Preliminary Study on the Application Strategy of New Materials in Garden Landscape

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ABSTRACT

The garden landscape represents the image of a city. With the development of society, the construction of garden landscape is gradually taken seriously. Materials are the material basis for the construction of landscape architecture, and the most subjective carrier for shaping the garden style and expressing the design concept. The introduction of new materials has greatly increased the expression of the landscape and the fun of space creation. With the improvement of people's appreciation level, it is not only necessary to maintain the basic characteristics of the garden landscape, but also to hope that the materials used in the garden landscape are more environmentally friendly and ecological and have a certain design beauty – Incorporating into the local natural environment and integrating into the overall atmosphere of the garden landscape. Based on the importance of new materials, this paper explores the possible problems of spatial collocation, design fusion and exploration of new materials based on the principle of selection and summarizes the application of new materials for landscape architecture.

CONCEPT OF NEW MATERIALS

As new materials are a relative concept, they refer to materials that perform better in some respects than traditional materials. At present, the application of new materials in the construction of landscape architecture has penetrated all aspects of garden construction. The perfect combination of new materials and modern gardens has given the garden landscape a more beautiful ecological and ecological function.

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THE IMPORTANCE OF GARDEN LANDSCAPE MATERIAL SELECTION

With the acceleration of China's modernization development process, China's garden landscape has also developed rapidly. The rapid rise of the landscape has met the needs of people; at the same time, it also puts forward further requirements for the landscape. In the value of the garden landscape, not only must have ornamental value or use value, but also cultural and ecological value. As the spirit of the garden landscape, the surrounding environment has a subtle guiding effect on the visitors. However, regardless of the realization of the ecological function and function of the garden landscape, as well as the feeling of the heart and the visual beauty, it is necessary to rely on the garden material to express. [1] The garden landscape is an inseparable whole, and the material is an integral part of it. Appropriate use of material language can achieve the effect of breaking through the limitations of the design; if the choice of local materials is not suitable, then the whole piece will not be patched together. Expected beauty.

DESIGN ISSUES

In the process of garden landscape design, the emergence of many new technologies and new materials have made the landscape design field more abundant, but there are still many shortcomings worth considering:

(1) The landscape garden design lacks the finishing touch: in the landscape design, even if the new construction materials are used, the landscape space structure and its garden essays lack a lot of color, and it does not bring a refreshing new to the visitors. Feel.

(2) The overall landscape design is extremely lacking in logic. New materials and new technologies lack the overall feeling of echoing: I believe that this is a major shortcoming in the application of new materials in landscape design – many garden landscapes are designed to emphasize the use of new materials in a certain part, and neglect to have a certain relationship with the overall landscape atmosphere. When the visitors use it, it gives a very awkward feeling, and the style is out of place. [4]

(3) Different new materials and new technologies are too singular in use: many new materials and new technologies have only one use in application—For example, the green design next to the road does not have the slightest effect of collecting rainwater. The layering of the space is also very simple, but it only gives people a sense of beauty and neatness. The effect of the design does not play the role expected by the new technology. In addition, our emphasis on the sequence of landscape design is also insufficient. New technologies and new materials have not been designed according to the order of the primary and secondary responses, and they appear to be random results. Even if there is a rich landscape structure level, if there is no practical landscape design concept, the landscape design will be flashy.
(4) In terms of function, new technologies and new materials lack environmental protection: the application of new materials and new technologies should pursue environmental protection concepts, renewable, and recyclable. It is hoped that as many landscape materials as possible can be recycled and reused as widely as possible.

**PRINCIPLES OF SELECTION OF LANDSCAPE MATERIALS**

In the design of landscapes, materials are the most basic element. The beauty of the garden landscape is mainly achieved through materials. At the same time, the nature of the material determines its use value to some extent. Many new materials have been widely used in the construction of landscapes. The combination of new materials and traditional materials allows the design to achieve better expected landscape effects. Therefore, in the choice of materials, mainly from the chemical properties, physical properties, the construction of materials in the hardness, antifreeze, anti-skid, corrosion resistance, texture, strength and other aspects in line with the rigid requirements of landscape design. The sensory effect of landscape materials is mainly achieved through the combination of different materials, such as color coordination degree, rhythm, proportion of material use, and so on. [2] Then the following four principles must be followed in the selection of landscape materials:

1. **Functional principle.** The use value of the garden landscape satisfies people's needs for entertainment, leisure and play. The material of the garden landscape should bear the function of the overall style of the landscape, and should be consistent with the overall style of the garden. Therefore, in the choice of materials, it is necessary to select the materials for the functional characteristics of the landscape, so as to "adapt to local conditions." For example, garden materials with strong plasticity can be selected to achieve the purpose of being able to be colored, glued, split table, etc., thereby satisfying the artistic expression of the landscape.

2. **Ecological principles.** Ecological construction is not only the foundation of the ecological environment, but also the cornerstone of the ecological city. In my opinion, landscape gardens have been given spiritual and cultural factors such as emotional values, not just things that have no life and thoughts. It can be considered as the crystallization of the wisdom of thought in the process of combining man and nature. Therefore, in the construction process, it may be wise to conduct material selection based on the characteristics of the local ecological environment from an ecological perspective. The landscape can meet the needs of ecological development.

