



BRIEF REVIEWS OF THE HISTORY OF THE STUDY OF MERCURIES

Temirova Munira Amirqulovna

TerSU Teacher of the Department of History and Source Studies of Uzbekistan

Article history:	Abstract:
Received: September 2 nd 2021 Accepted: October 3 rd 2021 Published: November 17 th 2021	This article provides information on the "mercury" pottery product, which was widespread in the Middle Ages, and its construction and function. We will also consider M.F.de Solsi, who also worked on the subject, Vivant Denon, F.I, the research of Ouspensky, VL Vyatkin and others. We will also discuss versions of the mercury-containing lamp, grenade, and mercury storage container.
Keywords: Small-mouthed and narrow-mouthed mercury, dark-colored, perfume container, liquid mercury, holy water, as a grenade, fish-like base, high-density, oil lamp.	

In the archeological literature, references to spherical-conical glasses can often be found in the materials of medieval monuments. For two centuries, researchers have offered different versions of what the purpose of these glasses was, but no consensus has yet been reached.

Spherical-conical cups differ morphologically from other categories of vessels: they have thick walls, a narrow throat and a small mouth, but most of them are distinguished by a lower part (tagdon), because such vessels do not stand upright, so it always lies on its side. Due to the small diameter of the hole (4-10 mm) in this position of the container, the contents did not spill.

Spheroconical vessels could be made of materials such as clay, glass, faience, bronze, and lead. Such high performance was achieved as a result of careful selection of sludge, fine elutriation and burning with clinker. According to the classification of ceramics, spherical-conical vessels, according to their properties, belong to refractories along with special bricks, kiln linings, cups and coils (Fig. 1). One of the first to work on mercury was the French explorer Vivant Denon, who in 1802 posted a picture of mercury in his diary while traveling around Egypt. Subsequent data on mercury appeared only 70 years later. In Western science, this was associated with summarizing the results of archaeological research of medieval cities in the Middle East, while in the interior it was considered a collection of antiquities. Due to the excavations, the findings of spherical-conical vessels are no longer of a random nature, but are associated with monumental stratigraphy and studied in the context of other materials. Mercury was distinguished among mass ceramic materials by its shape, and the question of their functional purpose attracted many scientists. Various versions have been put forward about the possibility of using these vessels: grenades, lamps, mercury, among others. One of the earliest versions of

the use of mercury was a grenade formed by Western European researchers as a result of field work in Syria. In 1874, the French antiquarian M.F. de Solsi made a valuable discovery into scientific circulation. These were 60 mercury pots found under the foundation of a building in Tripoli. Attention is drawn to the location of the jars in the cultural layer - they are wrapped in a circle, in the center of which is a large mercury jug, which differs in size from the others. One of the jars had the inscription "Hamadan", which most likely indicates the place where the mercury was produced. M.F. de Solsi, these glasses served as hand grenades and were mainly used during the Crusades, the siege war.

The author believes that the narrow throat served to fit the wick, the thick walls enhanced the explosion effect, the wax content from the inside protected the contents of the vessel walls from sharp blows,

Describing the mercury jar donated by the Syrian architect Aperi, the director of the Russian Institute of Archeology in Constantinople, F.I. Ouspensky speculated that the object was a hand shell. Explosive, oxidizing salt; explosive mercury formed as a result of the action of nitric acid on mercury in the presence of alcohol is particularly dangerous.

The chips in the container lead the researcher to the misconception about the structure of mercury. According to Uspensky, the vessel has two holes: "one to fit the rod or handle, so that it is filled with a combustible compound; another narrow hole for firefighting, which was covered with a small lid and had to fall when the composition was lit. Another proponent of the theory of the use of mercury for military purposes is the modern Danish archaeologist, Peter Pents. The author refers to the information left by the historian Ibn al-Afir about the siege of Akka by the crusaders in 1189: Christians suffered. They climbed to the top of the tower with victory and mocked the Arabs, he wrote.



Then a man from Damascus waited until the contents of the vessels were spread out over everything. When the time came, he threw away the burning dishes. At one point the fire spread to everything and the tower was engulfed in flames. The fire spread so fast that Christians could not get down from the tower. People, guns — everything was on fire.

As a result, all the crusaders' devices to occupy the fort were set on fire. The author gives this information for one reason: during an excavation by the Copenhagen Museum expedition in the 1930s, a workshop was found in Hama, Syria, where, as Peter Pents believed, oil was poured into mercury tanks for military purposes. This, according to the researcher, indicates the location of the structure (wall holes for ventilation, furnace for distillation, deep with lime required for the production of naphtha¹) and the presence of oil presses.

