

Kiln Formed Glass and Its Use in Public Parks in Egypt

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Key words

1= glass fountain 2= Kiln formed Glass 3= glass floors.

Abstract

Glass is a remarkable material, it's perhaps the most topical and fascinating material in modern architecture, this research mentions that there are many areas in Egypt-(Public Parks) - need to exploit Kiln formed Glass technology to serve Egyptian society and keep up with civilization's progress. Nowadays Egyptians are suffering from many environmental, social, economical and cultural problems and the most important of these problems that affect negatively the Egyptian society is the problem of neglecting public utilities such as schools, hospitals, sidewalks, streets and public parks, which lead to a lot of stress and nervousness, therefore this research is concerned to throw some light on an executed project at a park in the Al Massa hotel in Nasr city, Cairo, Egypt as shown in the figures and show how some of its components like floors were rephrased also a water fountain and a partition were executed by kiln formed glass, So as we can achieve the aesthetic and functional aspects to initialize comfort and joyous for the Egyptians (6ref.).

Introduction:

Outdoor glass fountains enhance any garden or natural space by incorporating both the soothing sounds of water and landscaping dimension. Beautiful outdoor glass fountains can fit into any landscaping, adding the extra element of a water feature for a complete design. They enrich the garden or outdoor living area with soothing, mesmerizing water sounds and the wonderful aesthetic form resulting from the blending of kiln formed colored glass and light. Additionally, fountain sizes can be small enough for a tabletop to large enough to make an impression in a large courtyard and everything in between ⁽¹⁾. With their distinctive and elegant style, these magnificent outdoor glass fountains enhance any outdoor setting with beauty and grace. Many results indicated that city landscape planning may affect the health of town-dwellers. Statistically significant relationships were found between the use of urban open green spaces and self-reported experiences of stress – regardless of the informant's age, sex and socio-economic status. The results suggest that the more often a person visits urban open green spaces, the less often he or she will report stress-related illnesses. The same pattern is shown when time spent per week in urban open green spaces, Outdoor areas that provide environments free from demands and stress, and that are available as part of everyday life, could have

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significant positive effects on the health of town-dwellers.⁽²⁾ Numerous factors influence the relationships among green space, crime, and violence. Additional research and standardization among research studies are needed to better understand these relationships⁽³⁾, another study as a project will produce a more robust evidence base on links between exposure to natural outdoor environment and human health and well-being, in addition to a better integration of human health needs into land-use planning and green space management in rural as well as urban areas⁽⁴⁾. **So the research's problem is:** some Egyptian designers do not take the advantage of glass technology optimization in order to improve the Egyptian public taste and health. **The research's goal is:** taking advantage of kiln formed glass in rephrasing some gardens' elements. The outdoor glass fountains will create instant relaxation and beautify the surroundings and there are many options that hang on the wall or patio as well as floor standing models with a center mounted glass face or rear mounted mirrored face. All of these outdoor fountains glass look perfect on a deck, patio or in gardens and can be used indoors as well, so **the importance of the search coming from:** rephrasing the garden's floors and executing a water fountain and some glass partitions by kiln formed glass which positively affects the Egyptian public taste and health .

Garden design:

Garden design is the art and process of designing and creating plans for layout and planting of gardens and landscapes. Garden design may be done by the garden owner themselves, or by professionals of varying levels of experience and expertise. Most professional garden designers are trained in principles of design and in horticulture, and have an expert knowledge and experience of using plants. Some professional garden designers are also landscape architects. Garden owners have shown an increasing interest in garden design during the late twentieth century, both as enthusiasts of gardening as a hobby, as well as an expansion in the use of professional garden designers⁽⁵⁾.

