



Contents lists available at ScienceDirect

Archaeological Research in Asia

journal homepage: www.elsevier.com/locate/ara

Case report

Ancient ceramics kilns of the *mantou* type in the Russian Far East

Irina S. Zhushchikhovskaya*, Yuri G. Nikitin

Institute of History, Archaeology & Ethnography of Peoples of Far East, Far Eastern Division of Russian Academy of Sciences, 89, Pushkinskaya, Vladivostok 690001, Russia

ARTICLE INFO

Keywords:

East Asia
Medieval epoch
Mantou kiln type
Ceramics
Firing regime

ABSTRACT

The remains of ceramics firing structures unique for the archaeological record of the southern Russian Far East were excavated in 1994 at the Sergeevka site in the southeastern Russian Maritime Province. Evidence for using these kilns for tile production was revealed. The remains are dated to the Jurchen period (12–13th century) of the Medieval epoch when the research area was, first, the northeastern periphery of Jin Empire and later, part of the Dong Xia state. Recently, a re-examination of archaeological materials from Sergeevka kilns site was carried out. The kilns are interpreted as *mantou* type firing structures. At present this site is the northeastern outpost in the East Asian distribution area of *mantou* kilns. Based on data from examination of samples of ceramics from the Sergeevka site, the technical potential of the kilns, in particular temperature regime, was inferior to that of *mantou* kilns used in ceramic production in Northern China since the Tang period.

1. Introduction

According to archaeological and historical evidence two basic advanced firing technical devices were used for the production of ceramics and porcelains in ancient China - the *long*, or dragon, kiln, first invented in the middle–second half of the 1st millennium BC somewhere in the Yangtze basin of southern China, and the *mantou* type kilns most widespread in various regions of northern China since the Tang dynasty period, or after the middle of the 1st millennium AD. Both were built of bricks and intended to achieve stable firing temperatures up to 1200–1350 °C. The construction principles of the *long* and *mantou* kilns were adopted by potters of surrounding regions of East Asia, Central Asia and South-East Asia (Barnes, 2001: 92–116; Kerr and Wood, 2004: 314–334, 347–364; Hein, 2008; Pohl et al., 2012; Lee, 2015).

Specific external features of the *mantou* kiln type were the strongly convex dome resting on relatively high walls, the contour of which caused the kiln to be named after a traditional Chinese steamed bun, or “*mantou*”, and often a “horse-shoe” - like horizontal plan, with the widest part of the floor at the front, and the narrow part at the back. The kiln's firebox was located below the floor level at the front of the firing chamber. The floor area of the firing chamber was up to 10 m² or above in size. At the floor level on the back wall were located flue exits connected to a brick chimney tube, or pair of them, located behind the back wall. In particular, this kind of kiln often had six flue exits located symmetrically along the back wall. Each unit of three flue exits was joined to a separate chimney tube (Barnes, 2001: 103–104; Kerr and Wood, 2004: 314–334).

In ancient China *mantou* type kilns were used for firing various kinds of ceramics—architectural ceramics, stoneware, and porcelain wares. Firing temperatures ranged in the interval 1000–1350 °C. *Mantou* kilns operated in oxidizing and reducing atmospheric regimes. Since the 10th century in northern China coal has been used as the main fuel for *mantou* kilns. Clusters of *mantou* kilns were usually located near extensive coal deposits (Kerr and Wood, 2004: 297–301).

The subject of this article is archaeological evidence for *mantou* type ceramic kilns on the mainland of the southern Russian Far East during the Jurchen period of the Medieval epoch. The research area is the Russian Maritime Province bordering northeast China and the Korean peninsula (Fig. 1). In this article the term “Jurchen period” indicates the period of the 12–13th centuries. This period corresponds mainly to the temporal frames of the Jin dynasty, 1115–1234. According to historical, archaeological, and epigraphic records, in 1115–1215 the subject area was part of the northeastern periphery of the Jin Empire founded by Jurchen tribes. The borders of the Jin Empire embraced the territory of Manchuria, northeast China, the most northern area of the Korean peninsula, and the territory of the modern Russian Maritime Province. The political and administrative systems of the Jin Empire imitated ones of the Chinese Empires. In particular, the state's territory was divided into 19 governorates. The governorate of Shuibin was located in the territory of the Russian Maritime Province. In 1215 three northeastern neighboring governorates - Helan, Huligai and Shuibin - separated from the central Jin powers and established an independent Jurchen state named Dong Xia which existed until 1233. In 1233–1234 the Mongols crushed and conquered the Jin Empire and Dong Xia state,

* Corresponding author.