Also, some spherico-cones have the inscriptions "Allah", "Victory" or their own names. VLvyatkin, a well-known researcher of Central Asian antiquity, writes that "such vessels served to remove fat" and cited the following evidence as proof of this hypothesis: first, the discovery of the zach, and secondly, the presence of information about the Greek fire in the historical literature. The researcher refers to the work of F.I. Uspensky. Uspensky described the use of Greek fire glasses in Byzantine history: the Greeks first used the name during the defense of Constantinople from the Arabs in 672-679. Greek flames were thrown at the enemy from the height of the wall, which surrounded the city. tightly closed containers were opened in a timely manner using a mechanical device from the top. He forcibly threw the container and flammable material over long distances. From the perspective of modern researchers, this description includes several contradictions.

This description by modern researchers includes several contradictions. First, the results of extensive archaeological research show that vessels with this appearance were widely used only in the tenth century; second, because of its structure, mercury does not allow it to "throw flammable material over long distances." The diameter of the hole varies from 4 to 10 mm, i.e. the shape of the veins helps to protect the contents from leakage.

Among the supporters of the grenade version are G. Fedorov,

A. V. Arsikhovskiy, L. Dmitrov, P. We can list James and N. Thorpe.

A.F.Likhachev, who spoke at the II Archaeological Congress in St. Petersburg in 1871, drew attention to "cone-shaped vessels" and said that "they are oil-filled lamps; the hole in the neck is

narrowed to hold the lamp. However, such use of lamps requires the presence of supports for the vertical position of the glasses." but such supports have not yet been found. The scientist explains this by the fact that the stands are made of wood and therefore did not survive. As a result, he puts forward the hypothesis of the use of mercury lamps as lamps.

At the IV Archaeological Congress in Kazan in 1877, Andrei Fedorovich spoke on "The Mysterious Mercury of the Volga Bulgarians." decorations are available to make sure they are "beautiful to the eyes" when used at home.

A.F. Likhachev's opinion was expressed by Professor V.A. Gorodtsov. He notes that "spherical-conical vessels acted as lamps mounted on candlesticks. When illuminated, such a unique lamp rotating on its axis can look great." As proof of this, the author conducted an experiment: he poured oil into a pot and put a wick. The result turned out to be vague: "The burning was excellent and even lasted for almost an hour. it was impossible to transport them directly, and secondly, the capacity of these spherical-conical vessels was so small that they were designed to burn overnight. " He provided another piece of evidence to support his hypothesis.

V. A. Gorodsov considers the discovery of tall metal candlesticks among the materials of Turkestan monuments, which may serve as a basis for spherical cones. The author pays special attention to dishes with clear traces of the bottom at the bottom. Finally, researcher M.I. Cites Obrazsov's data. Obrazsov, who lives in Pahlavi, Persia, described the vessels as "chandeliers" and the vessels themselves are considered sacred by Muslims. They were placed near the mullah's preaching pulpit. firstly, by the large number of finds of mud lamps and oil lamps, and secondly, by the absence of traces of melody in the spherico-cones.

Such olive oil jars can be found in a small number of mosques. In days of mourning, the mullah lit candles for them.

The tubes of the lamps where the wick is located are constantly lit and burnt. Ethnographic evidence for the use of spherical cones as lamps can be considered as an example of the use of these types of glasses for multifunctional purposes.



Figure 1. The appearance of mercury.

8. Вяткин В.Л. Афрасиаб - городище былого Самарканда: Археологический очерк. - Самарканд: Главнаука наркомпроса УзССР, 1926. -65.

There is also a mercury version of the use of spherical-cones, according to which spherical-conical containers were used as containers for storing and transporting liquids.

In 1871, the Englishman G. Chester, as a result of his study of the Palestinian Foundation, published the findings of the spheroids - 6 fragments and one archeological complete copy. Wax and mercury particles were found in one of the mercury jars, which led to the conclusion that they were used to transport mercury and to cover the mouth with wax.

Thus, we do not deny the above, but believe that mercury has been used in many functions.

REFERENCES

1. Нуретдинова А.Р Сфероканические сосуды:проблема атрибуции.
2. Том 153, кн. 3 Гуманитарные науки.2011
3. 2.Салахов А.М., Туктарова Г.Р., Морозов В.П. Загадки керамических сфероконусов // Стекло и керамика. - М., 2006. - № 7. - С. 25-28.
4. 3.Denon V Planches du Voyage dans la basse et la haute Egypte. - Paris: Editeurs Pygmalion / Gerard Watelet, 1990. - 141 p.
5. 4дном, находимых в пределах мусульманского Востока // Зап. Вост. отд-ния Имп. Рус. археол. о-ва. - СПб.: Тип. Имп. Акад. наук, 1904. - Т. XV. - С. 0101-0112.
6. 5.Успенский Ф.И. Археологические памятники Сирии // Изв. Рус. археол. ин-та в Кон-стантинополе. - София: Державна печатница, 1902. -Т.МП, Вып. 2-3. - С. 94-212.
7. 6.Pentz P. A medieval workshop for producing "Greek fire" grenades // Antiquity. - 1988. - V. 62, No 234. - P. 89-93.