Carpentry

For traditional Japanese carpentry the most typical are buildings of wood with massive roofs and relatively weak walls. It is not surprising, if to take into account that Japanese climate is mild and heavy rains are very often. Besides, Japanese carpenters had always to be aware of earthquakes danger. Even nowadays, Japan is a woody country, and in the past the quantity of forests was even more. Preparation of materials and building from stone demanded much more efforts than usage of wood.

Choice of material also was determined by climate – long hot and damp summer and quite short and dry winter. To help people to bear heat the buildings were made light and opened, with elevated floor and roof, which had long cornices, protecting from the sun and frequent rains. Stone buildings didn’t allow providing natural ventilation of the rooms. Wood doesn’t become so heated during the summer period, and doesn’t become very cold in winter. The wood also better absorbs moisture and what is more important, it withstands earthquakes better, and the earthquakes happen in Japan very often.

It is also important that you can easily take to pieces the wooden building and to assemble it in anther place; - such thing is very difficult (or almost impossible) in relation to that made of stone. Almost all Japanese buildings present combination of rectangular elements (S Azby Brown, p. 58). Circumferences are used only in the upper parts of constructions of two-storied pagodas. In such a way, all buildings are combinations of supporting-joist structures with axled symmetry. Diagonals to make the buildings rougher were used very rarely, - it was compensated at account of usage of more rough wood – cypress and cedar (Kiyosi Seike, p. 17).

Shinto temples of Ise and Idjumo are quite famous among of those buildings which we can see nowadays. They are made of wood, with almost flat span roofs, which overhang within the borders of building and protect it from bad weather. Idjumo temple is a huge building, with its height 24 m. Staring from Ise temples in Japanese carpentry prevailed tendency to horizontal development of space. It was more increased by characteristic roofs of buildings. Tiled roof with wide cornices is the peculiar feature of Chinese carpentry.

Chinese carpentry in Japan was used mostly for building of Buddhist monasteries and temples, which are the very important part of cult architecture in Japan. When Buddhism came to Japan, it influenced development of Japanese art, especially architecture. Japanese Buddhist pagodas, their multi-level roofs with broaches, made the same impression as those of gothic temple; they spread universe feeling, uniting the blue divine sky and power of great earth. Buddhism brought to Japan not only new architectural forms; new technique of building also was developed. The most important technical novelty was making of stone foundations.

In the ancient Sintoist buildings all weight of building felt upon piles, put into the earth, what, naturally, limited possible sizes of building to a great extent. Starting from the period Asuka (VII century), roofs with curved surface and elevated angles become more popular –without them we cannot imagine Japanese temples and pagodas. Special type of planning in temple complex is created for Japanese temple building. Japanese temple, doesn’t matter it is Sintoist or Buddhist, - is not a separate building, as we are used to think, but the whole system of special religious buildings.

It consisted of sevel elements – seven temples: external gates (Samon); the main or Golden temple (Kondo); Temple for sermon (Kodo); Drum or Bell tower (Koro or Sero); Library (Kudzo); Treasury (Sesoin); Multi-level pagoda. The most ancient wooden Buddhist building in Japan is Khorudji ensemble in Nara city, built in 607. But even in this temple we can notice Japanese coloring. In contrast to cornices, which are highly elevated (the characteristic feature of Chinese architecture), descending lines of roofs are turned so elegantly, that they seem to be almost horizontal.

Further the width of cornices is even more increased. In such a way, focus on horizontality with help of bearings from Chinese carpentry created peculiar image of Japanese architecture. Actually, all ancient buildings in Japan are made of wood. It is peculiarity of East Asian carpentry, which is stipulated by plenty of reasons. One of them, which is quite important, - seismic activity. But the matter is not only in durability (Kazuo Nishi, Kazuo Hozumi, p. 50-52). Wood allows uniting, combining together deeds of people’s hands and nature – surrounding environment in optimal way.