E-mail address: ihae@eastnet.febras.ru (I.S. Zhushchikhovskaya).<http://dx.doi.org/10.1016/j.ara.2017.07.003>Received 22 March 2017; Received in revised form 4 July 2017; Accepted 7 July 2017
2352-2267/ © 2017 Elsevier Ltd. All rights reserved.

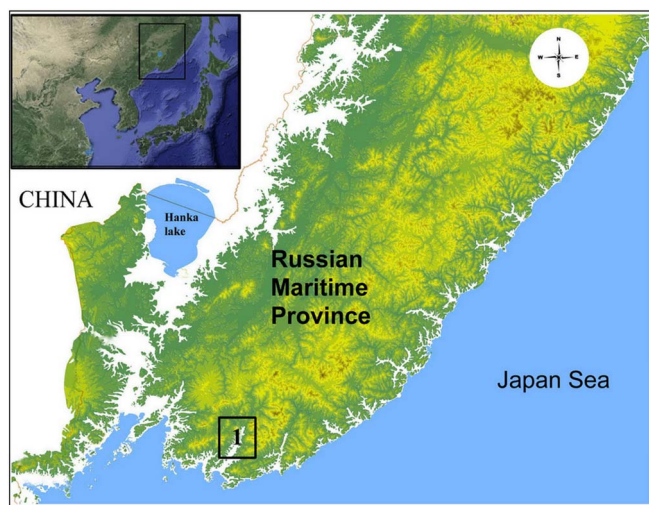


Fig. 1. Russian Maritime Province with research area location (1).

and sometime later the area under consideration fell into the hands of Yuan Dynasty authorities. The Jurchen population occupied this territory at least until the end of 13th–early 14th century (Artemieva and Ivliev, 2000; Ivliev, 2010).

Many archaeological sites belonging to the Jurchen period have been discovered in the research area. They are mostly walled towns and fortified settlements located on river plains and in mountainous areas. A series of sites has been studied under wide-scale excavations – the Shaiga walled town, Nikolaevka walled town, Anan'evka walled town, Lazovskoe walled town, Krasny Yar walled town, and others. The remains of high-status courtyards, column-type buildings, metalworking workshops, and commoners' houses were excavated. In a few cases the remains of isolated architectural complexes located outside the walled towns have been unearthed. Preliminarily they were recognized as temples of a Buddhist cult. The characteristics of Jurchen town planning, architecture, and building techniques were influenced greatly by Chinese cultural traditions. Artifact assemblages from Jurchen sites are rich in various kinds of metal tools, weaponry, ornaments made of bronze and semi-precious stones, household utensils, coins, imported glazed stoneware and porcelain wares (Artemieva and Usuki, 2010).

Two main groups of earthenware ceramic artifacts are present at Jurchen sites in the Russian Maritime Province. The first group is daily pottery made mostly on a potter's wheel: various vessels for the kitchen, storage, table service, and technical functions. Pottery is the most common artifact category at any walled town or fortress. Many pottery fragments and complete vessels are concentrated in ordinary houses and in areas with high status buildings and estates.

The second group consists of architectural ceramics, including roof tiles, bricks, and decorative sculptural objects. In excavated walled towns the concentrations of architectural ceramics are connected certainly with the areas of remains of high status column-type buildings (palaces, administration offices). Roof tile assemblages are characteristic also for isolated architectural complexes interpreted as temples.

