

## **Experimental Concept Design using Transparent Concrete Technology in Interior Architecture**

**Amira Saody Mohamed Abouelela**

**Assistant Professor - Faculty of Education - King Faisal  
University  
Faculty of Fine Arts - Decor Department- Interior  
Architecture - Alexandria University**

### **Abstract:**

The technological evolution in materials technology resulted in modern materials developed its improvement, and preservation of the environment and energy. In addition, to the creative side in the design process, to achieve modern environmental design thinking. This commensurate the environmental requirements. From here emerges the search problem on how to use the traditional construction materials, to become as transparent concrete technology, developed through the amendment by the addition to the concrete work on changing its characteristics and advantages. This opens the different fields of applications in architecture, interior architecture, furniture design creative and innovative thinking, interactions between the building and its environment. As the research aims to identify the material transparent concrete (as the building material developed) and how to combine the advantages of concrete construction with permeable natural light, this reduces energy consumption. With rapid urbanization in line, with population growth and many nearby buildings from one another. This reduces the passage of natural sunlight by developing special concrete material and construction materials focus study.

It is considered the traditional building materials of solid gray but through technological development they are no longer heavy construction materials (concrete gray). They developed an innovative and dynamic aesthetic that is more resistant and lighter. White or other colors (as the case design of this type of concrete) is able to adapt to new challenges and dubbed translucent concrete by optical fiber or by adding developed fiber glass in concrete mixture. Transparent concrete excels features on the concrete, where regular force and visual beauty uses bio-architecture that gets the architect for the building. This new kind of building materials can be used as a building material for the development of green architecture. They are also insulating materials that can be used in construction in the harsh climate. According to their ability, whether insulation at high temperatures or cold, while keeping the daylight, can be used in many applications that will be discovered. You will change the style of architecture and interior architecture in the future.

**Keywords:**

Transparent, Concrete, Optical Fiber, Energy savings.

**Introduction:**

The technological evolution in materials technology resulted in modern materials developed its improvement, and preservation of the environment and energy. In addition, to the creative side in the design process, to achieve modern environmental design thinking. This commensurate the environmental requirements. From here emerged a problem research about how to hire construction material as the transparent concrete technology developed by modifying the materials and adding other materials to the concrete work. This happens on changing its characteristics and advantages which opens the different fields of applications in architecture, and interior architecture, and furniture.

Research objective is to identify the material transparent concrete as a building material developed, and how to combine the advantages of concrete construction, with permeable natural light. This reduces energy consumption and thinking about transparency and transparent materials do not come to mind. Yet, thinking in concrete as a material of most common construction materials the word concrete is something solid overcast with heavy weight. This is simple in appearance but is now seeing evolution in materials technology and improving at a rapid pace and her signature material progress every day is Traditional building material concrete shape, hard-boring gray.

But now, this appears in the form of round columns and unique shapes that are selected for their durability and strength. However this has left modern developments in articles edited and added some material to the concrete, which helped to change the functional and aesthetic impact of concrete through light transparent concrete ' LiTraCon '. This is used in architecture and interior architecture as material of outer and inner construction materials after adding optical fiber which helped to achieve the transparency and the ability to transfer natural light. This happens while maintaining privacy space designed which in addition to the possibilities concerning environmental, functional and aesthetically reduces the costs of heating and lighting design visual impact by using this article gives a beautiful design. This also gives an indirect connection between domestic and spreads between inner space and outer nature.

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### **Statement of the Problem:**

Research problem in how to hire construction material,

As the transparent concrete technology developed by modifying the traditional construction materials.

Also adding other materials to concrete change and characteristics of the qualities and advantages which opens the different fields of applications in architecture and interior architecture and furniture.

This happens particularly through innovative design ideas therefor check the interaction between the building and its environment.

### **Research questions:**

-What is the impact of technological development on the concrete?

-What are the different application areas transparent concrete?

-How can employ transparent concrete technology in dealing with matters related to provide natural light and energy saving and sustainability of conservation?

-Is it possible to combine the advantages of concrete construction with the desire to have more daylight in buildings?

### **Study Significance:**

Importance of research: the importance of Significance of this research Study through:

- recognize the role of the new materials used in construction ' transparent ' concrete
- identify the impact of technological development on the concrete.
- How to employ transparent concrete in architecture and interior architecture?
- Ability to achieve creative side through transparent concrete in modern architecture.

### **Objectives:**

- Importance of research: the importance of Significance of this research Study through:
- recognize the role of the new materials used in construction ' transparent ' concrete
- identify the impact of technological development on the concrete.
- How to employ transparent concrete in architecture and interior architecture?
- Ability to achieve creative side through transparent concrete in modern architecture.

### **Hypotheses of research:**

Research hypotheses is that the possibility of combining the advantages of the construction of concrete research assumes the following:

- save energy and preserve the environment.
- Provide more daylight in buildings through the use of concrete as a building material and external transparent.

### **Methodology:**

Research hypotheses is that the possibility of combining the advantages of the construction of concrete research assumes the following:

- save energy and preserve the environment.
- Provide more daylight in buildings through the use of concrete as a building material and external transparent.

### **Results:**

- concrete of heavy materials become gray-looking beauty and dynamic research and innovation was created newly developed concrete more resistant and lighter, no longer.
- Concrete is able to adapt to new challenges as compared to normal concrete.
- Usage gives a better appearance of the architect of the buildings.
- Transparent concrete can be developed by adding fiber optic or large fiberglass Qatar in the concrete mixture.
- To light transmission through translucent concrete property depends on the relative size of optical fibers in concrete mixture.

-Transparent concrete does not lose its strength compared to normal concrete and also has a very dynamic property aesthetically.

-Can work on the concept of energy saving.

-Transparent concrete blocks can be used in many applications and implemented in several forms where strength and durability gravity and the art form but the only flaw affected her. - Transparent concrete can be employed in internal and external walls of prisons working on being able to monitor prisoners inside and monitoring internal and external movements as escape attempts.

### **Recommendations:**

-The study recommends the need to pay attention to the development of traditional and most common building materials

-the need to employ transparent concrete functional spreads. (As transparent concrete as material of appropriate building materials in green architecture).

-Variety of applications using transparent concrete benefit from the design potential and functional as possible.

-Transparent concrete technology is promising to field applications in civil infrastructure.

The study recommends that there is needed attention to research and development in the technology of traditional materials and design potential detection.

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Received: May 2020

Accepted: June 2020