When Glass Meets Intelligence—Research on the Innovative Design of Home Furnishings

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Abstract. This paper analyzes the importance of the use of glass technology in home furnishings in different stages from the origin of glass, and studies people's requirements of intelligence and modernization of living environment to a greater extent and the wide use of glass in innovative intelligent home-furnishings makes people's lives more humanistic and digital.

The History of Glass Origin

Ancient Roman Pliny's "natural history" describes: three thousand years ago, a full of crystal minerals containing "natural soda" of the European phoenician merchant sailing in the Mediterranean coast unfortunate stranded, the crew boarded the beach With a few pieces of "natural soda" to do the pot stall to cook, eat the meal to find the pot below the sand there are some bright and shiny things, this is the earliest glass. About the fourth century, the Romans used glass in the doors and windows, the eleventh century AD, the Germans invented the manufacture of flat glass technology. By 1291, Italy's glass manufacturing technology is very developed. In 1688, a man named Nuff invented the process of making large glass, from which the glass became ordinary items.

China's ancient glass is lead barium glass, unearthed ritual, seal and utensils and other glass patterns rich in Chinese characteristics, due to the purpose of production and technology, the traditional glass products in the ancient social life of the application of the main limitations in the ritual, Decorations and posing as pearls, precious stones beads, rings, etc., the texture of light brittle fragile, not high temperature, not used as food utensils, poor transparency, let alone today can produce optical glass and other high-tech products.

The Glass Technology in the Various Periods of Home Furnishings in the Extensive Use

Ancient

The original production of traditional Chinese glass is a substitute for natural jewelery jade, for the decoration of jewelry components and other utensils. Spring and autumn late introduction of foreign glass, led the development of Chinese glass art, modeling increasingly delicate. To the Han Dynasty, glass furnishings and daily necessities gradually become the mainstream, China's glass manufacturing industry development. Such as Guangxi Hepu County wind gate Ling Dong Han tomb unearthed string at the end of the glass, round mouth round bottom, belly decorated string pattern for three weeks, the whole body was translucent lake blue, the device structured and beautiful, color uniform alcohol and. From the Han Dynasty, the glass is used for architectural decoration in China. The Qing Dynasty is the heyday of the development of traditional Chinese glass art, with high quality and superb craftsmanship, such as glass celestial vases, vanguard ears, pen and cans.

Ancient Silk Road is the East and West glass culture exchange, glass products trade, glass technology communication bridge, is China's glass technology forward development important support.

British Museum of the ancient Roman Museum in nearly two thousand years of history Portland glass vase, known as "a bright pearl", is the glass family of the highest value, the most exquisite craft treasures, 24.8 cm high, blown Of the blue and white vase of the main body, showing the Greek mythology on the love of white relief characters.
Modern

Late in the late, the glass manufacturing process has been a great development, production increased significantly. Some folk artists set up factories, specializing in the production of glass paintings, mainly in Shaanxi Province, glass painting early for the palace building decoration, and later developed into a hanging screen, screen, Wai screen, lantern independent crafts. After the Qing Emperor Qianlong into the folk, the subject has flowers still life, family life scenes, the integration of Western painting, with a high artistic collection value.

Medieval Gothic architecture is the most important form of Gothic churches, towering tall and straight sagittal spire, the wall has the same sagittal high erected stained glass windows, as if the sky will be vacated. Gothic buildings on the beautiful stained glass windows full of all kinds of saints, round roses window symbol of heaven, the artists use dark red, blue, purple and ruby color to the church of the mortal beings from the Genesis to the end of the day Of the trial, from the condemnation to the last dinner of the salvation history, with a strong decorative beauty. Color glass flower window screen itself is very diverse composition, is the best indoor furnishings one of the supplies.

Contemporary

Crystal Palace is the most important symbol of the industrial revolution, held in London in 1851 the first World Expo exhibition hall, for the first time in the history of steel, glass as the material of the large buildings, creative use of the framework of the framework of the use of glass structure To the architectural design. IM Pei design of the Boston Hancock building, the facade all with light blue mirror glass, the building is like a huge mirror, reflecting the surrounding environment, has a very rich color changes in the dynamic, this is a successful application of modern architecture Glass wall of the successful example, but also to the indoor space to bring a good visual effect.

In 2010, the Shanghai Glass Museum, in the first floor and second floor space to build a volley of glass house, the cabin on both sides of the display of 1695 silver-plated glass bottles, each bottle has a laser engraved Chinese characters , These words constitute a glass-related romantic love story -"Glass Hill", and embellishment which is some of the internationally renowned luxury brand limited edition works of art. This design is both interior design, public art design, but also furnishings art design.

Tiffany art lighting inherited the nineteenth century American art master TIFFANY original style, gentle, antique. It is made of high-grade color glass inlaid welding, exquisite workmanship, smooth pattern, practical luxury, today many people will choose a Tiffany lighting as the focus of home decoration furnishings embellishment. Applicable to Chinese, Western, nostalgic style furnishings style, all handmade. The lampshade is made of high-grade stained glass, the surface is not very smooth, and most of the pattern, in the home furnishings, Tiffany art lighting is often one of the soul of the entire interior design.

