NOTES
· AND ·
NEW TECHNIQUES

THE NEWLY EXPANDED DEUTSCHES EDELSTEINMUSEUM OF IDAR-OBERSTEIN, GERMANY

By Peter C. Keller

With the opening of a new display area in 1982, this unique museum in the gem-cutting capital of Europe has not only doubled in size but has also established itself as one of the finest gemology exhibits in the world. This article describes both the new and old exhibit areas and discusses some of the organization and design techniques that have contributed to the success of the Deutsches Edelsteinmuseum.

In April 1982, the Deutsches Edelsteinmuseum (German Precious Stone Museum) of Idar-Oberstein, Germany, opened a new, second-floor exhibit area to the public. In addition, some of the original first-floor exhibits have been updated. The museum is now one of the best of its kind in the world.

The Deutsches Edelsteinmuseum is housed in the Diamant- und Edelsteinbörse which is the tallest building in Idar-Oberstein. The new exhibit area was created both to accommodate the increasingly large volume of visitors and to expand the scope of the museum. People from all over the world come to Idar-Oberstein to purchase gems; yet no other public museum in the area adequately addresses all the various aspects of this unique field. Although the old agate mines and polishing mills are popular attractions, at the Deutsches Edelsteinmuseum visitors and Idar's gemological students have a chance to learn through seeing some of the finest examples of gems and gem workmanship available today.

THE FIRST-FLOOR EXHIBITS

Immediately upon entering the museum (see figure 1 for a detailed scheme of the two floors of exhibits), the visitor encounters a collection (approximately 30 pieces) of large gemstones, including a 12,555-ct blue topaz from Brazil and an 11,600-ct brilliant-cut rock crystal. According to Gerhard Becker, curator and a driving force in the museum*, this display of "gemstone giants" is meant to attract the visitor into the museum and entice him to explore deeper into the world of gemstones.

ABOUT THE AUTHOR

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Mr. Becker is chairman of the volunteer committee that is in charge of the museum. The other members of the committee, each of whom is a specialist in a particular aspect of gemology, include: K. Arnold, Prof. Dr. H. Bank, R. Droeschel, D. Hahn, R. Hahn, and E. J. Petsch.