The current state of investigations in pottery and architectural ceramics excavated at Jurchen sites in the Russian Maritime Province has some “white spots”, or gaps in our knowledge. In particular, an unknown subject is the system of ceramic production. Until now evidence for workshops or certain technological operations in pot-making or tile-making and brick-making were not recognized in the territories of walled towns and in close vicinity. No historic records mentioning the production of tiles or pottery are known. There also are no available data on raw materials sources for pottery and architectural ceramics production. Another relevant subject is the technique and technology used for firing ceramics.

Most of the ceramics of both groups are grey on the surface and the

interior as revealed from fractures. This feature may be interpreted as the result of firing in special kiln structures under a reducing atmospheric regime. According to data from preliminary investigations, firing temperatures of the ceramics from the Russian Maritime Province's Jurchen sites are thought to fall mainly within the interval 900–1000 °C, though sometimes above 1000 °C (Zhushchikhovskaya and Nikitin, 2014). One of the most interesting and little known research subjects is the construction pattern and technical potential of firing devices used in ceramic production during the Jurchen period in the Russian Maritime Province territory.

At present, a single reliable case of remains of a ceramic kiln for firing, attributed to the Jurchen period, is known for the southern Russian Maritime Province. This is the Sergeevka kiln site, where firing structures of the *mantou* type were excavated. These materials are presented below. The objective of this article is to evaluate the structural and technical characteristics of the discovered kilns and to suggest a cultural-historical interpretation of these data.

2. Materials and methods

The archaeological remains considered in this article are chiefly the remains from the Sergeevka site's kiln structures and samples of ceramic production associated with these kilns.

The remains of kilns built of bricks were discovered and excavated by Dr. Yuri M. Vasil'ev on the southeastern outskirts of the modern village of Sergeevka in 1994 (Vasil'ev, 1998, 2009). Archaeological field work at the kiln's location revealed substantial disturbance of cultural layers by the construction of modern houses, farmsteads, and farming activities of the villagers. In this situation wide-scale excavations at the site were impossible. Between 1994 and 2015 no archaeological work was conducted at the Sergeevka kiln site. In 2015 and 2016 the authors conducted field surveys at the site and its surroundings. The characteristics of the archaeological record of the Sergeevka site presented in this article are based on the results of the initial field work and the most recent data.

The archaeological evidence at the Sergeevka site is concentrated mainly on the left bank terrace of Semenov Klyuch Creek, a tributary of the Partizanskaya River. The latter is one of largest rivers in the Russian Maritime Province, and its valley is rich in Jurchen period archaeological sites. Among them are the large walled towns of Shaiga and Nikolaevka, where extensive assemblages of pottery and architectural ceramics were unearthed (Artemieva and Usuki, 2010: 58–66). The Sergeevka site is located 7.0–8.0 km from the Shaiga walled town, and about 28 km from the Nikolaevka walled town (Fig. 2).

The left-bank terrace of Semenov Klyuch Creek, formed of clay

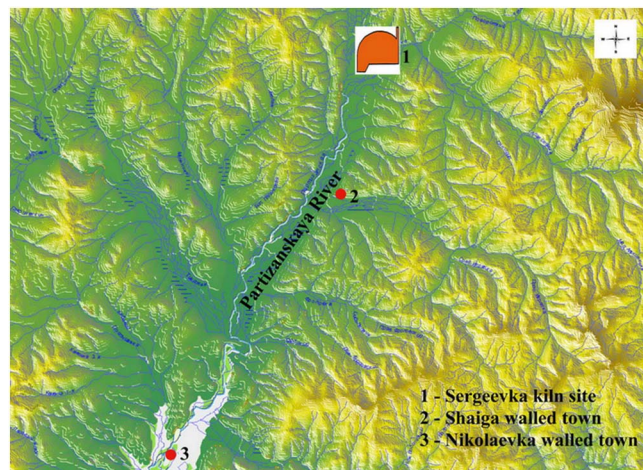


Fig. 2. Partizanskaya River valley area. 1 – Sergeevka kiln site. 2 – Shaiga walled town site. 3 – Nikolaevka walled town site.

Download English Version:

<https://daneshyari.com/en/article/5111880>

Download Persian Version:

<https://daneshyari.com/article/5111880>

[Daneshyari.com](https://daneshyari.com)