

Traditional technique used in the construction of the Goromon Gate

御楼門建設に用いられた伝統的技術

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使用于楼门建设的传统技术

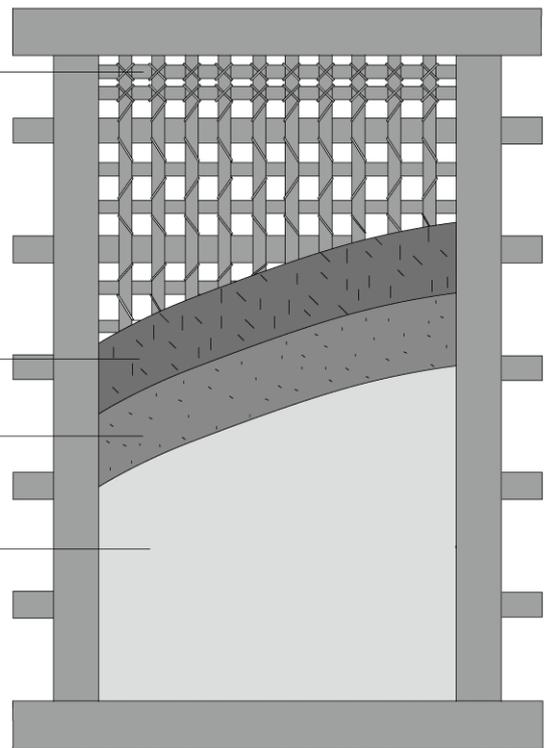
使用於樓門建設的傳統技術

Wall of the Goromon Gate

The exterior wall on the second floor of the Goromon Gate was a Namako wall. Namako is one of the traditional wall plastering techniques in Japan. It is a technique in which Namako tiles are placed on a mud wall, and the joints are filled with plaster in the shape of semicircular. This technique demonstrates outstanding heat retention, moisture retention, fire retardant properties, and water resistance.

Mud wall

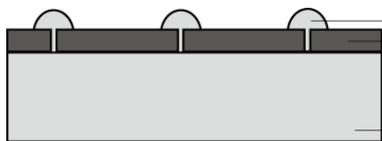
- ①小舞竹 Komaitake
Frameworks of bamboo lathing woven with rope. A foundation to apply mud.
- ②荒壁 Arakabe
The first layer of plaster made with hemp mixed into mud applied on Komaitake.
- ③中塗り Nakanuri
The second layer of plaster made with sand mixed into mud applied on the Arakabe.
- ④仕上げ Shiage
The final layer of plaster applied on the surface.



▲A construction of Mud wall

Namako wall

- ⑥漆喰 Mortar plaster
Applying plaster in the shape of semicircular.
- ⑤なまこ瓦 Namako tile
A plate-like roof tile.
The size of one plate on the Goromon Gate is 684 mm long and 379 mm wide and weighs 15 kilograms.
- ①～④土壁



▲A cross-section surface of Namako wall

A roof and roof tiles

According to old pictures, the roof of the Goromon Gate is found to be Hongawarabuki (made with traditional roof tiles). The roof is structured by combining two types of roof tiles: Marugawara (round tiles) and Hiragawara (flat tiles). Patterned tiles at the eaves are called Noki-marugawara (eave-end round tiles) and Noki-hiragawara (Eave-end flat tiles). Using the roof tiles unearthed in an excavation survey as models, Noki-tomoegawara (eave-end round tile with circular pattern) and Karakusa-gawara (eave-end flat tile with arabesque pattern) of the Goromon Gate were recreated.

