

The Architectural Characteristics of the Seljuk Domes in Isfahan's Mosques

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Abstract

Seljuk Iranian domes are among the most prominent structures in their heritage; this study is an attempt to examine and explore the underlying construction techniques, structural features, and concepts of the surviving examples of the Seljuk domes of the mosques in Isfahan. The construction techniques which have used for these domes have been based on precise information in terms of science and engineering. The aim of this research is also to track the architectural, structural and decorative development of Iranian domes and the possible factors affecting them, as well as technical methods that clearly contributed to the formation of rules and foundations for Seljuk domes. On the other hand, among the many factors that affected Seljuk architecture was the scientific renaissance that Iran witnessed during the Seljuk era, as it was an important factor in the remarkable architectural development of domes compared to the previous eras. Iran was not the only one that reaped the results of this architectural renaissance, but the influence of the Seljuk School of domed chambers extended to other Islamic countries such as Iraq, Syria, Egypt and Turkey.

The Seljuk in Isfahan developed the transition zones of their domes; the most important feature was the combination of the tri-lobed arch with a pointed frame. The tri-lobed squinches can, therefore, be regarded as the hallmark of the domes of the Mosques of Isfahan. The Seljuk mastered this technique and put it to good use, not only a solution to the problem of geometric transition but also addressed it in a high-level artistic manner. The Seljuk tri-lobed squinch consists of four niches.

Keywords:

Dome, Transition Zone, Isfahan, Domed chamber, Seljuk, Tri-lobed squinch.