

COMPOSITIONAL AND DESIGN FEATURES TYPES OF SHAPES FOR JEWELRY INSERTS

**Darya STONOGA^{1*},
Natalia OSTAPENKO²,
Dmitry VIDOLOB²,
Tatyana LUTSKER²**

¹*Kyiv National University of technology and Design, Design, Department of ergonomics and design, group DFZD-18, Kharkiv, Kharkiv oblast, Ukraine*

²*Kyiv National University of technology and Design, Design, Department of ergonomics and design, Kyiv, Ukraine*

*Corresponding author: Stonoga, Darya, stonogadafa@gmail.com

Abstract. *Varieties of forms inserts of modern jewelry are investigated and the main ones are singled out. The relationship of three-dimensional characteristics, artistic and lighting design of jewelry inserts the type of their cutting is established. The varieties of stone forms are analyzed and generalized, using them into account in different jewelry assortment groups. The specifics of compositional and structural features of jewelry depending on the shape of the insert are revealed.*

Keywords. *stones, jewelry design, cut, princess, baguette, trilliant, cushion, marquise, cabochon.*

Introduction

Modern art designing an artistically expressive composition of jewelry is a symbiosis of knowledge about the characteristics of precious and semiprecious jewelry stones and the basics of working with such inserts. The paper describes the main types of forms of jewelry inserts depending on the range of products and their materials.

Compositional and design features types of shapes for jewelry inserts

The term «jewelry inserts» is known, denoting natural precious, semiprecious and ornamental minerals, some materials of organic origin (pearls, amber), natural refined stones, artificial and synthetic analogues of natural minerals, as well as non-existent chemical compounds synthesized in nature as analogues of natural precious stones (cubic zirconia, moissanite, aluminum and other) [1].

In the vast majority, the compositional center of a piece of jewelry is the stone and organically connected with it, as the main components, shape, mass, color and graphic solution, cutting method, and so on. At the same time, artistic expressiveness of jewelry inserts amplifies thanks to a variety of types and forms of their cut. The most common shapes in all assortment groups of jewelry are circle, pear, oval, awning, heart, princess, emerald, baguette, trilliant, cushion and others.

A common form of cut found, in various jewelry is the «circle». Round inserts are used in various compositions of jewelry products – with one gem, in multi-level complex compositions and color solutions with a large number of inserts. Small gems often used in the frame of the main stone of a round or other crystal shape in jewelry. This form of stone could be in engagement rings, diamond products, and complex of bionic and zoomorphic forms, products with a minimalist design, as well as a frame and addition to stones of other cut shapes. The round form of faceting of a stone is applied in all assortment groups of jewelry, has the widest range of color and dimensional solutions. Precisely small-sized inserts of rounded shape, for example, ensure the integrity of the composition if the composition of the product that characterized by eclectic elements combined with the different in shape, type and material gemstones.

Expressive in artistic perception composition of the product is created by the such type of shape as «oval» insert, which is version of round gem cut. Such form activity use in jewelry design, since the beginning of the second half of the twentieth century. Most often used in pendants, earrings and rings of ethnic and classical styles. Being in a ring, the stone of such facet visually lengthens fingers, makes them thinner, graceful. The composition and artistic expressiveness of the product changes by scaling the length and width of the oval shape, becoming either more dynamic, elegant or static, close in shape to a circle. Promotes the organization of a holistic sense of form and coordination of all parts of the product in a harmonious composition.

In the historical heritage and modern practice of creating wedding rings, the «classic» type of shape, in addition to the round cut of the insert, is crystals in the shape of a «princess». For this shape of gem typical, an expressive and harmonious artistic and light design of the stone, but it has a square (less often rectangular) shape. Created in the late 1960s and early 1970s, it is most often used in rings, earrings, and pendants. For many well-known brands (Tiffany&Co, Boodles, Chopard and others), such rings are iconic precisely with the use of diamond inserts of this shape.

A characteristic feature of the symmetrical organization of the composition with the balance of mass, tone and color of the parts is the use of an octagonal shape of the stone with a stepped face, which named «octagon» or «emerald facet». Such faceting is used for large gemstones, especially emeralds, sapphires, tourmalines, etc [2]. This type of shape frequently used in men's and women's rings and signet rings, geometric earrings and pendants, in the modern direction of architectural author's products, etc. This type of insert became widely known after creating the composition of the ring by the Graff jewelry house with a large emerald and two baguette diamonds around the edges. It should be noted that the modern jewelry market uses this form in men's exquisite rings and bracelets.

