

Climate Changes and their Impact on The Design of Plaster Windows in Modern Mosques

Assist. Prof. Dr. Azza Osman Bakr

Assist. Prof. at the Faculty of Applied Arts, Damietta University

azzaosmanbakr@gmail.com

Abstract:

Architectural design is one of the disciplines that is most concerned with the study of weather and climate and their effect on homes, cities, countries, and others; since it has a direct relationship with the impact on urbanization, cities, dwellings, gardens, etc., which concern humans and nature in the first place. It takes into consideration the factors of harmony and balance, and that the determinants of the surrounding environment represent a necessary need to provide comfort, safety, privacy, and the continuation of the harmonious development of man and place. Thus, the optimal employment of the available and potential climatic and natural elements takes modern balanced methods, and the compatibility of the environment and urbanism is a necessary necessity to achieve a homogeneous urban system.

Architectural design specialization is linked to a devoted relationship with the climate; as there is no project of any kind except that it is related to the climate, in terms of natural lighting, solar radiation, the height of the sun in summer and winter, wind movement and direction, rates and types of precipitation, humidity and temperatures, all of which are studied over the four seasons. The climatic effects also have a direct impact on the shape and height of the building, the materials included in its design, the shape and area of window openings, the degree of reflection of the glass used, and the plants used in the gardens, their types and shapes...etc.

Architectural openings are considered an essential source of communication between the internal and external space so, the architects had great attention to the openings from the aesthetic, plastic and functional point of view, in an attempt to make a fit in the interdependence relationship between the inside and the outside. It became an entrance to the design of the façades, and the shading networks turned into an essential element in the design of the architectural block. In this research paper, the focus will be on the use of gypsum openings in mosque architecture, as applied to one of the modern mosques, and the clarification of the need to take advantage of the heritage to create contemporary architecture that expresses the era; since this art has developed in terms of diversity, unity, difference, contrast, repetition, and the achievement of architecture compatible with the current era and respects its users.

Keywords:

Climate Changes, Plaster, Glass Art