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THE PRODUCTION OF THE WORKSHOP OF POTTER JOHANN REHN OF TARTU (CA 1684–1708)

In Tartu, at the eastern side of Magasini Street, in the territory of the current Orthodox church of Dormition of the Theotokos (*Uspenski*), the potter Johann Rehn worked between 1684 and 1708. On the basis of two moulds, used for shaping stove tiles, and a lot of production debris, an overview can be obtained of the production of his workshop. The products of the workshop include redware pots with tin glaze, tripod pots and pans with a spout, lids, platters and bowls with multicolour slip and tin glaze, clay colanders, pot-like stove tiles and plate tiles with brown glaze. The production of the workshop under consideration represents the last stage of the tradition of making redware vessels, which spread to Estonia from Germany already in the 15th century. The products of the workshop of Johann Rehn followed, in general terms, rather accurately the fashion of the period. Only the moulds depicting a rider and a fish have so far not been matched with representative finished products.

Praeguse Uspenski apostliku õigeusu kiriku krundil Magasini tänava idaküljel Tartus töötas 1684. ja 1708. aasta vahelisel ajal pottsepp Johann Rehn. Tema töökoja toodangust on võimalik ülevaadet saada sealt leitud ahjukahlite valmistamisel kasutatud kahe savist matriitsi ja suure hulga põletuse käigus tekkinud keraamikavalmistuspõlde abil. Töökojas valmistati punasavist pliiglasuuriga potte ja tõstenäsaga graapeneid ning panne, samuti nõukaasi, mitmevärvilise angoobmaalingu ning pliiglasuuriga liudu ja kausse, savist sõelu, ahjupotte ja pruuni pliiglasuuriga plaatkahleid. Vaadeldava töökoja toodang esindab Saksa aladelt juba 15. sajandil Liivimaale levinud punaste savinõude valmistustraditsiooni viimast järku. Üldiselt vastas Johann Rehni töökoja toodang üpris täpselt oma aja moele. Vaid ratsaniku- ja kalakujutisega kahlimatriitsidele pole seni vasteid valmistoodangu näol teada.

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Introduction

In the cultural layer of Estonian medieval and post-medieval towns, castles and villages, potsherds form the most numerous category of finds. Among the archaeological pottery of the 16th to 18th-century towns, redwares with tin glaze form the largest share. In spite of this, redwares from Estonia have regrettably seldom attracted the attention of investigators. The first, and also the last comprehensive study, which also examines redwares, was published by Konrad Strauss in Basle in 1969. This voluminous monograph was based on material,

collected by the author from the museums and archives of Estonia and Latvia before and during World War II. In Estonia, stove tiles from the 15th–17th century, and the technology of their production have been studied in more detail (e.g. Vunk 1996; 2000).

Redware vessels with tin glaze were produced in the whole Baltic Sea region. This fact makes it difficult to determine the place of their production, as tablewares from other region, often by no means different from local products, were imported to Livonia. The reason for similar production methods lies in the fact that most of the potters who settled in Livonia, originated from the German-speaking cultural space then extending around the Baltic Sea (Russow 2005). The problem how to date redware products from the 16th to 18th century more precisely, and how to distinguish imports from local production, has troubled the investigators for decades. The best way for determining the origin of pottery products is to find out a site of pottery production, and investigate production remains found from that site. In Estonia, only the remains of a 13th-century potter's workshop in Viljandi has been investigated and published so far (Tvauri 1999; 2000; 2001).

A partial solution to the problem of origin and dating of Estonian redware vessels is offered by the production remains and moulds for stove tiles, found from a potter's workshop at Magasini Street in Tartu, which was operated in the end of the 17th and the beginning of the 18th century. The existence of a potter's workshop at that site (Fig. 1) was recognized already in 1909, as Baltic German amateur historian Richard Otto organized excavations at the site of medieval Dominican monastery, which also produced material indicating a potter's workshop (Otto 1911). On the basis of data published by Otto, K. Strauss presented this find in his monograph (1969, 149–150). The new archaeological finds from Magasini Street and other regions of Tartu, collected since 1993, have offered a lot of additional material, which forms the basis for the current article. The finds are worth publication, as post-medieval pottery waste has not been recorded in Estonia so far.

Archaeological investigations at the site of the Church of Dormition of the Theotokos in Tartu in 1909

In the summer of 1909, Richard Otto organized excavations at the site of the Tartu Orthodox Church of Dormition of the Theotokos, in order to locate the earlier Church of Mary Magdalena of the Dominican monastery, which was located at that parcel. For that cause, he made sondages in front of the Church of Dormition of the Theotokos, on the western side of the one-time church of the monastery. Approximately at the depth of 1.2 m from ground level, the walls of buildings, constructed of granite stones were unearthed, from inside of which a surplus of potter's clay and a lot of potsherds were collected (Otto 1911, 138–141). The most remarkable find, however, was a mould, used for the production of stove tiles with the depiction of a horseman (Fig. 2). On the back side of the mould, made of red clay, the following text reads: JOHAN REHN anno 1684 FR BN d. 3. Majus.

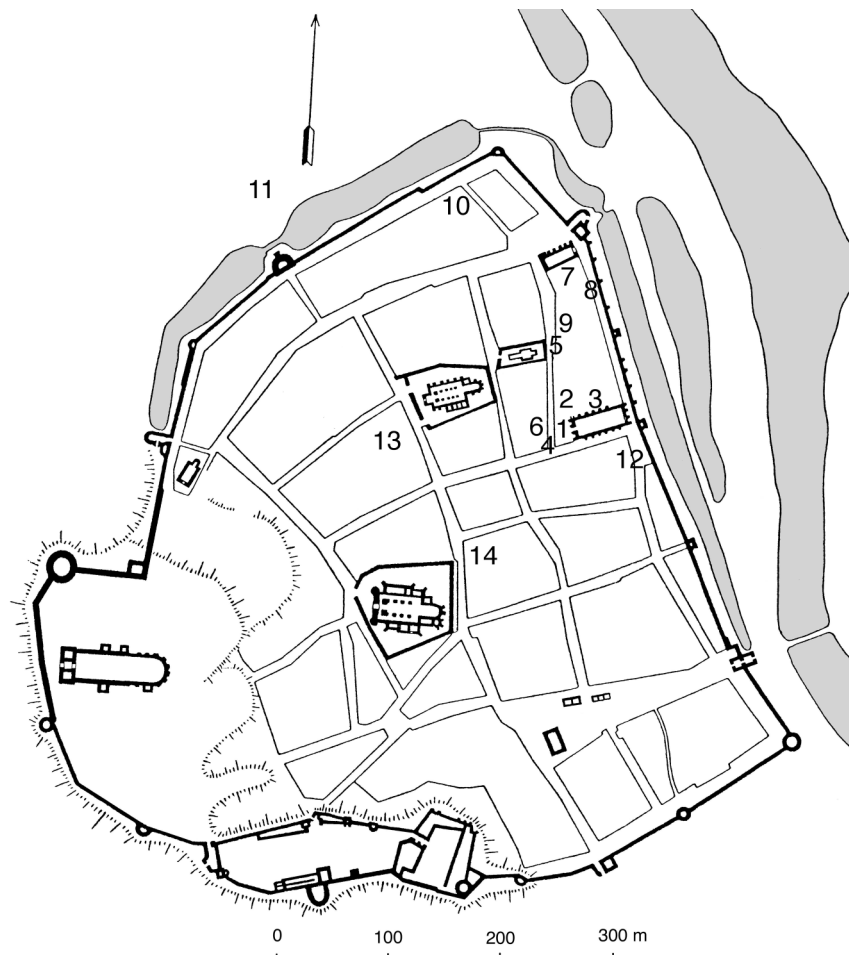


Fig. 1. The territory of Tartu, surrounded with the town wall, at the beginning of the 18th century. 1–3 excavation plots in the area of the workshop of Johann Rehn, 4–14 find-spots of production debris, originating from the workshop of Johann Rehn, outside the area of the workshop. 1 location of excavation plots of R. Otto (1909), 2 location of the find of 1993, 3 excavation plot inside the Church of Dormition of the Theotokos, 4 crossing of Magasini and Munga streets, 5 central part of Magasini Street, 6 yard of 15 Rütli Street, 7 yard of 37 Lai Street, 8 yard of 5 Magasini Street, 9 southern side of the building at 3 Magasini Street, 10 Botanical Garden of the University of Tartu, 11 yard of 31 Kroonuaia Street, 12 area in front of the building 10 Kompanii Street, 13 yard of 8 Jaani Street, 14 yard of 17 Ülikooli Street.

