

On the Selection of Green Plants in Interior Design

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Abstract: In recent years, owing to the constant progress of China's social economy, people's material living standards have significantly improved, and higher requirements have been put forward for the living environment. Interior design can not only give people visual beauty, but also improve living comfort. As a crucial part of interior design, green plants can not only purify the environment, but also optimize the interior structure. Based on this, this paper analyzes the selection of green plants in interior design and draws up a "green plan".

1. Introduction

Indoor greening has a long history in China, which can be traced back to the Stone Age. The Chinese people highly respect and love nature, and their love for plants and flowers is often expressed through ancient poems^[1]. In the current society, owing to the accelerating process of urbanization, high-rise buildings and intelligent equipment are full of people's vision. Indoor greening plants can effectively alleviate people's visual fatigue, and also can purify the living environment. Therefore, as one of the indoor furnishings, the indoor greening plants have received extensive attention due to their unique vitality.

2. Function of Greening Plants in Interior Design

2.1 Purify Air

The effective arrangement of green plants indoors can promote the green plants to absorb carbon dioxide in the air and release oxygen. In the process of breathing, people will inhale a lot of oxygen and emit carbon dioxide. The arrangement of greening plants can effectively regulate the balance of oxygen and carbon dioxide in the air, thus playing a role in purifying the air. In addition, green plants can also absorb heat and evaporate water through their leaves, thereby effectively reducing indoor temperature and improving indoor humidity. In winter, it can promote indoor temperature balance^[2]. In summer, it can shade sunlight and reduce indoor temperature. According to the survey, compared with the rooms without green plants, the rooms with green plants have higher oxygen content, can realize the effective circulation of oxygen and carbon dioxide between human body and green plants, and improve the greenhouse effect.

2.2 Optimize Indoor Structure

Greening plants can not only purify the air, but also optimize the indoor structure. First of all, greening plants can effectively partition the space. In the process of interior design, designers can divide people's activity areas and use rows of green plants to partition them^[3]. For instance, plants such as Parthenocissus tricuspidata and bracketplant can be used as screens to divide space. This can not only optimize the space, but also improve the flexibility of the space layout. In the later period of the customer's stay, the independent partition can be replanned according to the actual life needs. Secondly, there will inevitably be some dark corners that cannot be effectively used in the indoor space. At this time, the designer can choose green plants to fill, thereby improving the sense of space enrichment and beautifying the indoor environment. Reasonable use of the variety and size of green plants can adjust the sense of coordination of indoor space and improve the effective

utilization of air space.

2.3 Increase Animation

Greening plants have certain natural curves and various forms, can refract sunlight, effectively alleviate the tough feeling of indoor space lines, change people's stereotype of indoor space, and create a soft atmosphere. This reduces the sense of emptiness in the interior space to a certain degree. For instance, trees or shrubs can cover a lot of white space through soft branches and leaves. Vines can use slender branches to extend from one wall to the other, effectively improving the sense of visual extension and enhancing the vitality of the interior space. This is incomparable to any other interior decoration^[4].

2.4 Edify Sentiments

Greening plants can present the energetic and positive spiritual power from the aspects of shape, fragrance, fruit, flowers, etc., and guide people to form a positive attitude in imperceptible influence, so that people can find and feel the natural beauty in real life, and thus have the effect of cultivating sentiment^[5]. Greening plants can reflect their tenacious vitality in the process of growth, and their beauty is the beauty that is not artificially carved and naturally formed. For example, the fruitful kumquats, unstained lotus, solemn bamboo, romantic roses, etc. can not only optimize the indoor air, but also enrich people's spiritual world with their quality.

3. Selection of Indoor Greening Plants

In the interior design process, designers should clearly recognize that not all green plants are suitable for indoor placement, and should fully consider the actual design style, customer needs, health, etc. Only by arranging the most suitable greening plants can the design effectiveness be effectively improved.

3.1 Remove Formaldehyde Greening Plants

In the process of interior design, due to the particularity of building materials, a certain amount of harmful formaldehyde gas will be produced more or less. In order to completely eliminate formaldehyde gas, in addition to regular ventilation, effective selection and arrangement of greening plants can also accelerate the removal of formaldehyde gas^[6]. Therefore, in the actual interior design, designers can choose green plants such as aloe, bracketplant, Parthenocissus tricuspidata, pleione, and lucky bamboo. According to the survey, the above greening plants are more capable of removing formaldehyde gas than other plants.