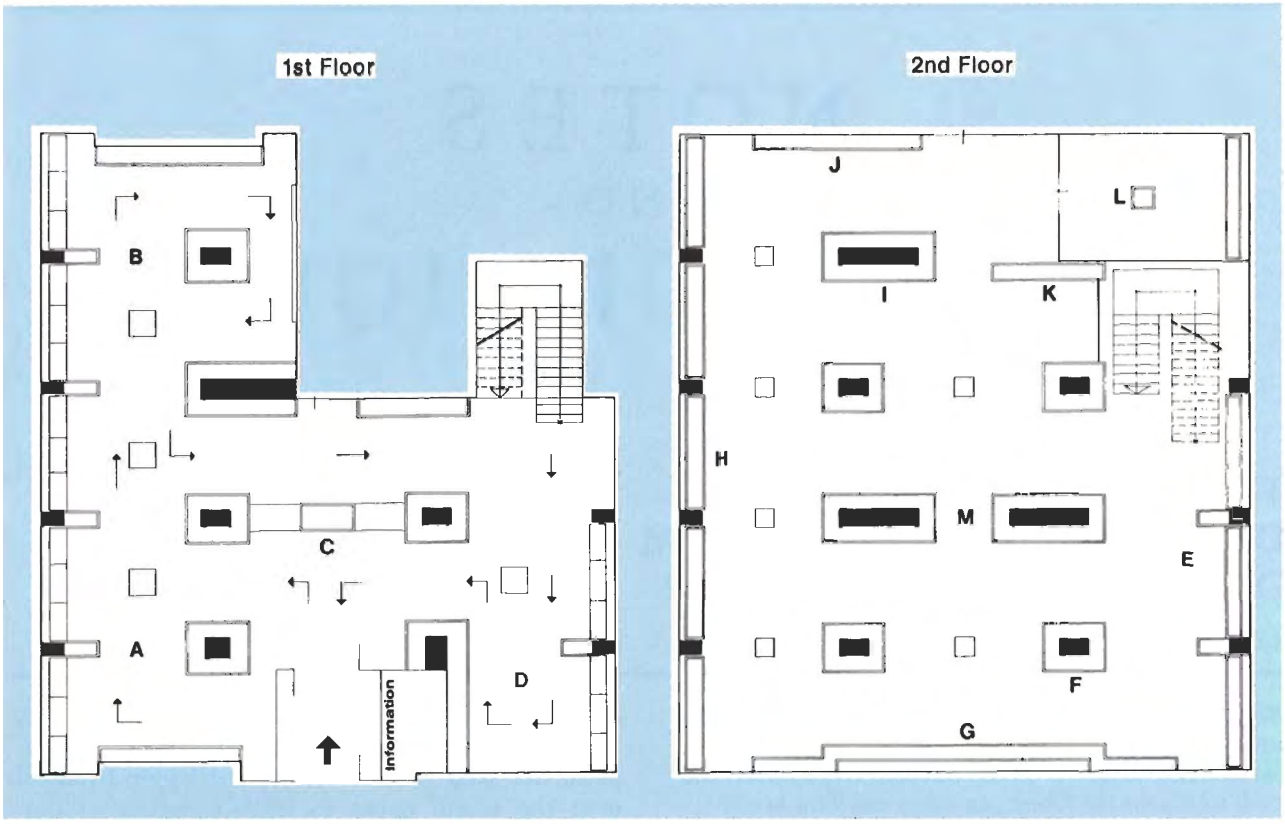


Figure 1. A floorplan of the Deutsches Edelsteinmuseum. The letters designate specific exhibit areas, as follows: A = the history of Idar-Oberstein's gem industry and items carved from Idar-Oberstein's own agate deposit; B = exhibits of both microcrystalline and macrocrystalline quartz varieties; C = unusually large faceted gems and fine carvings from Idar-Oberstein; D = the Glyptothek, *an exhibit detailing the history of carving worldwide, with special emphasis on cameo carving in Idar; E = the systematic classification of gemstones along with particularly fine examples of amethyst and citrine; F = gemstones exhibiting asterism and chatoyancy; G = exhibits showing examples of all major gem species in both their rough and cut forms; H = ornamental gemstones as well as gemstones containing unusual inclusions; I = diamonds, both rough and cut; J = gemstones of the 20th century; K = synthetic gem materials; L = the gem vault, containing especially valuable gems that are on loan to the museum; M = rough and cut tourmaline and beryl.*

Originally, the entire museum was devoted to the art of gem cutting and carving as it developed in Idar-Oberstein over the centuries. The main first-floor exhibit area is still arranged chronologically to show the evolution of the gem industry in Idar-Oberstein. To the left of the gemstone giants, one finds an exhibit explaining the origins and history of gem cutting in the area from 1375 to the present. This exhibit is accompanied by numerous early books documenting Idar-Oberstein's development.

With this history of gem cutting as a background, the visitor is next introduced to the distinctive agates found in the local Miocene-age basalt flows which gave birth to the gem industry in Idar-Oberstein. These agates occur in a variety of colors but are predominantly brown and red. Beautiful specimens of amethyst have been recovered with the agates. These appear in the mining exhibits as well, for they also played a major role in the early development of Idar's gem industry.

By the end of the 19th century, however, the German craftsmen could no longer depend on the dwindling supply of agate from the local mines and began importing the stone from Brazil. It wasn't long before they brought in amethyst, rose quartz, and many other varieties of quartz as well. They also started dyeing the grayish Brazilian agate; first, they used black and red, and then they

Figure 2. This pair of rock crystal owls on a petrified wood base is typical of the contemporary animal carvings displayed in the museum. Each owl is approximately 8 cm high; the entire piece is approximately 18 cm.

slowly developed other colors such as greens and blues. The next exhibit shows both early and contemporary workmanship using all the varieties of quartz imported from Brazil; items included are carved bowls and various animals (figure 2).

In recognition of the role that agate and other varieties of quartz have played in stimulating and perpetuating the carving industry in Idar-Oberstein, fully half of the first floor of the museum has been devoted to quartz and its many gem varieties. Particularly interesting among the early carvings are the subtle brown, black, and black-and-white agate beads that were fashioned in Idar-Oberstein and subsequently used by many African tribes as currency. Also impressive are the fine agate bowls with cameo-like carvings in their interiors, which may take up to a year to complete.