Joon 1. Tartu linnamüüri ümbritsetud ala 18. saj algul. 1–3 kaevandid Johann Rehni töökoja alal, 4–14 töökojast pärit valmistuspraagi leiud väljastpoolt töökoja ala. 1 R. Otto 1909. a kaevandite asukoht, 2 1993. a leiu asukoht, 3 kaevand Uspenski kirikus, 4 Magasini ja Munga tänava ristmik, 5 Magasini tänava keskosa, 6 Rütli 15 hoov, 7 Lai 37 hoov, 8 Magasini 5 hoov, 9 Magasini 3 hoone lõunakül, 10 Tartu Ülikooli Botaanikaaed, 11 Kroonuaia 31 hoov, 12 Kompanii 10 hoone esine, 13 Jaani 8 hoov, 14 Ülikooli 17 hoov.

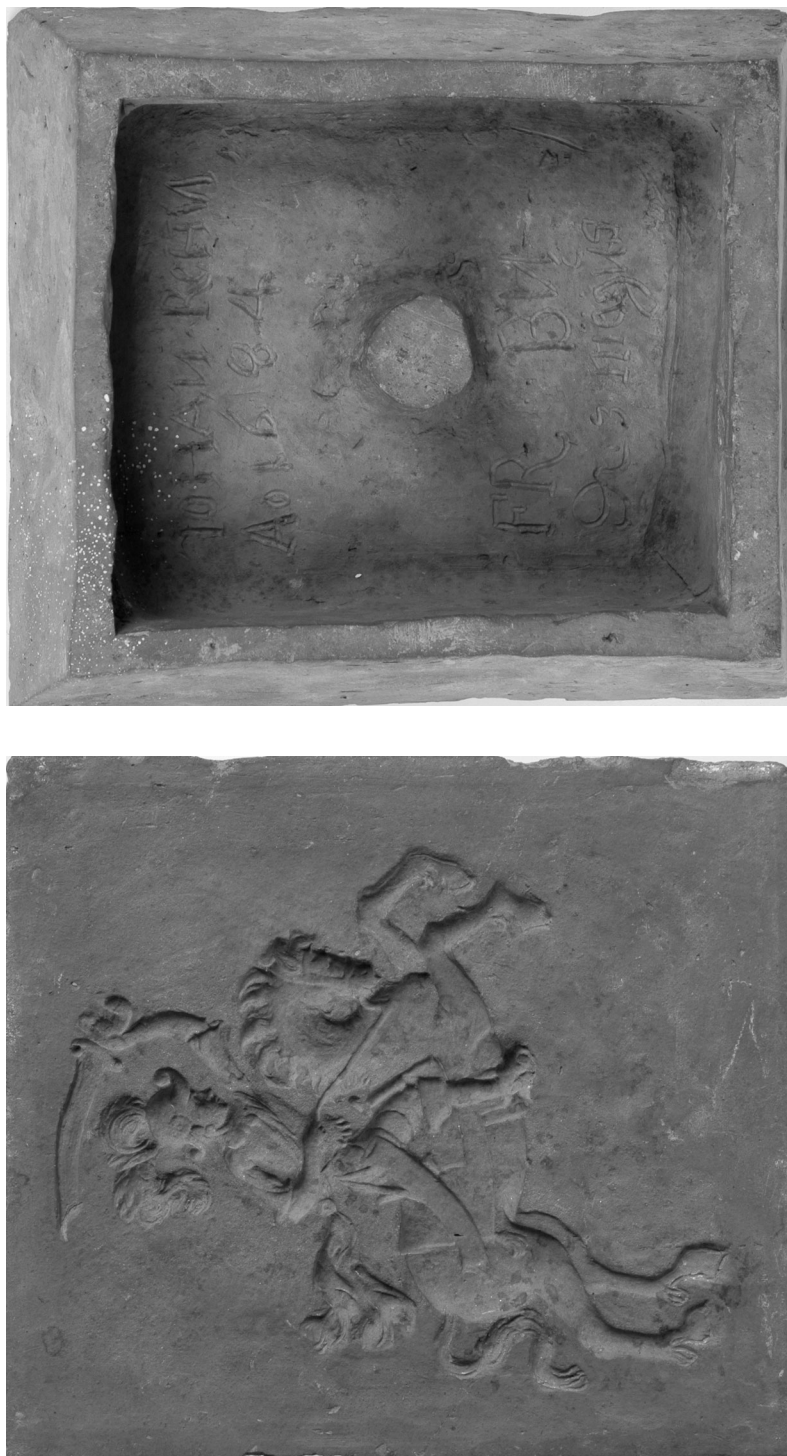


Fig. 2. Clay mould for stove tiles, found from the parcel of the Church of Dormition of the Theotokos in Tartu in 1909 (ERM D 19: 531). Front and back side. Height of the item is 21 cm. Photo: Estonian National Museum.

Joon 2. Tartust Uspenski kiriku krundilt 1909. a leitud ahjukahli savist matriitsi esi- ja tagakülg. Esemekõrgus on 21 cm. Foto: ERM.

The finds from the excavations by Otto have unfortunately mostly been lost. A few of the finds were stored in the collections of the Learned Estonian Society, from where these were handed over to Estonian National Museum in 1940. Unfortunately, information concerning the provenance of these finds is missing at the museum as well. Only the mould for stove tiles, described above, is unquestioningly recognizable upon the data published by Otto. Some of the finds found their way to the City Archives of Tartu, where K. Strauss saw an almost fully preserved tripod pot of red clay (Fig. 3) during World War II. He published a photo of this tripod pot in his monograph, and mentioned that it belonged to the “Finding of potter’s debris in Tartu” (Strauss 1969, pl. 17: 1). Both the outlook and the find context of the tripod pot points to the idea that this tripod pot is one of the finds collected during the excavations by Richard Otto. After World War II, the tripod pot was handed over to the State Museum of Ethnography of the E.S.S.R. (now Estonian National Museum). A spout of the tripod pot (ERM D 19: 659) belongs to the same find complex, among other potsherds. The spout might also originate from the excavations by Otto.



Fig. 3. Tripod pot from the collections of Estonian National Museum (ERM D 93: 43), probably found from the parcel of the Church of Dormition of the Theotokos in Tartu in 1909. Height of the vessel is 19.6 cm, dimension of its mouth is 17 cm. Photo: Estonian National Museum.

Joon 3. Eesti Rahva Muuseumi kogudes olev graapen, mis tõenäoliselt on leitud 1909. a Tartu Uspenski kiriku krundilt. Nõu kõrgus on 19,6 cm, suuava läbimõõt 17 cm. Foto: ERM.

Data from written sources

It was already Richard Otto who found out that the name Johan Rehn, which appears on the mould for stove tiles, also appears as the name of a potter in written sources. Namely, the list of citizens of Tartu, deported to Vologda in Russia in 1708 by the order from Peter I of Russia, includes a potter Johann Rehn (or Rein), who died in Vologda in 1711 at the age of 71. In addition to that, in the revision book of Tartu from 1734, a notice exists: “on the parcel, which belongs to the church of the monks, a potter Johann Rein lived during the last period of Swedish rule” (Otto 1911, 141, and the sources cited there.).

Kalev Jaago at the Estonian Historical Archives, figured out at the request of the authors of the current article, that Johann Rehn is mentioned for the first time in the proceedings of Tartu town council in 1684 (EAA 995-1-267). Circumstantially, this happens to be the same year, which was written on the mould for stove tiles, depicted above.

Thus it can be stated that the workshop of Johann Rehn operated in Tartu, at the parcel of the current Church of Dormition of the Theotokos, in the territory of the medieval monastery of the Dominicans definitely before the year 1708. He operated here in 1684, but there exist no data whether or not the workshop is of earlier origin.

Later archaeological investigations at the parcel of the Church of Dormition of the Theotokos in Tartu

The excavation plot for a cable pipeline in 1993

The first archaeological investigations in the area of the potter’s workshop after 1909 were conducted in 1993, when Romeo Metsallik directed archaeological supervision on the installation of a cable. The trench for the cable ran east of Magasini Street, parallel to the facade of the priest’s house of the Church (1 Magasini Street), 7 metres south of it (Fig. 4). East of the line of the bordering fence of the church on the side of Magasini Street, in a 2-metre area, the 50-cm wide and 70-cm-deep trench crossed a layer of potsherds, which already started 36 cm below ground level.

