

Typology of Khashkhashis (stiffeners) in discontinuous double-shell domes

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Abstract: Discontinuous double-shell dome is one of the different types of domes in Persian architecture which consists of four elements: outer shell, inner shell, drum and stiffeners. Among these, stiffeners which are called 'khashkhashi' in Persia are brick-made walls, connected to the outer shell, which can be observed in different styles. Diversity and multiplicity of this element, used in a wide spread area and access difficulties have made it less known among the others. This paper aims to introduce different types of stiffeners based on field surveys; A brief introduction is given on discontinuous double-shell domes at first and it goes on to explain different types of stiffeners in domes, built during Timurid (1491 to 1506) to Safavid era (1501 to 1722), in Khorasan, central Iran and Iraq. Finally, Based on Structural and formal characteristics a typology of stiffeners in the selected area is given using comparison of study findings.

Keywords: discontinuous double-shell dome, stiffener (Khashkhashi), Persian traditional structures.

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