Separate from the main theme of the exhibit area on the first floor, and almost a museum within a museum, is an exhibit on the evolution of gem carving worldwide over the last 6,000 years. Called the *Glyptothek*, this unique display of carved gemstones contains approximately 250 objects. The entire exhibit was either collected or manufactured by Idar-Oberstein's foremost gem carver, Richard Hahn. If a piece was unobtainable, Hahn reproduced the carving in its original style. The exhibit beautifully illustrates the art of stone carving from early man, with his rough beads of

Figure 3. This fine Brazilian amethyst crystal is one of many "touch" specimens seen throughout the museum.

quartz; through the ancient Egyptians, with their scarabs and seals; the Romans, with their cameos and intaglios; and finishing with early European carvings, including those of Idar-Oberstein. The exhibit is particularly strong in cameos.

One of the more unusual aspects of the museum is the large number of high-quality specimens that can be touched by the public. Enjoyed by adults and children alike, the dozens of "touch" specimens scattered throughout the museum include a fine 1.2 × 0.6 m malachite slab from the USSR; a large, gemmy aquamarine crystal; a large sphere fashioned from lapis lazuli; and a superb amethyst crystal (figure 3).

At the base of the stairs that lead to the new second-floor exhibit area is a reproduction of a pegmatite pocket found in Madagascar (figure 4). This unusually large pocket contains enormous aquamarine and quartz crystals. The walls of the pocket are studded with mica and quartz as well as feldspar, which makes for a most convincing reproduction. The pocket was conceived and constructed by Gerhard Becker.

Figure 4. A two-meter-high reproduction of an aquamarine pegmatite pocket as found in Madagascar.

THE SECOND-FLOOR EXHIBITS

Mounted on the walls midway up the stairs to the new exhibit area are three large, dramatic photographs from different localities showing the most important types of gem deposits: alluvial mining for corundum in Sri Lanka, pegmatite mining for beryl and tourmaline in Madagascar, and open-pit mining for tourmaline in Brazil. These photos are appropriate to introduce the theme of the new, second-floor exhibit area: gemology. Every effort has been made to present a broad, well-rounded lesson in the field in a dramatic yet inviting atmosphere (figure 5). The walls, as well as the display bases, are covered with a dark, chocolate-brown carpet. Track spotlights also are used judiciously to give a feeling of warmth.

The first exhibit encountered explains how gemstones can be classified according to their chemical composition: from diamonds, as native elements, through the many silicates. Following this exhibit, we find a case of birthstones (cabochons); a display showing chatoyancy and asterism; and a presentation on inclusions in gems, such as rutilated quartz.

Most of the remaining portions of the new exhibit area are devoted to the major gem species and feature both rough specimens and cut stones. For the most part, the examples included—especially the rough crystals—are very fine. Particularly impressive are the large Brazilian gem crystals, including aquamarine, blue topaz, imperial topaz, kunzite, and tourmaline. The exhibit also contains some of the finest rough-and-cut tanzan-

Figure 5. The second-floor exhibit area stresses gemology in an atmosphere of elegance. Again, note the numerous "touch" specimens on the floor.

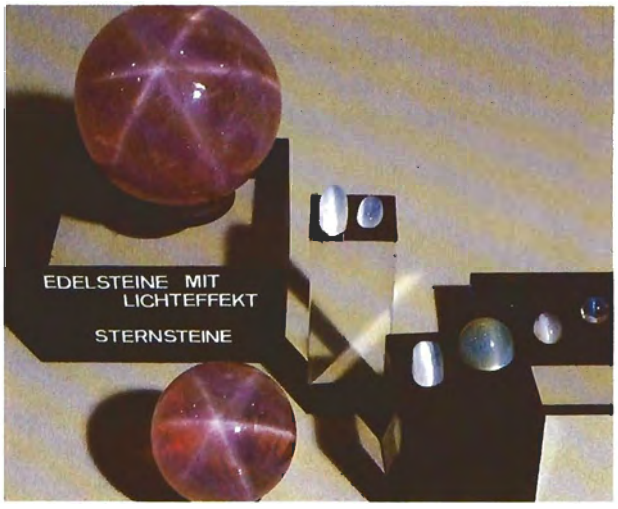
ite in existence today. Certainly the new exhibit in Idar-Oberstein must be considered one of the most extensive rough-and cut gemstone exhibits in the world.

The exhibit of phenomenal stones is also noteworthy. The stones show off their asterism and chatoyancy as well as any seen in major museums elsewhere (figure 6). The credit can be given to the unique lighting: the actual light source hangs from a long cord to within a few centimeters of the gem, so that a maximum amount of direct light hits the stone with minimal interference from ambient light. The exhibit itself contains some spectacular cat's-eye tourmaline and apatite, a star rose-quartz sphere, and a very interesting necklace of cat's-eye chrysoberyl beads.

