

# Application Analysis of Metal Material and Wood in Sculpture Creation

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**Abstract:** As a linguistic form of sculpture, materials have unique aesthetic interest and spiritual attributes. Metal materials have excellent properties, are easy to preserve for a long time, and have good ductility and plasticity. They can express artists' ideas and concepts very well. Therefore, this paper analyses the application of metal materials and wood in sculpture creation. Research and analysis show that wood is not polluted, it is a renewable resource, and it has good processing properties. It can be carved and ground, and its natural texture makes each piece of work show unique artistic effects. The combination of metal materials and wood is a form of existence of synthetic material sculptures. It has a unique artistic charm. The sculptural form of metal materials combined with wood has a strong artistic appeal and expressiveness.

## 1. Introduction

With the continuous development of the times, the continuous innovation of science and technology and industry, the variety of materials and technology are changing with each passing day, and the comprehensive material sculpture has developed rapidly [1]. The emergence of each new material is the trajectory of the times, and in art life, the material is to make the art rich and colorful, showing the organic composition of taste [2]. Today's artisans have regarded clay as an artistic creation material rather than a craft material. They are not satisfied with the single material inherent in ceramics. They are actively exploring new forms of mixing of ceramic materials and other media outside the traditional range. Means of expression [3]. The greatest value of this kind of inspiration seems to me to help us to establish a way of thinking that can guide us to keenly find common thoughts between individuals and social groups in the existing information resources and social contexts [4]. Because artistic creation must not only express the artist's inner monologue, but also be the window to open the truth, as Hegel said [5]. Because the appropriateness of materials is not only related to the final effect of the work, but also reflects people's perception, interest, customs, habits and so on. At the same time, science and technology, economy, knowledge, concept, environment and other factors also affect the creation of sculpture art to varying degrees [6]. From pottery, bronze, iron, lacquer, porcelain and other new materials used in the creation of works of art until today, the magnificent large-scale sculpture, elegant and refined decoration design, outstanding clothing design, all show its unique charm in materials.

Excellent materials are indispensable to the production and processing of any works of art. Since ancient times, materials have played a vital role in daily life and industrial production [7]. For example, modern ceramic sculpture using modern metal materials, glass materials, chemical materials, reinforced concrete, wood, mixed materials has become very common [8]. As a silent art, sculpture seems to be a bit wooden in expressing the content of the current subject matter, so more and more artists choose the synthesis of various materials in their works, and more avant-garde artists turn to the technology of image, sound, light effect and so on, and throw themselves into the embrace of devices [9]. The aesthetic pleasure through sculptural works is closely related to the visual viewing effect, texture and touch of raw materials. We should analyze the texture and color of the materials [10]. Then, based on this, we will link the two according to the image of creation. We must not only fully express our thoughts, but also play and explore the beauty of raw materials as much as possible in the selection of creation materials. The history of the development of materials strongly supports human development and technological innovation, and carries human civilization and spirit. The development of visible materials is in sync with social development, and even the materials of a

period have become the hallmark of this era. Sometimes a lot of materials are used in a pottery. The texture, texture, and glaze of the material are different, and the visual effects and appeal are different.

## 2. Metal Materials and Wood in Synthetic Materials Sculpture

### 2.1. Composite material sculpture

Sculpture creators are familiar with the characteristics and language of traditional sculpture materials, but in the context of the new era of ideas, the search for more and more materials and application to sculpture creation is a challenge we face. The unique artistic expression and appeal of the sculpture are more intuitive and richer. In the hands of modern artists, materials are the medium for carrying artistic ideas, and often used to reflect their own charm. Unlike sculptures in the traditional sense, the exploration of interior space by metal-welded sculptures is a new attempt. The sculptures of household iron bars and iron sheets are welded in the form of planes or lines, which are different from the form of casting, and the result is not volume. Form. The third part talks about the relationship between material and aesthetics. Aesthetics has the distinction between subject and object. The special aesthetic feeling of material is related to both. And in their body, aesthetic pleasure is thus produced. In this part, the visual aesthetic perception of materials is also analyzed. Attempting more possibilities of materials has become a direction of our research. Comprehensive material sculpture emerges with the development of the times. It has become an important manifestation of sculpture creation to fully display the material and characteristics unique to materials.

Under the same equivalent stress amplitude, the specimen has the longest life under uniaxial loading and the shortest life under pure torsional loading. The fatigue life tends to decrease with the increase of phase difference between tension and torsion loads, as shown in Fig. 1.