477 sherds of ceramic vessels were collected (TM A 149).¹ 425, or the bulk of it, originate from redware vessels. In addition to these, 12 fragments of vessel lids, 19 fragments of pot-like stove tiles and 14 of plate tiles were collected. One redware mould for a stove tile, two fragments of a ceramic colander, two of roof tiles and a few unidentifiable ceramic fragments can be added. Only a part of ceramic fragments were collected during the excavations, as the deposit of potsherds continued on both sides of the trench, as well as underneath it.

¹ Subnumbers have not been granted to the collection yet.



Fig. 4. View of the area where the workshop of Johann Rehn was located. The Church of Dormition of the Theotokos in the background. The priest's house of the church is on the left. Next to the corner of the house, close to the street (in front), production remains of the potter's workshop were found in 1993.

Joon 4. Vaade alale, kus paiknes Johann Rehni pottsepatöökoda. Tagaplaanil on näha Uspenski kirik, vasakul kiriku preestrimaja, mille tänavapoolse nurga juurest, esiplaanil olevalt alalt, leiti 1993. a pottsepatöökoja tootmispraaki.

The find definitely belongs to ceramic waste formed during firing. Many overheated or even clinkered fragments prove it. There appear a lot of glaze faults on the sherds, e.g. the glaze has burnt black, or has bubbled. The vessels, the glaze of which has spilled over onto the break, have been broken in the kiln. There exist also fragments, where the glaze has broken apart, as there have been ill-suited additions in the ceramic test. These fragments lack traces of usage. The fact that the vessels have been broken definitely in the kiln is further supported by the fact that of the 97 tripod pot feet found, 88 have separated from the vessel body at the joint. In the case of tripod pots broken during usage, the foot usually stays with a part of the vessel's wall. On top of that, the whole complex is extremely uniform both in its appearance, and the way of its production.

In spite of the large amount of the potsherds found, it seems that the find spot was not the actual place of their deposition. Only a few of the sherds found matched

and even in that case it is possible that the sherds broke into smaller fragments at the spot, or during excavations. It seems that the layer of potsherds was moved to that place in connection with construction and earthworks at the site of the Church of Dormition of the Theotokos in the 18th century. Namely, iron slag, and a human vertebra were found from among the ceramic debris. The vertebra most likely originates from any burial from the period of the existence of the church of the monastery of the Dominicans. 7 metres east of the spot of the ceramic debris, a fragment of a cast iron hollow hearted cannon ball, originating from the siege of Tartu in 1704, and a medieval vault brick, most likely originating from the vaults of the monastery of the Dominicans were found from the cable trench.

Investigations in the Church of Dormition of the Theotokos in 2005

In 2005, Andres Tvauri directed archaeological investigations at the site of the current Orthodox Church of Dormition of the Theotokos (1a Magasini Street). In the course of the excavations, an approximately 70-cm layer of fill was removed from under the floor of the church, and an excavation plot of 5.7 × 2.4 metres was investigated, for a more precise localisation of the Church of Mary Magdalena of the Dominican monastery (Tvauri 2005b). During these works, some potsherds that can be classified as production waste (e.g. TM A 140: 11) were collected from the layers of 18th-century fill.

Production waste of the workshop of Johann Rehn from other areas in Tartu Old Town

Pottery production waste, collected during the excavations of 1993, allows establishing an overview of the production of the workshop of Johann Rehn. Taking these finds as a basis, the waste of the same workshop can be sought from the archaeological finds collected from other parts of Tartu Old Town. It appeared that production waste most likely originating from the workshop under consideration has been found from areas further from the nearest vicinity of the workshop (Fig. 1).

In the summer of 2005, Andres Tvauri carried out archaeological supervision at **Magasini Street**, caused by the renovation of freshwater as well as sewage pipelines running along the street. During these works, a ditch with the approximate depth of 2.5 m was erected for the whole length of the street from Munga Street to Lai Street (Tvauri 2005a). The fill layer, which continued until the bottom of the trench, and was most likely piled up during the 18th century, contained waste from the potter's workshop, as well as other finds, in a heterogeneous way. Below the crossing of Munga and Magasini streets, an up to 10-cm layer of clean potter's clay was discovered from the fill of debris, which was located

below the street.² Directly above the clay layer, sherds of redware vessels were found, which can be considered as production waste (Fig. 5; 6: 1). In addition, fragments of four stove-tiles (Fig. 6: 2) were found, which originate from vessels ruined during firing. In the area from the spot mentioned to the house 3 Magasini Street, no potsherds were found from the ditch for sewage pipeline. In front of the building 3 Magasini Street, a big amount of sherds of redware vessels, pot-like stove tiles and plate tiles were found, a part of which (e.g. TM A 145: 36, 40, 49, 64, 74, 79, 85) belong to production waste.

Peeter Piirits directed archaeological excavations at the **yard of 15 Rüütli Street** in 1996. The investigated area lies in close proximity of the territory of the Church of Dormition of the Theotokos, on the western side of Magasini Street. Thus the outcome that more waste from the workshop of Johann Rehn is present in that excavation, than in any other area located outside the parcel of the church, can hardly be considered surprising. From the upper layers of the depositions at the yard of 15 Rüütli Street, a lot of fragments of pots and tripod pots with brown glaze and typical rim profile were found, which had been overheated and had lost

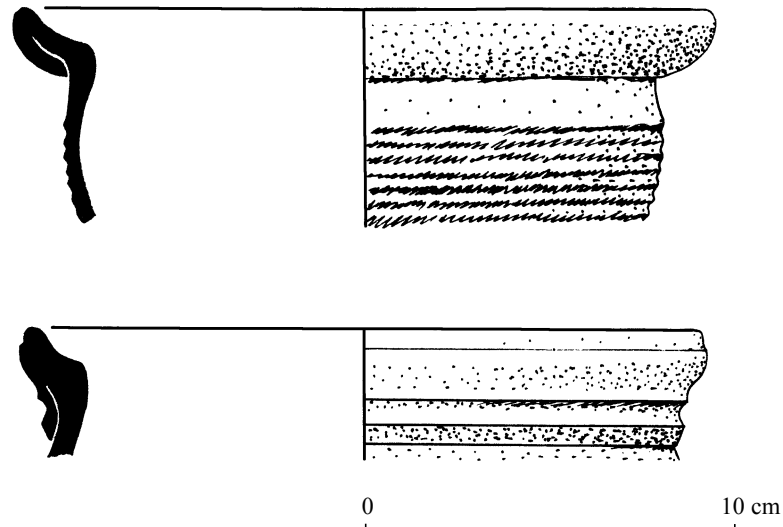


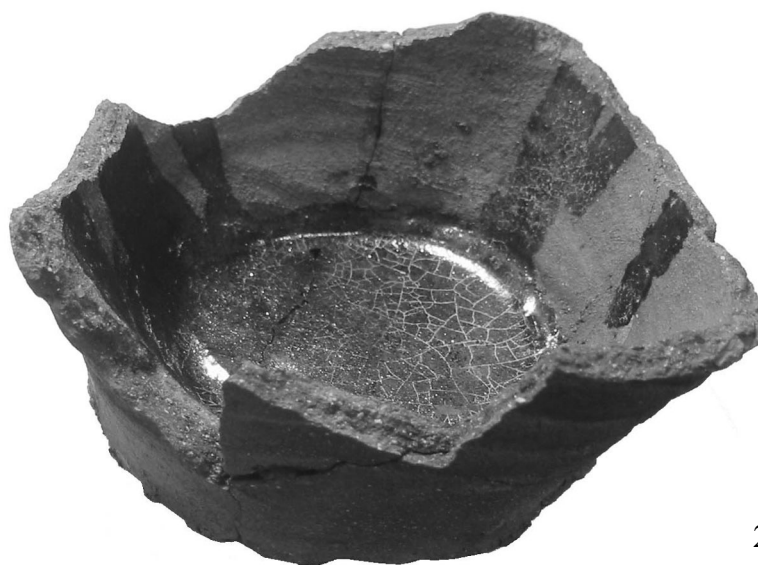
Fig. 5. Reconstructions of clay vessels (TM A 145: 6, 49), found from the crossing of Munga and Magasini streets, together with a layer of potter's clay.

Joon 5. Magasini ja Munga tänava ristmikult koos pottsepasavikihiga leitud praaksavinõude rekonstruktsioon.

² Experiments of baking the clay, carried out by ceramist Kristel Külljastinen in December 2005, show that the clay acquires red colour during baking at the temperature of 1000–1100 °C. The clay corresponds to the raw material of the workshop of Johann Rehn.



1



2

0 10 cm

Fig. 6. Production debris, found from the crossing of Magasini and Munga streets, together with the layer of potter's clay. 1 rim sherd of the vessel, where the glaze has burnt and flown onto the break, 2 fragment of a pot-like stove tile (TM A 145: 6, 2).

