

SOLUTIONS FOR USING KINETIC SHELLS IN THE BUILDING FACADE IN TERMS OF PERFORMANCE AND ENERGY CONSUMPTION OPTIMIZATION

Fereshteh Karimieyvanaki

Faculty of Architecture, Istanbul Bilgi University, Istanbul, Turkey

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ABSTRACT

As an integral part of the building, the building shell is always considered as a level of response to the climate that has the greatest impact on individuals in terms of performance and climate comfort. In the design of the building, unfortunately, little attention is paid to the functional aspects in terms of mobility and geometry, and more emphasis is placed on the aesthetic aspect. This study was conducted to investigate the kinetic facade in terms of performance and environmental comfort. Functional sciences on kinetic facades and architectural theories concerning shells were first reviewed, effective documentation on shell design was then analyzed by functional method, and the results were finally presented. This was a qualitative descriptive-analytical study in which the solutions of using kinetic shells and controlling climatic factors affecting the building through the kinetic design approach were examined.

KEYWORDS: *Energy Consumption Optimization, Shell Climate Design, Functional Methods, Kinetic Facade*