Elements of garden design:

Whether a garden is designed by a professional or an amateur, certain principles form the basis of effective garden design, resulting in the creation of gardens to meet the needs, goals and desires of the users or owners of the gardens. Elements of garden design include the layout of hard landscape, such as paths, walls, water features, sitting areas and decking; as well as the plants themselves, with consideration for their horticultural requirements, their season-to-season appearance, lifespan, growth habit, size, speed of growth, and combinations with other plants and landscape features. Consideration is also given to the maintenance needs of the garden, including the time or funds available for regular maintenance, which can affect the choices of plants regarding speed of growth, spreading or self-seeding of the plants, whether annual or perennial, and bloom-time, and many other characteristics. The most important consideration in garden design is how the garden will be used, followed closely by the desired stylistic genres, and the way the garden space will connect to the home or other structures in the surrounding areas. All of these considerations are subject to the limitations of the budgetary concerns for the particular project and time. Budget limitations can be addressed by a simpler more basic

garden style with fewer plants and less costly landscape materials, seeds rather than sod for lawns, and plants that grow quickly; alternatively, garden owners may choose to create their garden over time, area by area, putting more into each section than could be handled all at once. Figure (1) shows Al Massa hotel's garden.



Figure (1) shows Al Massa hotel's garden

Figure (2) shows the footpath of the Al Massa hotel's garden before rephrasing it by kiln formed glass; Figure (3) shows the footpath of the Al Massa hotel's garden after rephrasing it by blue kiln formed glass with some white glass frit added. Figures (4, 5, 6, and 7) show different proposed designs for the glass fountain at the same place (Al Massa hotel). Figure (7) was chosen to be the executed one, light and dark blue glasses were used with light and dark brown glass sandwiched. Figure (8) shows the construction of the executed fountain. Figure (9, 10 and 11) shows the glass fountain under construction, figure (12) shows a night shot for the glass fountain. Figure (13) shows a kiln formed glass partition at the same hotel.



Figure (2) shows the footpath of Al Massa hotel's garden before rephrasing it



Figure (3) shows the footpath of the Al Massa hotel's garden after rephrasing it by kiln formed glass