Joon 6. Magasini ja Munga tänava ristmikult koos pottsepasavikihiga leitud valmistuspraak. 1 savinõu servakild, millel on glasuur põlenud ja murdele valgunud, 2 ahjupoti katke.

shape in the oven (e.g. TM A 92: 827, 1878, 2001, 3366). In case of one rim sherd, the light brown glaze has spilled over onto the break (TM A 92: 2550), which is a firm proof of production waste. In addition to that, loop handles (e.g. TM A 92: 2051, 2212) and feet (e.g. TM A 92: 3139, 3369) of tripod pots were found, which also originate from vessels broken during production, as indicated by the missing of wear marks. The unglazed rim sherds of tripod pots (TM A 92: 1712, 2018) form a characteristic type of production remains. In all probability, the fragments of platters with slip decoration, where the glaze has peeled off from the slip (e.g. Fig. 7; TM A 92: 1882), also originate from production waste. In addition, fragments of lids of vessels are present, which also existed in the find from 1993. At least one of these (TM A 92: 3384) has been roughly overheated. Among the finds from the yard of 15 Rütli Street, numerous plate tiles with brown glaze, which have been overheated or have broken during firing (e.g. TM A 92: 423, 2145, 3452, 3455) were present. In the case of some of these (TM A 92: 2257/1), only part of the surface has been covered with glaze.

An excavation plot of ca 80 m² was erected in 1966 under the direction of Vilma Trummal ca 100 m north of the Church of Dormition of the Theotokos, at the eastern side of Magasini Street, **in the yard of the house at 37 Lai Street** (Trummal 1970). 1.6–1.7 m below ground level, a cobblestone pavement was



Fig. 7. Fragment of a clay platter with engobe painting (TM A 92: 2765), found from the yard of 15 Rütli Street. Glaze has fallen apart from the painting.

Joon 7. Tartust Rütli 15 õuelt leitud angoobmaalinguga liua katke, millel on glasuur maalingu kohalt lahti tulnud.

found, where fragments of cast iron cannon balls and holes caused by these were traced, originating from the siege of Tartu by Russian troops in 1704 (Trummal 1970, 9). In the layer of debris above the pavement, a lot of fragments of redware vessels and stove tiles were present. The fragments with characteristic rim profile, or clinkered sherds found from the debris (e.g. TM A 18: 25/3, 25/5) are definitely production waste from the workshop of Johann Rehn. An overheated fragment of unglazed plate tile (TM 314 / Aj 142: 30) was found from the same yard during earthworks in 1961.

In 1996, a test pit was made next to the medieval town wall, east of the house at **5 Magasini Street**. The investigations were directed by Romeo Metsallik and Udo Tiirmaa. Among other finds, a fragment of a plate tile with projecting plant ornament was collected (Tiirmaa & Metsallik 1996, photo 18), which, judging on the basis of glaze faults, belongs to production waste.

On the southern side of the house at **3 Magasini Street**, excavations were directed by A. Tvauri in 2005 (Tvauri 2006). From the upper deposits of the cultural layer, a few sherds of redware vessels, typical of the production of the workshop of Johann Rehn (TM A 157: 2, 3) were found. Judging from the absence of wear marks, these might belong to production waste.

Quite a lot of production waste originating from the workshop of Johann Rehn has been found during archaeological excavations in the territory of the **Botanical Garden of the University of Tartu**, in the northeastern corner of the medieval town, in the northern side of Lai Street. Among the finds from the 1988 excavations in the area, directed by Vilma Trummal, a few sherds that can unquestionably be classified as production waste (Fig. 8; TM A 43: 211/7, 342/1) were found: the dark brown glaze had spilled over onto the break. In addition, clinkered fragments of plate tiles with plant ornament without glaze (e.g. TM A 43: 236/1) were also present. Production waste typical of the workshop of Johann Rehn was also found during the 1990 excavations in the same area, directed by Kalle Lange. Sherds from redware vessels (e.g. TM A 53: 234), plate tiles (e.g. TM A 53: 125, 350, 531) as well as pot-like stove tiles (e.g. TM A 53: 280, 281) can be classified as production waste. A wall fragment of a tripod pot with a spout, which has totally bloated in excessive heat and changed into ceramicside (TM A 53: 538), can be mentioned here as a find most typical of production waste. All the finds mentioned have been collected from the upper layers of fill in the excavation plots, which mostly have been disturbed. The excavation plots in the Botanical Garden are located ca 200 m NNW of the workshop of Johann Rehn.

The furthest find-spot of production waste from the workshop of Johann Rehn is situated in the **yard of the house at 31 Kroonuaia Street**, which is outside the medieval town wall of Tartu. A fragment of a plate tile with brown glaze was found there, which has clearly been overheated (TM 727: 5). It was found during earthworks in 1965, and Vilma Trummal brought it to the City Museum of Tartu. The find-spot of the plate tile fragment lies ca 300 m northeast of the territory of the Church of Dormition of the Theotokos.



Fig. 8. Miniature jug or cup, which has been broken during firing (TM A 43: 106), from the workshop of Johann Rehn. Found from the excavations at the Botanical Garden of the University of Tartu.

Joon 8. Johann Rehni töökojast pärit põletuse käigus purunenud miniatuurne kannuke või tass. Leitud Tartu Ülikooli Botaanikaia kaevandist.

Production waste from the workshop of Johann Rehn has also been found south of the territory of his workshop. During archaeological supervision in the reconstruction of sewage pipeline **in front of 10 Kompanii Street**, A. Tvauri found at least one potsherd, which can be considered production waste (TÜ 1138: 25), from the fill layer consisting mostly of debris. It is a rim sherd of a tripod pot, covered with brownish green glaze, which has got out of shape due to pressure from the rim of another vessel during baking.

In 2003, A. Tvauri directed archaeological investigations in the yard of 8 Jaani Street. During the excavations, an overheated and misshaped rim fragment of a tripod pot (TM A 150: 10) was found from the uppermost part of the cultural layer, reaching up to 1 metre from ground level. On the basis of both rim profile and glaze, the fragment can be considered a product of the workshop of Johann Rehn. This is the westernmost find-spot of production waste of the workshop under consideration so far, situated ca 150 m west of the Church of Dormition of the Theotokos.

In 1998, archaeological investigations took place in the yard of **17 Ülikooli Street**, directed by P. Piirits. During excavations, remains of the walls of a medieval brick building, demolished during the 18th century were found (Piirits 1998). In the destruction and filling layers surrounding the walls, many fragments of plate tiles with plant ornament and dark brown glaze were present, which have the characteristics of production debris (e.g. TM A 105: 249, 259, 276, 313). By their design and production details, such tiles correspond to the production of the workshop of Johann Rehn. This is the southernmost find-spot of production debris of the workshop under consideration, known to the authors. From the territory of the Church of Dormition of the Theotokos, the find-spot is situated ca 150 m southwest.

Moulds for stove tiles

At least two moulds for stove tiles, connected to the workshop of Johann Rehn, have been found. The first of these (Fig. 2) was found already by Richard Otto during his excavations in 1909. This mould has been mentioned above in this article, but as it is a really important find, we will describe it here in detail.

The height of the mould is 21 cm and the width 18.5 cm. It is for making Baroque plate tiles depicting a rider carrying a sword with curved blade raised above his head, and a helmet decorated with feathers. The find is extraordinary because it was unbroken, and on its back side is the following text: JOHAN REHN anno 1684 FR BN d. 3. Majus. Stove tiles with the rider motif seem to be rather unusual in the Baltic Sea region. The closest parallel known to the authors so far is a plate tile depicting a rider, found from the castle of Dobeles in Latvia. It depicts a rider swinging a sword within an architectural frame of caryatids and angels, and the cartouche under it carries the text NINVS (Ose 1996, 73, Fig. 63). Ninus is known from Greek mythology as king of Assyria and the founder of Nineveh. Although the tile mould from Tartu somewhat differs from the stove tile from Dobeles, both by more professional realization as well as design (the Tartu mould lacks architectural framing and a decorative frame), it may be assumed that the mould of Johann Rehn was made for producing plate tiles depicting Ninus. The “Oriental” curved blade of the sword of the rider may be an additional proof of the idea. At the same time, it cannot be excluded that the rider on the mould depicts Julius Caesar, Alexander the Great or King Cyrus II the Great of Persia. All these rulers have been depicted as riders on 17th-century stove tiles (see http://www.furnologia.de/furnologia/Bibliothek/bibliothek_weltreich/bibliothek_weltreiche_galerie.htm).