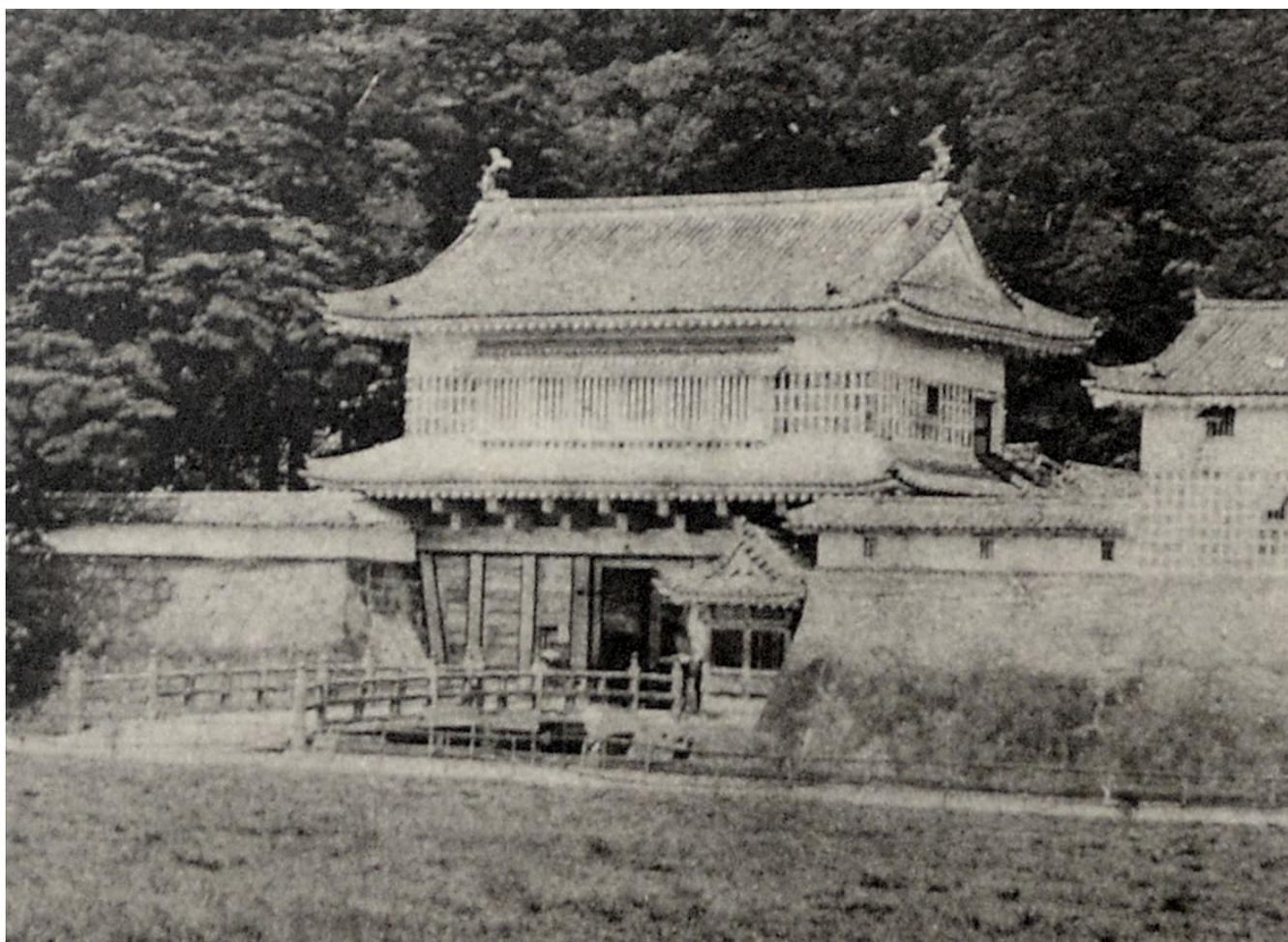
Oni-gawara (ridge-end file)

Oni-gawara is a decorative tile placed at the edge of the tile roof as a god to protect the building. Using the Oni-gawara unearthed in excavations around the Goromon Gate as models, oni-gawara tiles were created and placed at main, descending, and corner ridges of the roof.

Shachihoko

Shachihoko is a decoration placed at both ends of the main roof as gods to protect the building in the same manner as Oni-gawara. There were many fires at Kagoshima (Tsurumaru) Castle and its castle town, and Shachihoko decorations were placed as charms against fires.

Shachihoko decorations on the Goromon Gate are recorded as being "replaced with bronze ones" when a repair project took place at the end of the Edo Period (1603–1867), and during the construction of the Goromon Gate in the Heisei (1989–2019) and Reiwa (2019–) Periods, bronze Shachihoko decorations were placed on the roof.



▲ The Goromon Gate in 1872