Also on the second floor is an exhibit that displays virtually every important synthetic gemstone known today, including the products of such major manufacturers as Chatham, Kashan, Gilson, and Lechleitner. I know of no other exhibit of synthetics anywhere that matches this in scope.

Equally unique is the display of gemstones new to the 20th century, in both their rough and cut forms. These include mineral species such as benitoite, sinhalite, brazilianite, ekanite, taaffeite, charoite, and sugilite, as well as species that

Figure 6. The fine exhibit on chatoyancy and asterism includes these cat's-eye tourmalines and star rose quartzes.



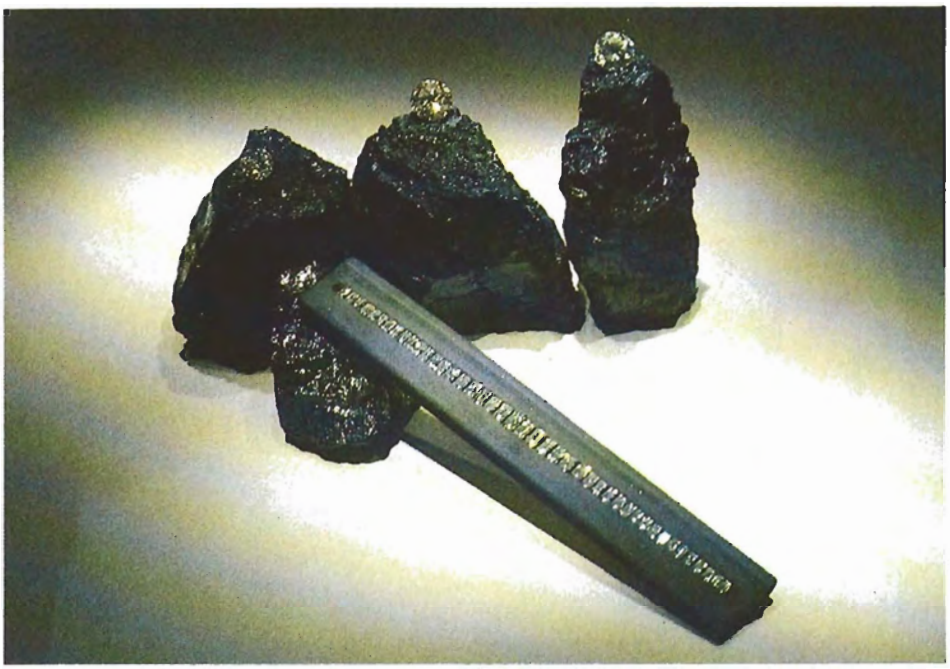


Figure 7. The new exhibit is particularly strong in diamonds, and the technique of displaying them on coal is but one example of the museum's innovativeness.

were not known as cut stones prior to the 20th century, such as cuprite and labradorite. Also featured are gems from localities that are new to the 20th century, such as Indian aquamarine, Pakistani topaz, Afghani tourmaline and kunzite, and Brazilian emerald.

The highlight of the new second-floor exhibit is a walk-in vault containing some of the finest gems in the museum. The centerpiece in the vault is a 2-ct diamond, displayed with several smaller diamonds. Elsewhere, diamonds are displayed in a unique manner on coal (figure 7). The cases along the far wall of the exhibit include exquisite tanzanites, emeralds, rubies, sapphires, imperial topaz, and some very fine cameos, one of which is of ancient Roman origin.

According to Gerhard Becker, the vault was built for two purposes. First, it enables the museum to present special exhibits from all over the world with the assurance of adequate security. Second, the concept of a vault serves to underscore the great value of the materials housed therein.

The people of Idar-Oberstein can be justly proud. Their museum is indeed superb. I know of no other like it in Europe or, for that matter, anywhere else in the world. The Deutsches Edelsteinmuseum is in a unique position to present the subject of gemology and gem carving in that it is backed enthusiastically by the huge gem industry in Idar-Oberstein. Because of this gem industry, Idar-Oberstein receives a steady flow of new gem materials from the world over; the various companies select the best and most unusual from their inventories and loan it to the museum for display. This industrial backing guarantees that the museum will remain dynamic, constantly being changed and updated for the public.