The name of the potter Johann Rehn appears on the back side of the mould. There exists no clear evidence what the date 3rd of May 1684 stands for, but most likely it marks the date of production of the mould. The meaning of the letters FR BN is yet uncertain. There exist no data of any plate tile produced with that mould so far.

Another mould, also of burnt clay (Fig. 9) was found in 1993 from the cable trench in front of the priest’s house of the Church of Dormition of the Theotokos.

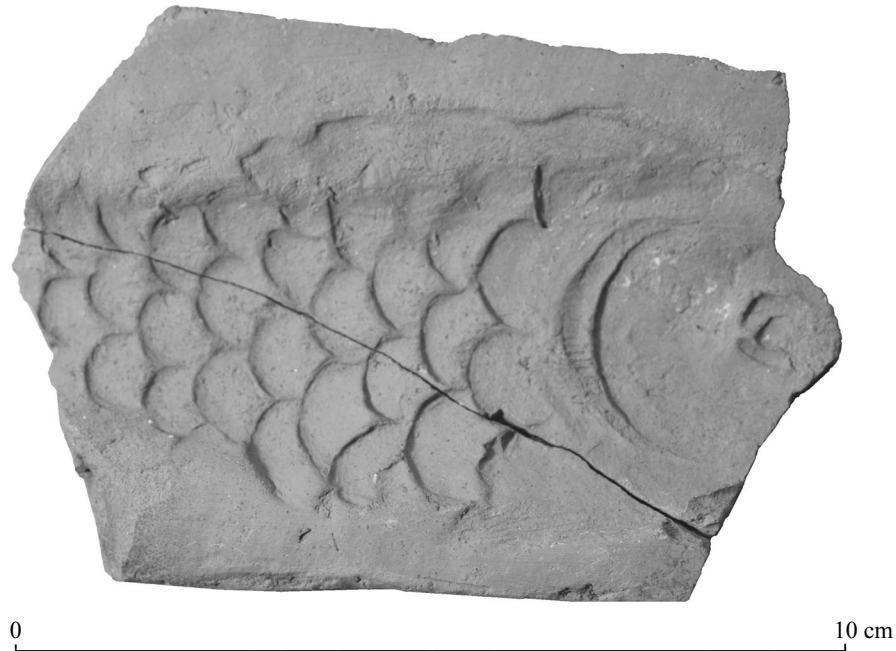


Fig. 9. Mould for stove tiles (TM A 149), found from among the production debris of the potter's workshop in front of the priest's house of the Church of Dormition of the Theotokos in Tartu.

Joon 9. Tartust 1993. a Uspenski kiriku preestrimaja eest keraamikavalmistuspäägi hulgast leitud kahlimatriits.

The length of the latter tile reaches 9.6 cm, with its width being 6.7 cm. The mould depicts a mirror image of a fish. Taking into account the small measures of the mould, it was probably used for making some smaller detail of the stove tile. So far, no stove tiles made using this mould have been found.

Fish motif has been rather rare on stove tiles. The nearest parallel known to the author, i.e. a stove tile depicting fish was found from the town of Mir in the western part of present-day Byelorussia. It dates from the 17th century (Кравцевич 1988, 142, fig. 1: 2).

Production of the potter's workshop, on the basis of production debris and the moulds

Tripod pots

The production of the workshop of Johann Rehn can be best characterised on the basis of the sherds of production waste, gathered from the cable trench in front of the priest's house of the Church of Dormition of the Theotokos in 1993.

In the find of 1993, fragments of tripod pots form the largest share. Fragments with tripod pans with a spout occur less often. Pots without legs have occurred as single items among the production waste of the workshop of Johann Rehn.

In the 1993 find of production waste, there exist a total of 173 rim sherds. Their **rim profile** follows one general form. The amply profiled form is a characteristic feature, with at least four clear further characteristics (Fig. 10; 11; 12: 1, 2, 5).

- 1) Concave inner side of the rim part.
- 2) During turning the rim part, the upper edge of the vessel has been turned down towards the outer surface of the rim part. The adjunction in the rim part is often visible at the break. In rare occasions, a gap has remained within the upper part of the rim. This has been the reason why the rim part of the vessel has cleaved lengthwise during firing.
- 3) A cordon is formed between the rim and shoulder part of the vessel from the tip of the part turned down towards the outer surface. The shape of the cross-section of the cordon changes from a triangle to that of a halved cylinder.
- 4) Often, but not always a shallow groove exists in the lower part of the rim part.

Other shapes of profile were present in the 1993 find only as two single items (Fig. 12: 3, 4). In the case of these vessels, the upper part of the vessel had been turned down during turning toward the outer surface of the rim, but the inner side of the rim part is not concave, and the distinguishing cordon between the rim part and the shoulder is missing.

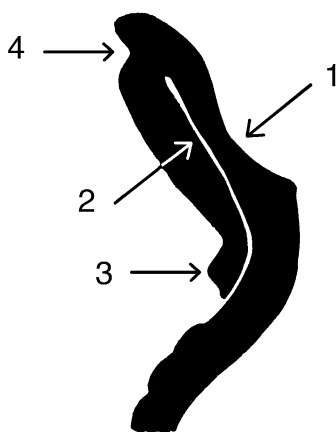


Fig. 10. Rim profile, characteristic of the production of the workshop of Johann Rehn. 1 concave inner side of the rim, 2 upper edge of the rim, which has been turned down against the outer surface of the vessel during turning, 3 a cordon is formed between the rim and the neck of the vessel from the tip of the part turned down, 4 a shallow hollow in the upper part of the rim.

Joon 10. Johann Rehni töökoja toodangule omase savinõu servaprofiil. 1 võriku nõgus sisekülg, 2 nõu treimisel vastu võriku väliskülge mahakeeratud ülaserv, 3 mahakeeratud osa tipust on võriku ja õla vahele moodustanud mõika, 4 madal vagu võriku ülasosas.

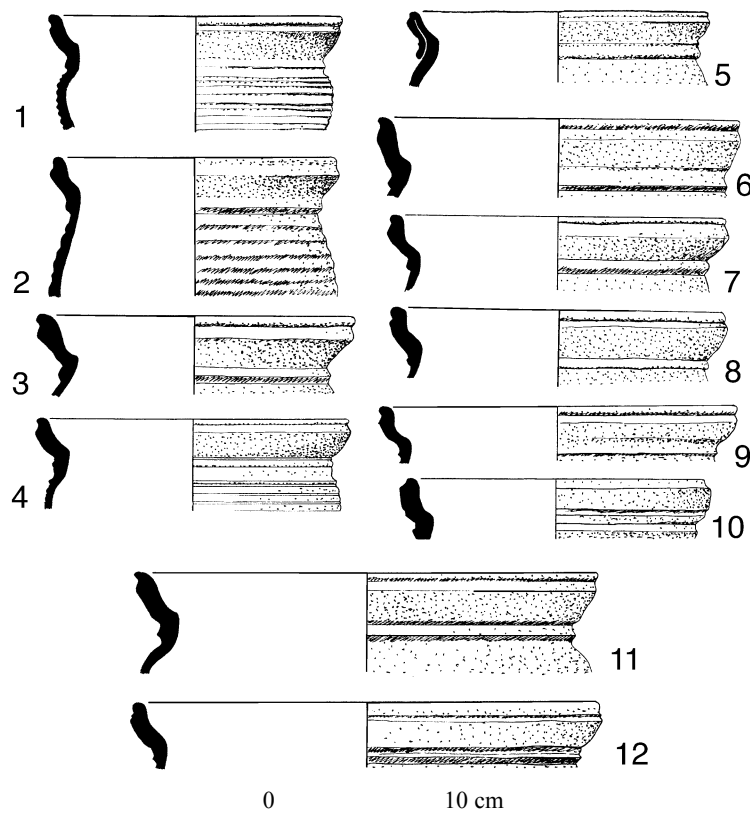


Fig. 11. Reconstructions of the upper parts of clay vessels (TM A 149), found from production debris in front of the priest's house of the Church of Dormition of the Theotokos in Tartu in 1993.

Joon 11. Tartust 1993. a Uspenski kiriku preestrimaja eest keraamikavalmistuspärgi hulgast leitud savinõude ülaosade rekonstruktsioonid.

An especially characteristic part of redware *grapens* is the tube-like **spout**. From the cable trench in front of the priest's house of the Church of Dormition of the Theotokos, 24 spouts or their fragments, were found. These belong to two types. One has a large and somewhat funnel-shaped mouth with a strengthening cordon (Fig. 13: 1–4), the others are characterized by a profiled mouth, gradually narrowing (Fig. 13: 5–7). Unfortunately, there exists no fully preserved tripod pot among the find from 1993, but on the basis of the angle of connection of some of the spouts it may be presumed that spouts with the funnel-shaped mouth belonged to tripod pans, while those with narrowing end belong to tripod pots (compare Fig. 3).