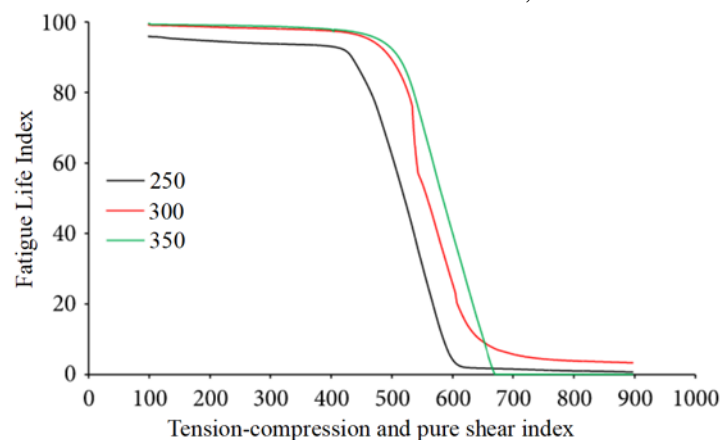


Fig.1. Effect of phase difference between normal stress and shear stress on fatigue life

### 2.2. Metal Material in Composite Material Sculpture

Metal material has become a favorite material for sculptors because of its unique chemical and physical properties, good ductility, weldability, rich and colorful color effect and texture aesthetics. I think comprehensive material sculpture is a kind of integration and communication between artists' ideas and materials. If the material of ceramic sculpture itself can be skillfully combined with other sculpture materials, it can not only create a contrast between muscle and texture, but also make up for the limitations of material itself on the basis of the characteristics of ceramic and porcelain. The characteristic of modern art is to respect the nature of material, not only to meet the single material. At the same time, driven by new artistic trends and aesthetic ideas, the status of materials in artistic creation has also changed. From a passive styling carrier to the status of being able to actively express their own language, the development and popularization of science and technology have led to changes in people's understanding and perception of matter. Under the joint influence of the resulting philosophical thoughts, metal sculptures in the modern sense have emerged. Then, it is to explain how the sculpture material develops with the development of sculpture art, and the

sculpture art advancement sculpture material also advances, and the two progress simultaneously. Metal materials are not only the medium of sculpture artists, but also the carrier of artistic concepts, reflecting the spiritual attributes of human beings, giving metal sculptures a greater charm and embodying the spirit of the times.

### **3. Diversification of Synthetic Materials**

#### **3.1. The nature of the sculpture composite**

The nature of synthetic materials can be studied in two ways: one is visual sense. Each material has a unique language, and people's understanding of the material begins at first glance. In the choice of metal, stone, ceramic and wood, we feel that different materials have essential differences in the transmission of emotions, all in order to achieve a perfect harmony in the form and content. But unlike the post-modern artists' misappropriation of ready-made products, the meaning of materials is not in the original life intentions of the materials, but in the shape and fun. Sculptures made by welding, cutting and other means have created a new era of modern metal sculpture, which marks the emergence of "direct metal sculpture", the narrow modern metal sculpture. Iron and steel, as the main material of modern metal sculpture, has also entered the art stage. The same material has different mechanism but different feeling, and its own color also has a great impact on the choice of materials. With the development of modern ceramics, ceramic sculptures are becoming larger and more environmentally, often in the form of groups. On the one hand, ceramic sculptures break through the traditional concept of small ornaments on shelves, go out of indoor space and enter a large environmental world. The versatility of this device, which is carefully designed, is a very representative feature of postwar active sculpture.

#### **3.2. Composite Material Sculpture**

I have always wanted to try to create sculpture by combining metal and wood. I intend to use the combination of metal and wood to express my creativity in graduation creation. The rust-stained metal gives people the impression that it has gone through vicissitudes of life, rough and old, full of historical traces. The bronze wares collected so far in the Bronze Age carry history, culture and technology. At the same time, it breaks through the limitation of single material and enters the free world of modern art created by "unrestrained and unrestrained" magic left. These things creak as soon as they move, and people suspect that they have both good and bad effects. The charm of sculpture art comes from two aspects, one is from the author itself, because sculpture is different from other fields in art form, it has multiple aspects, it can be three-dimensional or flat. In the face of materials to create, so just with the expectation of materials, began to look for materials. Pottery and porcelain are a contrast between ancient and ethereal. The rock is hard and rough, the marble is majestic and delicate, and the jade is transparent, plump and clear. Visible texture and color are the main identifying features of the material. Metal has luster, ductility, easy conductivity and heat transfer function. Its development and application are inseparable from the development of the times and the advancement of science and technology. It has an irreplaceable role in practical applications.

### **4. Conclusions**

Through the practice and thinking of the combination of wood and metal materials in graduation creation, I also deeply realized the charm and expression language of the comprehensive sculpture. Art comes from life and then returns to life. This is the rule that art development and progress follow. The sense of life is the inspiration of art creation. People are constantly broadening their horizons, experimenting with the application of new materials, and interpreting today's artistic views. In the modernist period, metal materials played a decisive role in the process of subverting the old aesthetic traditions and exploring new artistic styles due to their physical attributes. This section explains how sculpture materials are used flexibly by sculptors. Putting together sculptural materials and aesthetics to analyze the importance of materials. Sculpture creation should share a common destiny with the

times, and explore deeper cultural significance and spiritual and cultural connotation of national dependence. But the progress of society will also lead to the reform of art. Comparing with the ideas and concepts I created and the current situation of my works, I feel that there are still many shortcomings. The artistic expression of works is not exquisite and ingenious enough, and the artistic effect is not yet free and easy. The bonding material he used was resin glue, a chemical material. The broken lines in his works were one of his main modeling languages, in order to show the expressive power of cracks more strikingly. He used gypsum to fill the gap, and the traces of "repair" reflected the characteristics of ceramics.

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