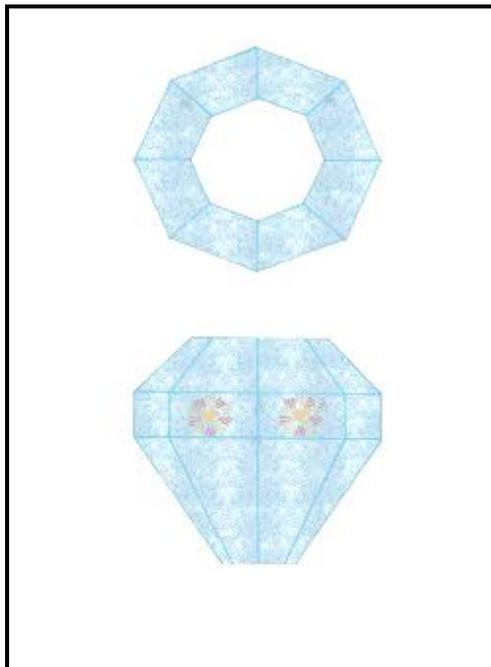


Figure (4) shows one of the proposed designs for the glass fountain

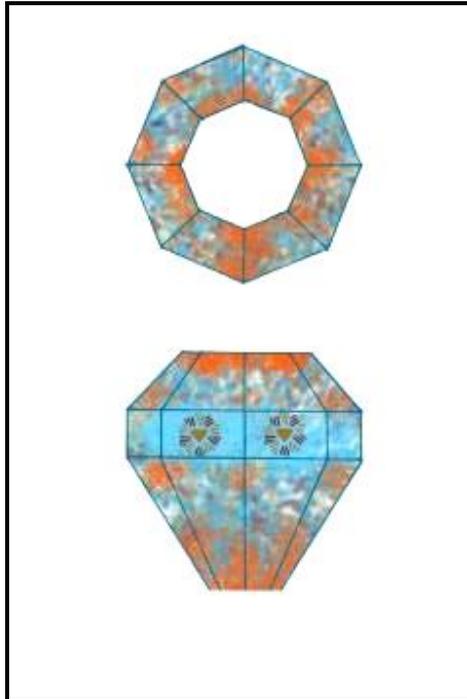


Figure (5) shows one of the proposed designs for the glass fountain

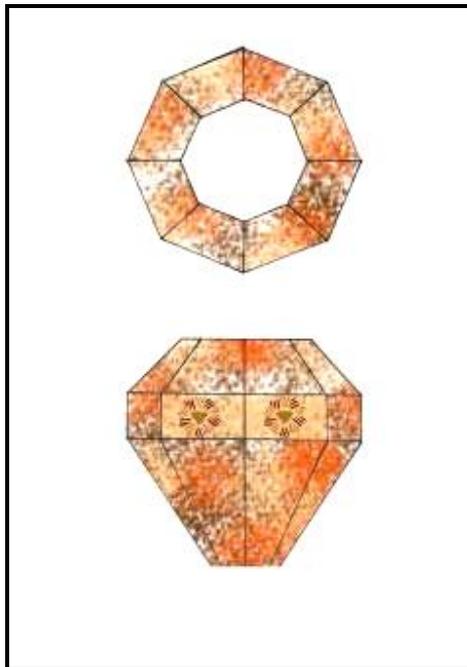


Figure (6) shows one of the proposed designs for the glass fountain

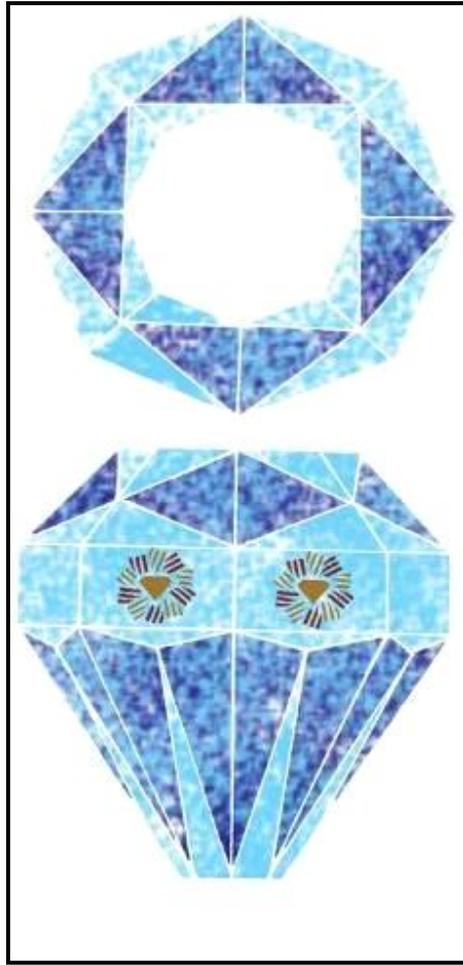


Figure (7) shows one of the proposed designs for the glass fountain and the executed one



Figure (8) shows the construction of the executed fountain



Figure (9) shows the glass fountain under construction



Figure (10) shows the glass fountain under construction



Figure (11) shows the glass fountain under construction



Figure (12) shows a night shot for the glass fountain



Figure (13) shows a kiln formed glass partition

Glass maintenance

The best cleaning method is a quick squeegee from time to time that will keep glass looking brand new for many years. The applied surface protection helps repel stains caused by hard water, making glass 50%-90% easier to clean. The few deposits that do adhere to the glass need to be removed every 2-4 weeks with a general glass cleaner. We recommend Spray Way Glass Cleaner⁽⁶⁾, we no longer need to clean glass with harsh and dangerous chemicals, when cleaning treated glass, be careful not to use any rough, gritty, highly acidic or abrasive cleaners.

Conclusion

Applying this research affects both functional and aesthetic standpoints of constructing gardens; it also has a positive effect on human beings regardless their age where children are as much affected psychologically by the surrounding environment as adults which was shown by many previous researches.

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