3. **The principle of safety.** As one of the components of the landscape, the material determines most of the characteristics of the landscape. Safety is the most important first feature of the landscape. When the materials are selected, there should be no safety hazards. Because the landscape materials need to be in close contact with people, the materials should meet the safety standards of the national
building materials in various indicators, and the basic requirements for the
construction materials to be non-toxic and harmless to the human body should be
achieved. Garden landscape materials should not only have corresponding comfort,
but also require the strength, hardness and durability of the materials to meet
relevant safety requirements. When selecting materials, we should try to make long-
term considerations, such as resistance to acid rain corrosion and strong sunlight
resistance. [2]

(4) The principle of integration. In order to better integrate the landscape into the
environment and avoid incompatibility, we should try to choose natural materials
close to the environment by examining the characteristics of the surrounding
environment. The landscape has unique ornamental, cultural and aesthetic values,
and whether it is a traditional material or an emerging artificial material - When the
garden is shaped by art, it should be integrated with the garden landscape to achieve
the perfect integration of the material's natural and artistic techniques, so that the
constructed garden landscape has local flavor, thus forming a unique landscape.

DESIGN STRATEGY

Design Fusion

In the process of garden landscape design, the application of new materials
should be integrated with the natural scenery of the entire garden space. If the design
effect is relatively abrupt, then the materials used are materials that are not suitable
for the overall landscape. [3] For example:

(1) In some Chinese landscape design examples, some new materials or new
technologies are often used in them, which are out of place. In the Chinese style, it is
not appropriate to have Western-style architectural materials that do not conform to
the overall style;

(2) When designing a landscape space with more natural landscapes, if you add
too many different architectural forms during construction, or hard paving of new
materials, the design style of natural scenery will be extremely Match

(3) In the application of a new material or new technology, each part of the best
design can match its intrinsic elements. [4] For example, the new simulated natural
landscape materials should not only simulate natural landscape matching and
configuration, but also use function or structure as a prototype, and artificial
technology as one of the means to simulate the overall model of nature. Create. The
perfect blend of nature and design in the design reflects the consistency of the
overall landscape.

Space Matching

The combination of plants and space also play a very important role in the
design of landscape space. Not only the application of new technologies and new
materials can not affect the plant collocation of the landscape, but also ensure that the entire landscape garden of the design meets the local natural environment conditions, and then the landscape design and the green structure of different landscapes are integrated.

In the details of the landscape, if you use some new garden technology or garden materials, it will give visitors a different experience. For example, in the connection between the grass and the hard pavement, try to place some softened new materials to give people a refreshing feeling. Or in the design of some garden essays, you can also try to insert some new materials or new technologies, such as inserting some mirror or glass surface material, perhaps giving people a new feeling. New technologies or new materials are not only reflected in the details, but also the design of the entire garden space uses different new materials and new technologies, but ultimately remains consistent in the overall landscape style. [5]

The Use of New Materials for Landscape Architecture

PURPOSE OF USE

In the space construction, the new materials for the landscape are based on the sustainable development of the environment and culture, in order to achieve the goal of fun, mobility and environmental protection. [5].

INTERESTING

While satisfying the function, the space process creates people's integration into the landscape and makes the landscape space vibrant.

MOBILITY

The landscape can be transformed according to people's different needs, thus enhancing the uniqueness of the landscape and making the space more interesting.

ENVIRONMENTAL PROTECTION

In order to make the landscape space created by the design better integrated into the natural environment, the designer should always combine with the environmental protection concept in the process of applying new materials.

Application Trends

As an indispensable element of garden landscape, materials serve as an important medium for connecting designers and users. The use of various new materials also redefines the connotation of garden landscape to a certain extent. In the present view, the garden landscape may no longer be a natural reappearance, but more manifested in the exchange of human and natural emotions, which is the blend
of heart and heart. Landscape designers should give full play to the imagination and creation of new materials for landscapes, so that they will not let the landscape lose vitality and vitality, in order to express rich emotions, creatively express different psychological feelings and exert people's needs for emotions. [6] If the art form of the material can be perfectly combined with the emotional needs of the people, the excellent landscape is naturally created.

Application Strategy

TRADITIONAL MATERIAL APPLICATION STRATEGY

The traditional materials of garden landscape are usually made of natural hard materials such as rock materials and plant materials. The advantages of traditional materials are that the ecological characteristics of plant materials can be used to easily create landscape features with regional characteristics. With the development of modern society and the continuous emergence of modern materials, the number of traditional materials has become increasingly scarce due to natural conditions; and the cost of development and use is high, many natural stones are non-renewable resources, so to some extent, the development of traditional materials has been limited.

MODERN MATERIAL APPLICATION STRATEGY

With the continuous development of physics and chemical technology, modern garden landscape new materials have developed. These new materials are mainly composed of gypsum, concrete, cement, plastic, plastics, etc. These materials are generally low in cost, strong in plasticity, light in weight, etc., and have good moisture resistance and corrosion resistance, and can be used to make different styles. Artificial landscape. [1] However, modern materials still have certain problems in environmental protection and have certain pollution. In recent years, with the development of modern technology, recycled waste has been applied as a new material for landscape architecture. For example, recycled porcelain, bricks, metals, as well as branches, wood chips, etc. can be used as new materials for landscapes. [7] New materials have extensive development and application space and are important materials for modern garden design.

CONCLUSIONS

Through the preliminary research on the new materials of garden landscape, new materials and new technologies should be integrated into the local landscape as much as possible in the application process to avoid abruptness, and the virality of the landscape should be taken into account in the application process of new materials, thus highlighting the characteristics of the garden landscape. When
selecting the material for the landscape, the safety should be taken into consideration at the forefront, taking into account the environmental characteristics of long-term use, taking into account the basic requirements of environmental protection.

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