3.2 Remove Harmful Gas Greening Plants

In the process of interior decoration, in addition to the formaldehyde gas emitted by building materials, some electrical appliances and plastic products will also emit harmful gas. Therefore, in order to improve the living comfort and ensure the health of residents to the maximum extent, designers can choose to decorate chrysanthemum, jasmine, rose, camellia, Milan, wintersweet, daisy and other green plants and flowers indoors. The above plants can not only effectively clear the harmful gases in the air, but also emit a light fragrance, which plays an important role in optimizing the environment.

3.3 Absorb Carbon Dioxide Greening Plants

Agave, tiger skin orchid, brown palm, tiger tail orchid, cultivated pineapple, etc. can clean air at night. According to the survey, only arranging two pots of the above plants in a space of 10 square meters can effectively absorb all the carbon dioxide emitted by a person at night. In addition, cacti, cactus sword, epiphyllum, lotus and other green plants can also increase the content of negative ions in the air. When the TV is played indoors or the computer is turned on, the negative oxygen ions will decrease rapidly. The stomata contained in the fleshy stems of the above greening plants can be closed during the day and opened at night, absorb carbon dioxide, release oxygen, and improve the

content and concentration of negative ions in the indoor air.

3.4 Greening Plants That Inhibit the Growth of Bacteria

Roses, osmanthus, jasmine, lemon, rose, crape myrtle and other flowers can not only emit fragrance, but also produce volatile oils in the process of aroma volatilization, which has a significant bactericidal effect. Among them, green plants such as crape myrtle, rose and lemon can kill the original bacteria in the air in five minutes, such as diphtheria and dysentery bacteria. The fragrance of green plants such as jasmine, lily of the valley, carnation and rose can effectively inhibit the propagation and diffusion of mycobacterium tuberculosis and pneumococcus contained in the air, thereby reducing the growth of bacteria and ensuring human health.

3.5 Promote Sleeping Greening Plants

Cloves, jasmines, roses, violets, mint and other green plants can soothe nerves, relax people, and help people sleep. Greening plants with long cilia, such as orchids, solidification and wintersweet, can effectively absorb floating dust in the air, thus creating a good sleeping environment for residents.

3.6 Careful Selection of Greening Plants

Not all green plants are suitable to be placed indoors, and those with strong smell or peculiar smell and bright color should not be placed indoors, such as oleander, mandarin, etc. The gases emitted by these plants are harmful to human health, so designers should avoid the choice of such plants in greening selection. In addition, the fragrance of evening primrose can produce strong irritation to the human olfactory system, and it also emits a large amount of exhaust gas at night, which is not conducive to human health. The stems and leaves of evergreen contain a large amount of calcium oxalate. If you touch the skin carelessly, it will cause itching and poisoning. Based on this, when choosing green plants for interior design, designers should make appropriate choices in combination with the overall design style and customer needs to avoid the arrangement of harmful plants.

4. Layout of Indoor Greening Plants

The indoor space can be divided into different areas according to the living functions, such as bedroom, balcony, dining room, living room, study, etc. Different layouts have different requirements for green plants, and their layout positions affect the overall interior design style to a certain degree. Therefore, in addition to reasonable selection of green plants, designers also need to make reasonable arrangements in combination with the design style and the growth needs of green plants. First of all, designers can give priority to using green plants to fill the indoor blank, and use green plants to supplement the unusable narrow space, thus improving the visual effect. Meanwhile, it can also reduce the use of indoor area by means of hanging and making hollow shelves on walls. Secondly, designers can also arrange green plants in combination with furniture, layout, etc. to promote the integration of green plants with floor lamps, balconies, sofas, etc., thereby improving the overall design sense and atmosphere sense of indoor space. Thirdly, the designer can consider using green plants as the background^[7]. Because the color and texture of green plants have certain particularity, they can form a dense effect no matter on the partition or the pavement. In this way, designers can use green plants to design TV background, restaurant partition, etc. Finally, the designer can also arrange green plants along the balcony. This can not only ensure that green plants get sufficient light, but also improve the safety of balcony use. In the specific layout process, vertical greening is the first way, which is not only in line with people's perception habits, but also conducive to the healthy growth of green plants. Meanwhile, some climbing plants, such as bracketplant and green vines, can better show their beautiful posture through vertical greening. Therefore, designers should carry out reasonable green layout, and improve the aesthetic feeling and artistry of interior design while creating a green living environment.

5. Discussion

To sum up, interior design is a highly comprehensive work, which involves psychology, architecture, art and other aspects. There are many unknown areas for us to explore and research. This paper mainly expounds the function and selection strategy of greening plants, hoping to provide reference for design colleagues.

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