen which are brought in, from all across the country.

These Gem Bazaars have provided the gemstone dealers and buyers with a lucrative platform, to meet and wrap-up business deals in the most transparent and fair environment. The idea behind introducing Gem Bazaar is to build and enhance the value chain productivity resulting in increase of business relationships between the buyers and sellers. Business relationships developed during Gem Bazaar can be exploited further, to eventually boost the exports and local trade.

The Gem Bazaars reflect PGJDC's commitment for consistent efforts to promote Pakistani Gemstone sector and also to provide a lucrative opportunity and platform for those interested in buying and selling gemstones and mineral specimen under one roof in a secured environment. The interested buyers are exposed to quality products at competitive prices, which add tangible value to their business. The Gem Bazaar also motivates miners to rise above unnecessary exploitation and deprivation from direct trading.

In future PGJDC intends to organize Gem Bazaars in Karachi, Gilgit, Muzzafabad, Sukkur and Malakand as well.

7- Assaying and Hallmarking:

Assaying & Hallmarking dates back to antiquity and as such a number of countries have, besides the members of Vienna Convention 1972, adopted/passed the required legislation/rules/regulations to give it all the legal and valid requirements to make it more valuable and worth-full for their nations and nationals. Likewise, Pakistan being an independent and above all among the largest consumers of gold, has also taken steps to regulate and monitor the activities of gold sector. It was not only to address the stakeholders but also, at the same time, to bring laurels for the country in the international markets.

Introduction of Hallmarking is among the major initiatives of PGJDC. Assaying is the process of inspecting articles of gold/silver/platinum jewellery to determine fineness/composition of precious metal (Gold, Silver, Palladium and Platinum) in the alloy used in jewellery and Hallmarking is the application of a series of marks onto precious metal jewellery which shows that the jewellery has been tested at an official Assay Office and found to conform to one of the accepted standards of fineness. The main objective of hallmarking is to facilitate trade while maintaining fair trade and consumer protection.

The Assaying and Hallmarking centers being established by PGJDC will provide the facility to accurately determine and officially record the proportionate contents of precious metals in jewellery. Official marks are used in many countries as a guarantee of purity or fineness of gold jewellery. For peace of mind and security to people's investment in gold, it is imperative that the consumers understand the Hallmarking initiative taken by PGJDC. The Hallmarking Centers will play a pivotal role in inculcating the importance of Assaying and Hallmarking into the norms of Pakistani jewellery sector. Assaying and Hallmarking Centers will provide a paradigm and direction for the independent Assay Centers.

Assaying and Hallmarking Services

The following services are provided to cater to needs of the Gems & Jewellery sector,

- Precious Metal Testing (Gold, Silver, Platinum, Palladium, etc) and
- Hallmarking of Precious Metals

Assaying is carried out by a number of techniques which normally includes touchstone method, XRF Technique and Cupellation (Fire Assaying) describes as below:

- **Touchstone testing** is an ancient method for measuring gold content whereby a rubbing of the item is made on a special touchstone alongside rubbings of known reference samples and treated with nitric acid and a mixture of hydrochloric and nitric acids (Aqua Regia). The color change and rate of dissolution of the reacted area is compared to that of the reference sample. The touchstone method is particularly suited for testing of very valuable pieces, for which sampling by destructive means, such as scraping, cutting or drilling is unacceptable.
- **X-Ray Fluorescence (XRF)** is a non-destructive technique that is suitable for normal assaying requirements such as in-house quality control in manufacturing or for certifying gold content in retail outlets. It has accuracy of 2 – 5 parts per thousand under good conditions i.e. where the surface of the jewellery being measured is relatively flat and sufficiently large. It is a quick technique, an assay taking about minutes, and the computer can automatically print out the results. It also measures the content of other alloying metals present in the article. The XRF instruments measure the intensity of the generated gold X-ray by wavelength dispersion analysis.
- **Cupellation (Fire Assaying)** involves taking a small sample from the article, typically about 250 milligrams, weighing it accurately, wrapping it in lead foil with some added silver, cupelling it in

a furnace at about 1100°C to remove all base metals and then placing the resulting gold/silver alloy bullion in nitric acid to dissolve out the silver and re-weighing the resulting pure gold. This is the standard reference technique used by the National Assay Laboratories worldwide for Assaying and is covered in the International Standard, ISO 11426:1993.

After having determined the purity of the article/bullion as per abovementioned assaying techniques, the mark is struck by laser marking machine to mark the article(s) of the found purity. Hallmarking is performed through a Laser marking Machine.

- **Laser marking** works by using high power lasers to evaporate material from the metal surface. Two methods exist, 2D and 3D laser marking. 2D laser marking burns the outline of the hallmarks into the object, while 3D laser marking better simulates the marks made by punching.