Harmonic combination of architecture with landscape, consider Japanese, can be possible only in case when they consist of one material. Japanese temple-monastery is united with landscape. The nature is a part of carpentry and carpentry is a part of nature. Sometimes wooden force intervenes into the art. Trunk of big alive tree becomes supporting point in traditional Japanese hut or a column in village sanctuary, preserving untouched primary beauty of its facture. Inside of monastery yards you can find an interesting garden of stones, the garden of thinking and concentration.

A bright example of Japanese carpentry is temple complex Todaiji, built in 743-752. At those time Buddhism was announced the governmental religion of Japan. Remember that beauty, majesty of architecture complexes, dedicated to “ unknown God” always had primary meaning for conversion into the new belief of heathens and was the most important feature to create a new cult. So, emperor Semu – exactly with his name is connected triumph of Buddhism in Japan – decided to build in his capital, Nara city, a building whith will not have equal in any other place of the world. The golden temple (Kondo) of Todaiji monastery should become such building.

If buildings of Khoruji ensemble are the most ancient carpentry building in the world, the Golden temple of Todaiji is the biggest wooden building in the world. It is difficult to imagine that this temple has heigh of modern 16-floor building (48 meters) with foundation 60x55 meters (Michiko Young, David Young, Tan Hong Yew, pp. 112-119). They build this temple during six years. The size was determined by the height of the main “ inhabitant”: the temple should become the earth house of legendary the Great Buddha – the unique monument of medieval Japanese sculpture.

From outside the building seems to be a two-storey building because of two majestic roofs. But the temple has one internal space, where Saibutsu sits (Hideo Sato, p. 116-125). Unfortunately, the wood is a short-lived material. For the last centuries the temple was on fire for two times (in 1180 and 1567), but each time it was reconstructed. Japanese architects reconstruct ancient buildings as they were made, so we can consider that the temple looks as it was in ancient times. Yakushiji is one of the most ancient temples in Nara – it was founded in 680 by order of emperor Temmu.

He wanted to build the temple to pray to Buddha – healer of Jakusi – for recovery of empress Dzito, which suffered from eye disease. The prayers were successful: the empress recovered from her disease. Still, when the emperor was taken ill, any prayer wasn't able to help him and later he died. Nevertheless, Yakushiji, announced as official temple, was under permanent protection of emperor's court. In 718 Yakushiji was transferred to Nara and during the Nara's epoque Yakushiji was one of the most influential temples, which competed with Kofukuji. Time wasn't favorable to the temple and is was set on fire for several times.

The majority of its buildings, which we can see today, relate to XVII century. Exception is only the Western pagoda, which remained safe in spite of numerous fires, and which is one of the rare examples of early Japanese carpentry nowadays. Doesn't matter from which direction you come to Yakushiji; pagoda is the first thing you see and it server correct guiding line to the temple (Traditional Architecture, p. 2). Yakushiji pagoda is very peculiar in its carpentry relation: it is the only one pagoda which was built in 680 (later than Khoruji, but earlier than Todaiji) and which is also located near ancient Nara.

Yakushiji pagoda has traditional architectural peculiarities which are common for pagoda, as well as considerable differences. Peculiarity of this very high tower (35 meters) is that actually it has only three floors, but it seems to have six floors. It has six roofs, but three roofs of smaller size have only decorative character. Their alternation with bigger constructive roofs gives to the tower peculiar toothed silhouette. In Yakushiji ensemble the

central building is the main hall, and two pagodas became decorative element of the whole complex.

The whole building is characterized by lightness, finesse of contours and grace, which makes it the most beautiful pagoda of those times (Japanese Culture and Building Craft p. 1). Japanese constructions in Japan, in the country of wooden architecture, rarely are heavy and massive. Some light and elegant details are always present; they balance the whole composition. For example, such balance is a Phoenix bird at the Golden pavilion. For the pagoda it is a steeple, continuation of central mast, which is directed from the roof of pagoda to the sky.