The legs of tripod pots, or their fragments were present in quantities, 97 of them were collected. Most of them were simple conical legs (Fig. 14), only in

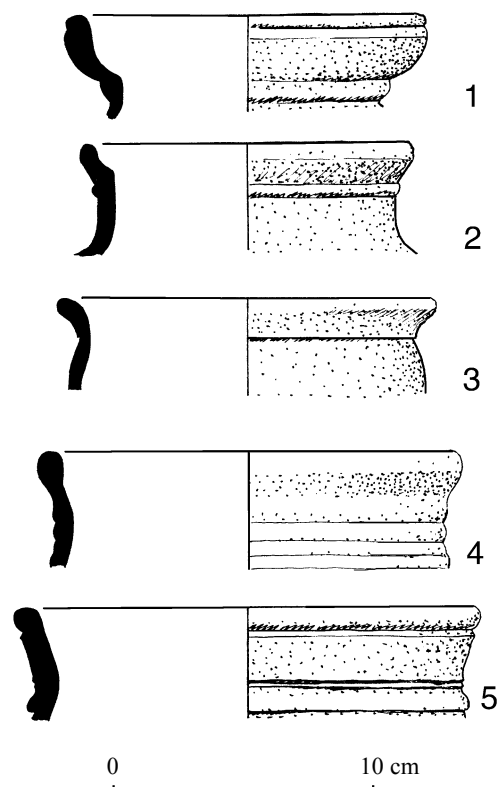


Fig. 12. Reconstructions of the clay vessels with unique profile of the rim (TM A 149), found from production debris in front of the priest's house of the Church of Dormition of the Theotokos in Tartu in 1993.

Joon 12. Tartust 1993. a Uspenski kiriku preestrimaja eest keraamikavalmistuspärgi hulgast leitud unikaalse servaprofiiliga savinõude rekonstruktsioonid.

one case a deep vertical groove exists on a leg (Fig. 14, the leg on the left). The legs found are of rather similar height – approximately 7.5 cm.

In addition to spouts, handles, legs and rim fragments, 108 sherds from the wall or bottom parts of tripod pots exist in the find of 1993. These have almost no characteristic traits. In most cases, the unglazed outer surface of the vessels is corrugated horizontally, which is applied during turning on wheel.

All the fragments of tripod pots originate from vessels that have been **glazed** inside. It was lead glaze, the colour of which varies from yellowish brown to dark brown. The brown colour of the glaze was achieved by adding ferric oxide to the lead glaze (Strauss 1969, 14). The brown glaze on some of the sherds has a slightly greenish nuance. One of the rim sherds, however, originates from a vessel, the glaze of which was dark green. The green colour was obtained

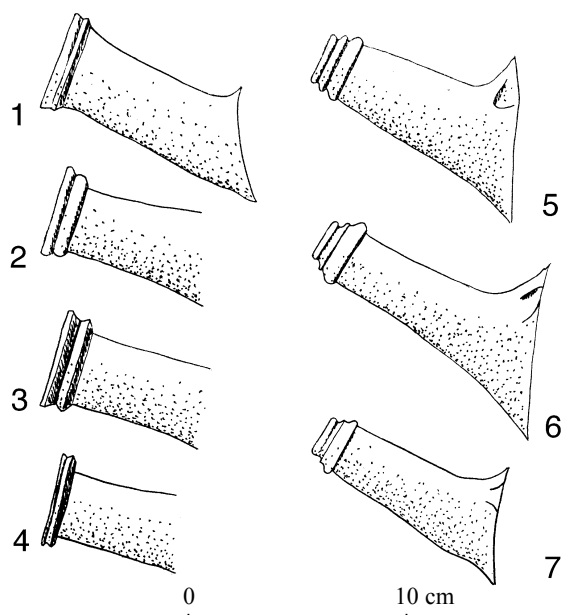


Fig. 13. Spouts of tripod pans (1–4) and tripod pots (5–7) (TM A 149), found from production debris in front of the priest's house of the Church of Dormition of the Theotokos in Tartu in 1993.

Joon 13. Tartust 1993. a Uspenski kiriku preestrimaja eest keraamikavalmistuspäraagi hulgast leitud kolmjalgpannade (1–4) ja graapenite (5–7) tõstenäsad.



Fig. 14. Legs of tripod vessels (TM A 149), found from production debris in front of the priest's house of the Church of Dormition of the Theotokos in Tartu in 1993.

Joon 14. Tartust 1993. a Uspenski kiriku preestrimaja eest keraamikavalmistuspäraagi hulgast leitud kolmjalgõude jalad.

by adding cuprous oxide to the glaze. The sherd with green glaze represented the most common cross section of the rim, present among the production waste of the workshop. Among the production waste found from the yard of 15 Rütli Street, there exists a sherd (TM A 92: 2681), the dark green glaze of which has frothed during heating.

Lids of vessels

In the current find of production debris, fragments of 12 vessel lids existed (Fig. 15). Two of these had been preserved to the extent that a reconstruction drawing was possible (Fig. 16). The diameter of the lids is between 8 and 15 cm. The biggest lid also contained a hole for ventilation. Fragments of exactly similar vessel lids have been collected from the yard of 15 Rütli Street (TM A 92: 1316, 2214).

All the lids found are without glaze. The main reason for glazing the vessels was the need to make them waterproof. The lids were not in contact with the liquid contents of the vessel, and thus there existed no direct need for glazing them.



Fig. 15. Vessel lids (TM A 149), found from production debris in front of the priest's house of the Church of Dormition of the Theotokos in Tartu in 1993.

Joon 15. Tartust 1993. a Uspenski kiriku preestrimaja eest keraamikavalmistuspärgi hulgast leitud nõukaaned.

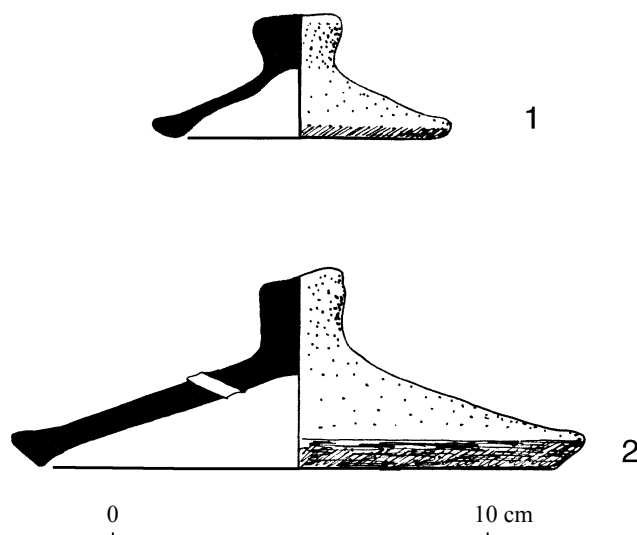


Fig. 16. Reconstructions of vessel lids (TM A 149), found from production debris in front of the priest's house of the Church of Dormition of the Theotokos in Tartu in 1993.

Joon 16. Tartust 1993. a Uspenski kiriku preestrimaja eest keraamikavalmistuspärgi hulgast leitud nõukaante rekonstruktsioonid.

Platters and bowls with painted slip and lead glaze

Among the production debris collected in 1993, 17 fragments of bowl or platter exist. These originate from shallow dishes (Fig. 17) with varying dimensions (diameter 14–31 cm). The rim of the vessels is strengthened with a cordon, which, similarly to the rim of tripod pots, has been formed during turning by pushing down the upper edge of the blank vessel toward its outer surface.

All the fragments of platters and bowls found in 1993, which have been considered as production debris, were decorated with polychrome slip, and then covered with transparent lead glaze. Engobing meant covering the surface of dried vessels with oxide-based colours before heating. The colours were attached to the clay surface during primary heating. Thereafter, the inner surface of the vessel was covered with glaze, and the vessel was baked secondarily. White, beige and dark brown slip clays were used while decorating the bowls. The most common motifs of decoration were spiral and wavy lines (Fig. 18). On one of the platter fragments, collected in 1993 from production debris, fragment of text "...dre..." had been painted on slip. A fragment of platter with similar finishing and rim profile (TM A 92: 4976) was collected from the yard of 15 Rütli Street. This carried text fragment "...der...". We may assume that it also originated from the workshop of Johann Rehn.