A Hallmarked jewellery article will be principally marked by the Hallmarking Centers being established by PGJDC. These centers will provide third party assurance. Hallmarking Centers, being not involved in jewellery trade of any sort, will work as an independent third party. This third party effect will help in assuring impartial marking of the jewellery article. It is a fact that, hallmarked jewellery articles are trusted and recommended worldwide. Thus, with standardization as such, it is expected to boost direct exports and can enhance the business generated in international gems and jewellery trade shows.

Benefits of Jewellery Hallmarking

Assaying and Hallmarking occupies a great importance since antiquity. Assaying is basically a technique refers to the determination of the fineness/composition of the precious metal (Gold, Silver, Palladium and Platinum) in the alloy used in jewellery whereas, Hallmarking determines fineness or Physically marking a piece of jewellery according to specific laws to certify the purity of metal. It is designed to ensure the public trust besides promoting gems and jewellery exports of Pakistan. Likewise, some of its adamant benefits are listed below;

- Standardization of the products i.e. guarantee the purity
- Consumer Protection to get quality product against their best price
- Promotion of fair competition
- Assurance of the gold content, hence the value of purchased.
- Hallmarking will ensure that mixing of other metals in gold will be within the permitted limits.
- Hallmarking protects the public against fraud and traders against unfair competition
- Useful in case of resale
- No inspection will be required for exporting articles to the signatories of Vienna Convention thus saves inspection cost
- Enhance international acceptance of local Jewellery
- Facilitates to export the items with full confidence & avoid over or under cartage
- Facilitates the cross border trade and so help in boosting export
- Help in making branding

It is pertinent to note that such advantages are only possible if hallmarking regime is implemented timely and squarely.

8- Incubation facilities and Entrepreneurship development

Skill Development and Technology Up-gradation is one of the core initiatives of Pakistan Gems and Jewellery Development Company. The Company not only provides training to the students in different areas of Gems & Jewellery at its training centers across Pakistan, but also it provides them with incubation facilities so that they could practically use the knowledge imparted to them at the training centers ultimately leading towards skill enhancement.

PGJDC has procured latest state-of-the-art machinery, tools and equipment related to Gem & Jewellery, from the leading suppliers and manufacturers from Germany and Japan. These machineries include those for Lapidary (Faceting and Carving), Computer aided Jewellery manufacturing, Gemology etc. PGJDC has established incubation centers at its training centers across Pakistan, where the passed out students use these machineries to enhance their skills.

These incubation facilities are being offered in the following areas:

- **Computer aided Jewellery manufacturing:**

PGJDC has procured state-of-the-art Rapid Prototyping CAM Machines from EnvisionTec Germany which are installed at its Training Centers at Karachi and Lahore. Furthermore, in collaboration with FATA Development Project for Livelihood Development (FDPLD), a center of excellence has been established at the Peshawar Training center where Rapid Prototyping CAM Machine is installed.

The students of Computer aided Jewellery Designing and Manufacturing at these training centers are being imparted hands on training on the RP Machines. Furthermore, these RP machines are being used commercially too and the local Gems & Jewellery sector get the wax models of their jewellery designs manufactured at very subsidized rates using these RP Machines.

- **Gem Identification and Certification:**

PGJDC has established fully functional Gem Identification and Certification Labs at Karachi, Lahore, Peshawar, Quetta and Gilgit. In these labs, the precious/semi-precious gemstones are being graded and certified by qualified gemologists from AIGS Bangkok using latest gemological equipments and tools.

The students, who have been imparted trainings in various tracts of gemology at PGJDC's training centers, are using these equipments to enhance their skills. PGJDC is also offering gem certification facility to the gemstone sector at very subsidized rates. The local sector get their gemstones tested and certified either through verbal opinion or in the form of certificates at these gem identification laboratories.

- **Lapidary:**

The latest Lapidary machinery and tools have been procured and installed at the Training centers of PGJDC across Pakistan. The students are being trained in the fields of Lapidary at these training centers using latest techniques and methodologies prevailing in the Gem & Jewellery world today. The

areas of lapidary being covered include faceting, carving, ball making, bead making, specimen dressing etc.

After getting trainings on these machines, a great number of students have opened their own workshops and procured the same machinery for their own commercial use.

The incubation facilities being offered by PGJDC have yielded fruitful results for the development of Gems & Jewellery sector in terms of skill enhancement, technology up-gradation and entrepreneurship development. A number of passed out students have started their own business using the knowledge gained through different training programs conducted by PGJDC at its training centers. PGJDC is also conducting training programs such as import & export procedures, time management, cost management etc for the entrepreneurship development of the sector.

9- Newsletters:

Pakistan Gems and Jewellery development Company publishes its newsletters after every six months. These newsletters highlight activities of the Company along with its achievements.