Steeple is the most important detail of pagoda and reflects it’s deep philosophic symbolic to a great extent. Steeple of Yakushiji pagoda is very beautiful and peculiar (its height is 10 meters) with nine circles around, which symbolize nine heavens – the point which is similar to Buddhist and Christian cosmology. The ending of steeple – “ phial” represents the stylized image of flame with twisted in its tongues figures of angels in fly-away clothes. A “ Phial” has resemblance of nimbus of Buddhist saints with silhouette and symbolic.

The focus of saint power of temple is exactly in this “ phial”. The whole building, which is quite “ heavy”, rises towards the invisible heights of Buddhist heavens. Buddhist temple complexes differed by planning depending of whether they were built in the mountains or at the plain. For temple ensembles, built at the plain, symmetrical location of buildings is characteristic. When the temples are built in the mountains, it is very difficult to locate them in symmetrical consequence, so carpenters had to find

definite solving of this problem each time they wanted to build a new temple complex.

What about peculiarities of Chinese carpentry, there the most typical construction of building was considered frame-column construction, using of wood (Nelson Wu, pp. 24-26). They put at wattle and daub platform wooden columns, and then put lengthwise cross-beams, and then after – tiled roof. We can tell that the wall of building can destroy, but the building will not destroy. Such system allowed to Chinese carpenters not only plan walls, but helped to prevent destruction of the building during earthquakes. For example, there is a Buddhist temple in Northern Province of China, with the height of more than 60 meters, made of wood.

This pagoda is more than 900 years old, but it is in very good condition. Another peculiarity of Chinese carpentry is effect which gives integral composition; it creates some ensemble from plenty of buildings. Chinese carpenters are not used to build buildings, which are located separately: doesn’t matter is they are temple buildings or private houses, - they always have additional buildings. The main building is accompanied by yard constructions, which are usually located at the same distance and are symmetrical. Ancient objects of Chinese carpentry are characterized by using of colors.

Usually roofs of buildings were covered by yellow glazed tiling, cornices were painted in blue-green paint; walls, columns and yards – by red color; the rooms were covered by white and dark marble platforms, which sparkled under the blue sky (Boyd Andrew, pp. 25-38). Combination of yellow, red and green colors with white-n-black in decoration of buildings not only underlines

majesty of buildings, but also looks very beautiful. In comparison with temples living apartments in the Southern part of China are quite “ modest”.

The buildings are covered by dark-grey tile roofs; their walls are painted in white, and wooden frameworks – by dark-brown color. The stable style peculiarities of Chinese carpentry, which influence the carpentry of the whole region of East Asia, can be called to some extent a Chinese style in carpentry. It is remarkable that the most characteristic external features of this style, for example, the roofs, are still used in modern buildings and can be seen in constructions of many-storied hotels of China, Korea, Hong Kong, Singapore, etc.

Korean carpentry also was influences to a great extent by that carpentry which was characteristic to China. For example, in Kore epoque the carpentry was divided into two parts according to style: the first group included buildings, which were constructed under influence of building technologies of Southern Sun dynasty, brought to Korea by Chinese merchants (An Outline of Korean Culture, pp. 60-75); the second group included buildings, constructed under influence of styles, which were developed in the Northern China during the epoque of foreign dynasties Lao, Tszin, Yuan.

Both styles at the Korean background possessed some features of traditional building technologies and made a certain combination (mixture) of styles. Formally those styles differ by some structure peculiarities of corbels. The Southern style had corbels, which were located under the columns, whereas in the Northern style location of corbels was freer. Those corbels were used in China as structure feature of building, supporting heavy roof, but later

they were used also for decoration. So in East Asian carpentry is present classification of buildings in accordance with style of corbels.

So, we can make conclusion that Chinese carpentry influences East Asian carpentry to a great extent. With appearance of Buddhism it entered East Asian countries and made great contribution to development of architecture and changed style of building, although it didn’t cross out architecture styles, but added some features, enriched design and building technologies. Local carpentry in all East Asian countries is not dissolved under its influence, but gains some features, which become peculiarities of the whole East Asian carpentry.