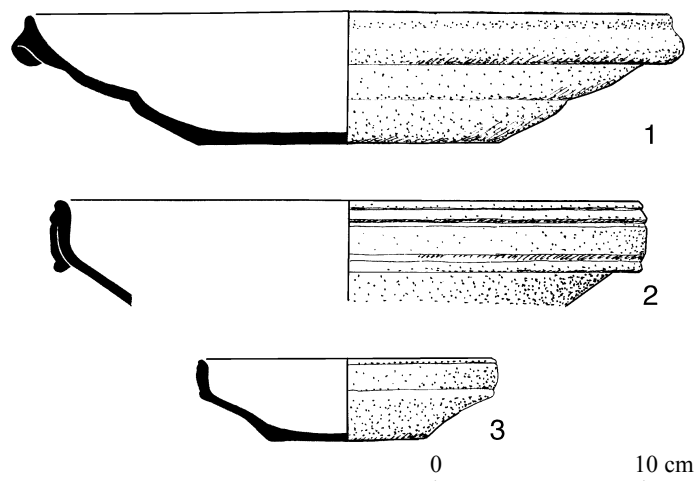


Fig. 17. Reconstructions of platters and bowls (TM A 149), found from production debris in front of the priest's house of the Church of Dormition of the Theotokos in Tartu in 1993.

Joon 17. Tartust 1993. a Uspenski kiriku preestrimaja eest keraamikavalmistuspäägi hulgast leitud liudade ja kausside rekonstruktsioonid.



Fig. 18. Fragments of redware bowls and platters, decorated with engobe paintings (TM A 149), found from production debris in front of the priest's house of the Church of Dormition of the Theotokos in Tartu in 1993.

Joon 18. Tartust 1993. a Uspenski kiriku preestrimaja eest keraamikavalmistuspäägi hulgast leitud angoobmaalinguga punasavist kausside ja liudade katked.

Sieves

Two fragments of clay sieves (Fig. 19) constitute an interesting find among the production debris of 1993. A similar fragment of a ceramic sieve, but with yellow glaze was found from the mixed layer in the trench for water and sewerage pipelines at Magasini Street, in front of the Church of Dormition of the Theotokos.

The described fragments originate from a sieve with the shape of a platter. A similar fully preserved item has been found from Riga, in a 17th-century context (Strauss 1969, pl. 30: 2). It is a vessel with two flat handles, glazed on the inner side, which has holes at the bottom.

Pot-like stove tiles

19 fragments of pot-like stove tiles were collected from the cable trench of 1993. Judging from the rim sherds, these originate from tiles with both rectangular and round opening (Fig. 20). The diameter of the mouth of the latter was 13 cm. A few sherds originate from a tile, which had been covered with yellow glaze at the inner side.

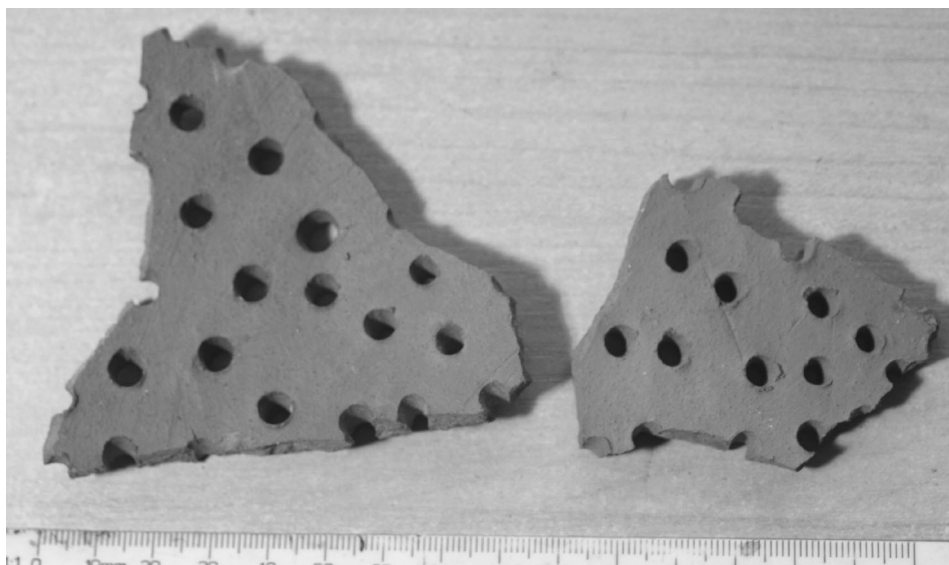


Fig. 19. Fragments of ceramic sieve (TM A 149), found from production debris in front of the priest's house of the Church of Dormition of the Theotokos in Tartu in 1993.

Joon 19. Tartust 1993. a Uspenski kiriku preestrimaja eest keraamikavalmistuspärgi hulgast leitud keraamilise sõela katked.

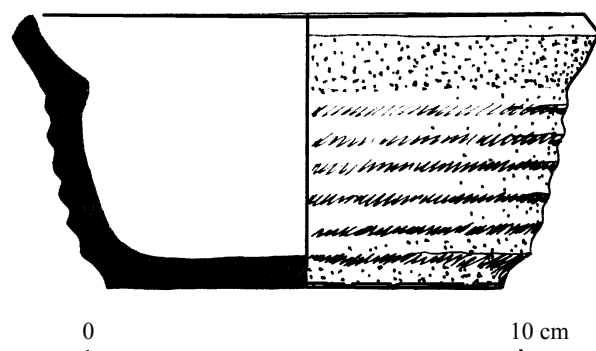


Fig. 20. Reconstruction of a pot-like stove tile with a round mouth (TM A 149), found from production debris in front of the priest's house of the Church of Dormition of the Theotokos in Tartu in 1993.

Joon 20. Tartust 1993. a Uspenski kiriku preestrimaja eest keraamikavalmistuspäägi hulgast leitud ümmarguse avaga ahjupoti rekonstruktsioon.

Relief stove tiles

Stove tiles, which can be connected with the workshop of Johann Rehn without hesitation, are Baroque-style plate or edge tiles, with dark brown glaze. An almost fully preserved edge tile (Fig. 21: 1) was present in the find of 1993. In addition, 4 strongly overheated fragments of plate tiles were present in this collection; a rose was depicted on an unglazed fragment of one of these (Fig. 21: 2). In addition to one bigger blossom, the rose has some smaller blossoms, which have not yet bloomed, and leaves are also depicted below the blossoms. Fragments of wasters made probably with the same mould have also been found from the site of Tartu Botanical Garden on the northern side of Lai Street (TM A 43: 53, 110, 350, 531). Wasters with extremely similar decoration have been found from the cultural layer in the yard of 15 Rööpli Street (Fig. 21: 3). The latter waste tiles most likely originate from the workshop under consideration. This type of stove tiles is a rather typical find in the cultural layer of Tartu. Also in other regions of Estonia and Latvia, this motif was rather widespread during the second half of the 17th century (see Strauss 1969, pl. 69; Ose 1996, pl. V: 3, 4; VIII: 1, 2).

The find from 1993 includes four fragments of cornice tiles of a stove (Fig. 22). They originate from a cornice strip with half-cylindrical cross-section, with the width of 2.5 cm. These have been covered with egg yolk yellow glaze, which has been deformed during firing – the glaze has started frothing. A similar waster of a cornice tile, most likely originating even from the same wasted assemblage (TM A 145: 40), was found, however, from Magasini Street, northwest from the test pit of 1993. A waster of a cornice tile with similar profile, but with dark brown glaze (TM A 53: 125) has been found from the excavation plot of 1990 at the Botanical Garden of the University of Tartu.

