

Principle

Miyadaiku (specialists in the construction of Shinto shrines and temples) evaluate the characteristics and properties of wood, arrange it in a way that makes the most of those characteristics and properties, and then join it together using traditional Japanese joints and connections.

The wooden frame structure is held together by horizontal members called "nuki", creating a structure similar to a bamboo basket. The structure is designed to flexibly absorb external forces from various directions.

Furthermore, the base of the building is called "ishibadate" and it is made by simply placing a pillar with its bottom part shaped to match the natural stone as a foundation. If an earthquake force greater than necessary is given, the building does not break, but the building itself shifts from the foundation stone. This is a construction method that flexibly absorbs large forces, and it is a traditional Japanese construction method.



The importance of using naturally dried wood

Freshly cut wood contains a lot of moisture and cannot be used immediately, so a process is needed to remove the moisture. There are two main methods of drying wood.

Natural drying: This is a method that has been used since ancient times, and involves drying lumber cut between October and February for at least one year in the natural climate. Even after drying, the wood still has its original scent, and the resin remains, giving it a sheen.

When working with it by hand, I found it to be very sticky and difficult to break. Artificial drying is a method that is often used in recent years for wooden buildings, and the wood is dried in a high-temperature machine for about 10 days. The inside is burnt, and after drying it smells burnt and is dry and brittle with no resin. I felt that if I tried too hard when working by hand, it would break.



Traditional construction methods and Modern construction methods

If you look at how Hōryū-ji has endured for 1,400 years, I think you can see how strong traditional construction methods are. However, in the modern era, there are building standards, and it is true that it is difficult to apply for permission without using metal fittings or bolts. What we can do as people of the modern era who carry on tradition on our shoulders is to make the structure strong using only wooden joints without relying on metal fittings, and then attach the legal metal fittings as an extra.



Sumitsuke (marking with Japanese ink), Hand cutting and Handing down the tradition

Basically, we carry out sumitsuke and hand-cutting of structural materials such as beams and pillars in-house. Our craftsmen finish all decorative pillars, girders, and other items by hand, putting their heart and soul into each one.

In addition to having qualifications in traditional Japanese techniques, our construction carpenters are also qualified as first-class or second-class carpenters, which is a national qualification.

Compared to the artisans of the past, electrical machinery, heavy machinery, tools, and information have all evolved considerably. Even as a Miyadaiku, I believe that it is my mission to use the conveniences of civilization to improve efficiency, while also ensuring that the important aspects of traditional techniques are passed on to future generations.