One of the earliest methods of processing gemstones is the type «baguette», a type of step cut, as a result of which rectangular crystals are obtained. Geometric of the shape, sharp corners, and large area for playing light and perfect symmetry: these are the main elements that contribute to the creation of a coherent composition of the product. This form of insertion became especially relevant at the beginning of the XX century thanks to Cartier products in the style of «Art Deco» [2].

The «trilliant» (or trillion) cut of a stone is an equilateral triangle with sharp or smoothed corners. Compared to other insert options, this is the youngest method of processing precious stones, which was invented in the 1980s in Holland [2]. Most often, trillions are fixed in rings, earrings, and necklaces. This form of insert is typical for large precious stones, revealing to the full the beauty of their color and the play of light and shadow on the plane and corners of the mineral. Polygonal gems usually act as the compositional center of jewelry or become part of huge necklaces and earrings. Artistic compositions with floral narrative or compositions in the postmodern style are characterized by the use of trillian inserts.

The «antique» gem shape (or «cushion») first appeared in the XVII – XVIII centuries in Europe. There are two types of «cushions» gems: with right angles and rounded. The cushion can be both square and rectangular. Products with the use of inserts in the form of antique are characterized by fantasy, multifaceted stepped compositions, with the addition of inserts of small diameter in the form of a circle. The most common colors are purple or blue (amethyst inserts), yellow and other. This type of insert is most often used in precious, fancy couture women's collections of major jewelry brands.

An original solution for jewelry is the shape of the insert «pear», which combines the features of an oval shape and «marquise». This type of form has been known since the second half of the XV century [3]. On the surface of the stone, there is one large face, which provides a play of light and shadow, and the side faces are wedges. In the form of a pear, both large and small inserts are processed. They are most often used in necklaces, pendants, earrings. It is believed that the stones «drops», «ovals», «awnings» create the illusion of a longer, graceful neck, so longer; visually dynamic forms of jewelry characterize the composition of the product. Often pear-shaped

stones can be seen in classic women's rings or such types of earrings as congo, chandeliers, earring-pendants, «classic» pendants and more. The most such textured structuring of the form is inherent in multi-colored stones, revealing the naturalness and filling of the color-graphic crystal structure, which creates a more expressive artistic composition.

In modern jewelry, inserts in the form of «marquise» is becoming more common. This species was named after the Marquise de Pompadour, a favorite of Louis XV [3]. The oval cutting edge with pointed oblong ends immortalized the flirty smile of the legendary beauty. It is most often used in rings and earrings. Compositionally coordinated and elegant awnings look in a necklace. This type of cut is most typical for precious inserts made of garnet, ruby, topaz and others.

The «heart» should be singled out among the complex three-dimensional forms of jewelry inserts. Mentions of the first inserts with this form date back to the middle of the XV century. The larger the stone, the more expressive its shape becomes. Therefore, products with this type of inserts have a massive appearance or are solitaire products. The most common are women's rings and children's earrings, pendants, the color scheme of which is often a shade of red color for gemstones and white for classic diamonds.

Separately from other types of cut, there is a «cabochon» behind the handicap (from the french Caboshe, head) [3]. Cabachons have a completely different structure, namely a convex top, a flat bottom and a smooth surface. This is usually the case with opaque and translucent minerals, semi-precious inserts, specimens with the effect of a cat's eye or asterism (star-shaped figures). For example, onyx, opal, agate, jasper, turquoise, malachite, lapis lazuli, and so on. They are most often used in ancient products, massive rings and ethno-style jewelry.

Conclusions

Finishing with jewelry inserts of various shapes cut contributes to the compositional expressiveness, creates a connection between the three-dimensional and color-light characteristics of the product. Varieties of forms of inserts of jewelry depending on assortment groups of jewelry are characterized.

The modern jewelry industry is able to create and process almost any mineral, give it a variety of fancy shapes and use them to create a unique jewelry design. Therefore, with the development of jewelry design, it should be assumed that there would be an expansion of the information base of forms of cutting jewelry inserts in the future.

References

1. The law of Ukraine "On Derzhavne reguluvannya widebody, virobnictva the usage precios dorigina metal, kamna that control the operations z nimi" od 18.10.97 No. 637 [online] [accessed 07.02.2021]. Available: <https://zakon.rada.gov.ua/laws/show/637/97-%D0%B2%D1%80#Text>
2. ViDi cut dorigina kamenu: Ranoidea forms ogranicenja [online] [accessed 07.02.2021]. Available: <https://zolotoyvek.ua/ua/vidi-ogranki-dragocennih-kamney/>
3. Cutting of jewelry stones. MonteCrystal [online] [accessed 07.02.2021]. Available: <https://montecrystal-gems.ru/ogranka-yuvelirnyh-kamney/>