Traditional Wooden Buildings in Iran

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ARCHITECTURE IN PAST EPOCHS

Architects of ancient Persia, Egypt, Greece, Rome, India and China, as well as those of the Middle Ages and of early America, have used wood to enhance the artistic and aesthetic beauty of historical buildings. These factors continue to be a foremost consideration in the minds of architects. Of all building materials, wood has fostered the warmest atmosphere, with highly artistic and aesthetic characteristics. Wood has been used to fulfill man's spiritual and creative needs in places of worship, palaces and historical buildings.

The Temple of Solomon, which took 7 years to build, was completed in 1012 BC, when there were few craftsmen with the skill to hew timber like the Sidonians. The roof and walls of the temple were panelled with cedar carved with figures of cherubim. The floors were of cypress wood overlaid with gold; the doors were of olive wood carved and inlaid like the walls. The folding temple door was of cypress on posts of olive wood, likewise carved and gold inlaid.

Architecture of Ancient Iran During the Achdemenian Dynasty

Persepolis, the largest palace and ancient capital of the Achdemenian dynasty, was built in 450 BC. The roof was panelled with cedar and walnut; the posts were of

cedar, oak and walnut. In 1958 a few samples of charcoal were found in the ruins of Persepolis, and although the samples were almost disintegrated, anatomical studies revealed that they belonged to the genus *Cedrus*. This wood was imported by Darius the Great from Lebanon to Susa and Persepolis for use as posts and beams. It has also been conjectured that *Cedrus deodora* Lood, or Kashmere cedar, was imported from India and Pakistan for use as posts and columns in the construction of Persepolis.

Architectural Styles During the Safavid Dynasty (506-1730 AD)

Manifestations of the unique architectural styles of Iran appeared during the period 500-1730 AD. Many palaces were built by the Safavid dynasty during this era. The golden prime of Iran's architecture was reached in the Middle Ages during the reign of Shah-Abbas the Great. This versatile, dynamic monarch decided to build himself a capital which would bring added glory to his vast empire. Out of that golden dream emerged a great city, Isfahan — "half the world," as its proud citizens called it (and some still do). Wooden columns of sycamore were used in the palace of Ali-Ghapou. The large door of this palace had been brought from the shrine of Ali in Hajaf by Shah-Abbas the Great in order to maintain his empire by the power and virtue of Ali. Thus it is called the Door of Ali Palace.

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Chehel-Sotoun (the Palace of Forty Columns) was built in Isfahan during the reign of Shah-Abbas II (1057 Hejri, 1647 AD). The roof, which is panelled with plane and walnut, is similar to that at Persepolis. The 20 posts are of plane (Sycamore — *Platanus orientalis* L.). Chehel-Sotoun is the largest of all existing wood frame buildings in Iran (Fig. 1).

Fig. 1. Chehel-Sotoun, the Palace of Forty Columns.

Ali Qapu is a seven-story palace located in the Nagash-e-Jahan square. It was built by the order of Shah-Abbas the Great in the early years of the 11th century of Hejri (17th century AD). The posts are of plane. The interior decoration was improved and altered in 1054 Hejri (1644 AD), the period of Shah-Abbas II, by a famous artist called Reza Abbassi.

MODERN ARCHITECTURAL TRENDS

Today the trend is toward erecting smaller buildings exerting a greater influence in community life, such as modern educational and recreational facilities. The use of wood in many structural and decorative forms harmoniously binds present-day Iran to the past. As new techniques and building concepts are developed, a great need arises for the use of wood in many structural and decorative forms (Fig. 2).

One of the best and most economical of modern structural and decorative techniques is glued, laminated wood construction. Exposed, glued, laminated wood arches provide desired architectural beauty. The exacting requirements of educational designs are effectively met in graceful lines and high structural performance. Economy,

appearence and ease of construction have made the laminated rafter type of construction popular. Its inherent strength, performance and economy comprise a combination seldom matched.

Lamellar construction is another type of wood roof construction that needs no ceiling coverage because of the decorative effect of the lamellae. Lamellar construction is not often used in agricultural buildings, but is popular for recreational buildings and other places of assembly.

One of the most important engineering advances in the use of wood for home construction has been the development of the trussed rafter system of roof framing. The connector system of timber construction is highly popular with architects for smaller buildings. Both exposed and concealed roof construction is possible with trussed rafters, triangulars, scissors, and trusses.

Present Traditional Wooden Houses in the Caspian Region

Iran is now in a great building period; construction ranges from small rural farmhouses to large educational and recreational buildings. Wood is in plentiful supply in the Caspian region; therefore, it is one of the most economical materials available for home construction. It is a widely-used material, having the best record of satisfactory performance. Improvements in farm housing that have been developed in the last few years shows that the home can be much more satisfying for living and growing happily, healthfully and graciously, with timber the only building material renewed by nature as we use it. Because wood is a natural and familiar material, it imparts a feeling of security and well-being. Its many forms and colors provide beauty in both exteriors and interiors of modern homes.

Fig. 2. A wooden structure in a small Iranian community.