Smart glass in the Furnishings of the Innovative Design and Use

What is Smart?

It is generally believed that intelligence refers to the comprehensive ability of individuals to rationally analyze, judge and carry out objective things and effectively deal with the surrounding environment. Some people think that intelligence is the sum of multiple talents. Smart technology is a lot of philosophers at home and abroad, scientists have been trying to explore and study the problem.

The Characteristics of Smart Glass

Smart glass is made in the middle of double-layer transparent glass filled with polymer composite materials made of polymer molecular material with the temperature or the intensity of the applied electric field changes, according to the outdoor temperature or the application of electric field strength changes to change their own Of the light, infrared transmittance, so as to adjust the indoor temperature, light changes.
Smart Glass in the Home Furnishings in the Design of Innovative Use

(1) do not touch the water glass technology

Hydrophobic nano glass self-cleaning paint, can be used for all glass products, such as curtain wall glass, doors and windows glass, shower room glass, automotive glass, architectural glass and household ceramic products. This kind of nano-coating itself has a rejection of water performance, once the rain, you can make the glass surface to form a sliding water and slide itself to achieve the purpose of self-cleaning glass. This non-water glass research and development, to the interior design of home furnishings has brought a lot of convenience, widely used in various types of glass furniture, bathroom partitions, indoor walls and so on. The

(2) Temperature control glass technology

Summer can block the infrared light, and winter infrared light can be through the temperature control smart glass, can effectively save energy, the indoor temperature to maintain a relatively stable state, so that people in the interior space to maintain a reasonable degree of comfort.

(3) Can replace the curtain of the glass

In a television program, we saw a bathroom surrounded by a transparent glass, people are hesitating is not easy to go into the time, it was demonstrated into the bathroom and push a switch, transparent glass instantly become blurred hair glass, so peace of mind convenient, End out of the bathroom, the glass is reduced to full transparency. The mystery of this glass is that it is two ordinary glass in the middle of the layer of liquid crystal liquid film, people only need to adjust the voltage level to adjust the glass transmittance, thus replacing the curtain opening and closing.

(4) Intelligent glass in the home furnishings in the design of innovative use

Today, smart phones and tablet PCs are extremely popular, and our lives in the future may work with intelligent interactive technology to penetrate all aspects of life. Corning's short film "The Day by Glass" depicts an intelligent life scene with glass as a medium: "In Amy's room, through his tablet, finishing his favorite things. In the school to learn, manage his schedule, all this is all in a very thin and highly durable and has a special optical design of the glass to complete the Amy bedroom window is electrochromic glass, this glass can be from the need for opaque Into a transparent state. Closet door is Amy Tablet PC-driven display, all of the above procedures are used in Amy's Tablet PC implementation, the whole door for the large-screen display, it has its own operating system, take up space Small, can intelligently identify Amy's Tablet PC device, according to the principle of approximation and other relevant principles, to the best way to display the contents of the display should be displayed. Large endless display device to Amy's day to become true, in the Tablet PC and large display perfect conversion between the classroom, the monitor is not only in front of the classroom, each The table also has a large area, seamless, thin, durable glass. Low power consumption, small footprint operating system, can also send information, and can be used as a personal computing device display. The whole class for activities with the table, But also a large area of seamless design, logical control, durable, multi-touch glass, although it looks like in science fiction, but this has become true, the future of the classroom can be equipped with class activities and interactive wall The Amy's Tablet PC drives the infinite wall display in the room and shares his bitterness with the rest of his family. When the night falls ready to sleep, the glass fiber light is dark and the room becomes quiet. The day of the glass is over.

This is the future of human communication and the use of technology to change the best model, but also on the ubiquitous display, they use the media of this glass, open operating system, sharing applications, cloud storage, wireless bandwidth, to the human Life brings infinite beautiful day.

The Conclusion

Chen Danqing in the "talk about the art of home furnishings," a text, said: "What kind of things inside the house? Furniture omitted, the single wall, I would like to hang Japan's two mysterious inch of fine printed Ni Zan, Guo Zhongshu, Li Xixun landscape, Zhu In the other walls, I would like to commit my own intention to copy the paintings of Martha's, Caravaggio, Hals, and Poussin. The wall will
always have several faces, I will be collected for many years a good picture of the arrangement of hanging, from the top and the ground. "This seems to be a traditional home furnishings of the ancient way, for many literati like, older ones even more. Based on this, the future is not able to use a smart way to make Mr. Chen convenient and satisfied with his hobbies? Home furnishings at any time to meet people's stage change or timeliness changes.

With the rapid development of computer technology, communication technology, network technology and information technology, people want to be more modernized, comfortable and safe in living environment. The future intelligent home interactive system can meet people's wishes well. In addition to being safe, convenient, comfortable, energy efficient and entertaining, it is a set of audio, video, computer functions, communication functions, home automation, control, security technology and All the different equipment applications and functions connected to one of the living system, more people accepted and needed.

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