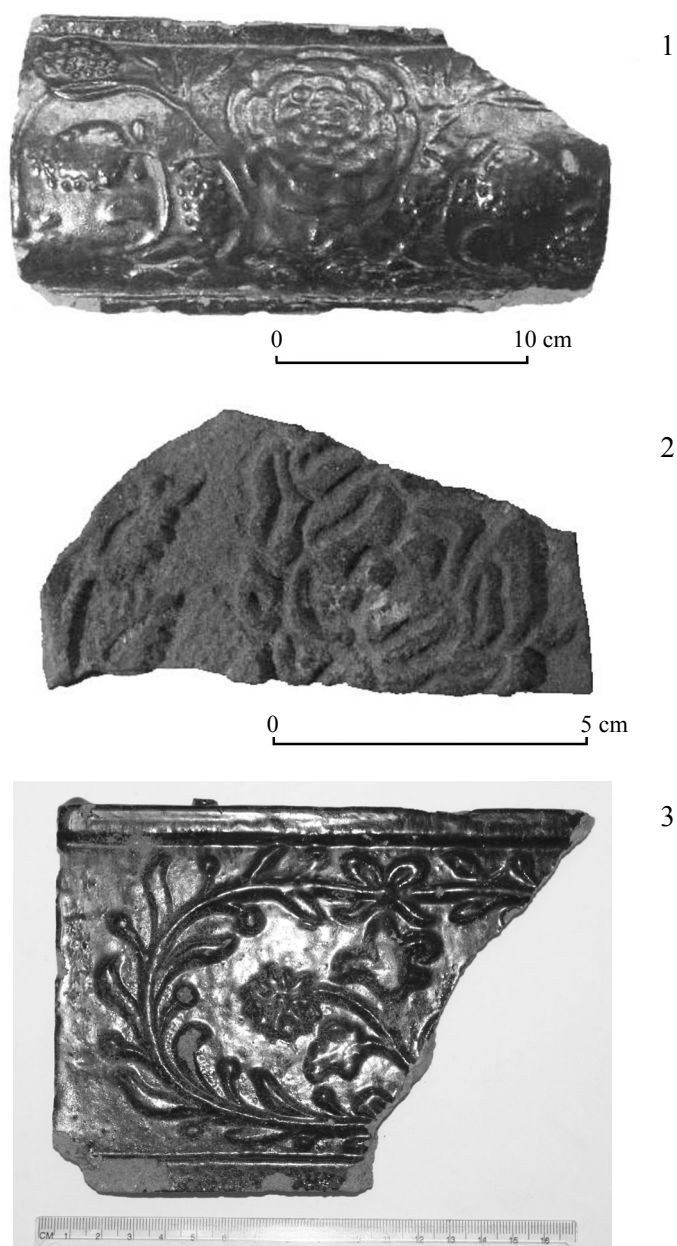


Fig. 21. Waste stove tiles, produced in the workshop of Johann Rehn in Tartu. 1 stove tile found from production debris in front of the priest's house of the Church of Dormition of the Theotokos in Tartu in 1993 (TM A 149), 2 fragment of unglazed and overheated plate tile with plant ornament (TM A 149), found from the same place, 3 fragment of a waste stove tile, found from the yard of 15 Rüütli Street (TM A 92: 2952).

Joon 21. Johann Rehni töökoja praakahjukahlid Tartust. 1 1993. a Uspenski kiriku preestrimaja eest keraamikavalmistuspäraagi hulgast leitud ahjukahhel, 2 samast leitud glasuurimata ja üle põletatud taimornamendiga plaatkahli katke, 3 Rüütli 15 õuelt leitud praakahjukahli katke.

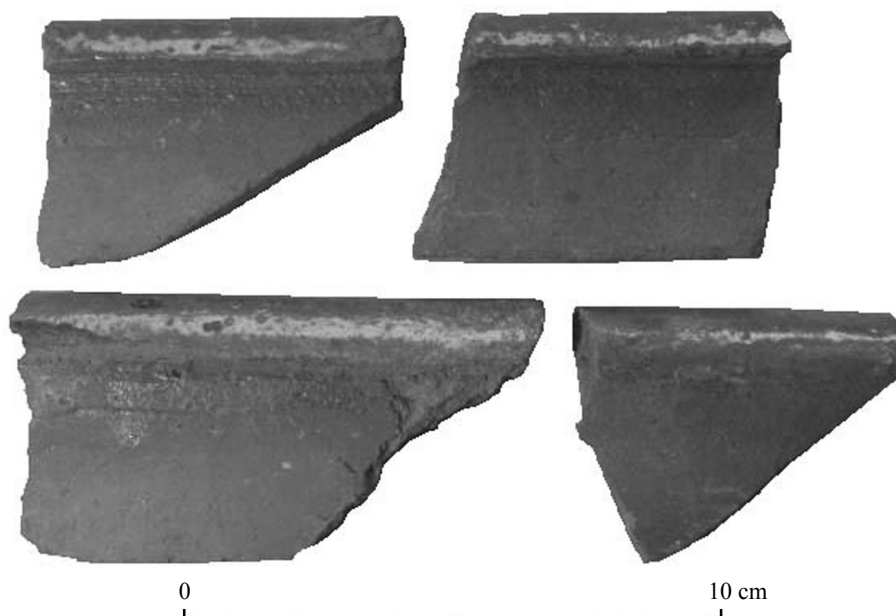


Fig. 22. Fragments of cornice tiles of a stove (TM A 149), found from production debris in front of the priest's house of the Church of Dormition of the Theotokos in Tartu in 1993.

Joon 22. Tartust 1993. a Uspenski kiriku preestrimaja eest keraamikavalmistuspäägi hulgast leitud simsitükkide katked.

The find of 1993 also includes four fragments of the rectangular supporting frame attached to the back side of the tile. The separation of the supporting frame from the main tile seems to be one of the most common problems, which happened during firing. Plate tiles without supporting frame have been collected from the yard of 15 Rütli Street (e.g. TM A 92: 2952, 3823).

Remarks concerning production technology

In numerous cases, it is possible to learn something about the production process from sherds of ceramic vessels. Technological details are often important, as potters from different schools of production use slightly different methods of production, which can be used for tracing the origin of vessels.

The clay test of the vessels found from the workshop of Johann Rehn is of light red colour after burning. Overheated and clinkered vessels have turned dark grey or reddish purple in colour. Small limestone fragments, which often appear in the clay test, form a characteristic detail, which have often destroyed the surface and the glaze of vessels during firing (Fig. 23).



Fig. 23. Wall fragment of a clay vessel (TM A 149), where it is clearly visible that a small fragment of limestone in the clay mass has caused a fault in glaze. Found from production debris in front of the priest's house of the Church of Dormition of the Theotokos in Tartu in 1993.

Joon 23. Tartust 1993. a Uspenski kiriku preestrimaja eest keraamikavalmistuspäraagi hulgast leitud savinõu küljetükk, millel on näha savimassis leiduva lubjakivitükikese tekitatud glasuuridefekt.

Glazed redware vessels were usually baked twice. The first baking took place before glazing the vessel or tile. Slip, however, was applied to the surface of vessels before primary baking. Raw glaze, consisting of lead, was applied to the primarily baked vessels, and they were baked for a second time. The fragments of tripod pots (TM A 92: 1712, 2018) and a sieve (Fig. 19), which were broken during primary baking, are good evidence of such technological procedure. The wasters found from the cable trench by the Church of Dormition of the Theotokos in 1993 have mostly been spoiled during secondary baking, as these were already glazed, or drops of glaze can be seen on their surface.

The vessels show stacking scars, caused by breaking apart the vessels, which have stuck together during firing. Such scars exist both at the bottom (Fig. 24), edges and walls of the vessels. Thus it is possible to state that vessels in the oven were stacked upon each other. Judging on the basis of the direction of traces of flowing and dipping of glaze, the oven was stacked with vessels both in the right direction and upside down. This is also shown by the fact that drops of glaze exist on the outer side and spouts of vessels.



Fig. 24. The bottom of a clay pot, found in the yard of 15 Rüütli Street (TM A 92: 423), which shows marks, when the upper part of another vessel was attached to it during firing.

Joon 24. Tartust Rüütli 15 õuelt leitud poti põhi, millel on näha põletuse käigus selle külge kinni jäänud teise nõu ülaserva jälg.

Two fragments of clinkered S-shaped roof tiles were collected among fragments of vessel and stove tile wasters. So far, no finds have been collected which would refer to the production of roof tiles in the workshop under consideration. Thus it seems more logical to presume that roof tiles or their fragments were used for stacking the oven with vessels, more exactly for separating unburnt vessels from each other.

Vessels requiring both primary and secondary baking were heated together in the oven. A plate tile, collected from the yard of 15 Ülikooli Street, is a good evidence for that (Fig. 25). The upper side of the tile, decorated with plant ornament, is unglazed while a thick layer of brown glaze had poured onto its



Fig. 25. Fragment of a stove tile, found from the yard of 15 Rüütli Street (TM A 92: 4395), the glaze whose had run to the back side.

Joon 25. Tartust Rüütli 15 õuelt leitud ahjukahli katke, millel on glasuur tagaküljele valgunud.

back side, inside the supporting frame. Another overheated stove tile, depicting a rose on its unglazed upper side (TM A 53: 110), was found from the territory of the Botanical Garden of the University of Tartu during the excavations of 1990. A thick layer of scorched glaze had flown onto its back side.

Production of the workshop of potter Johann Rehn in the context of its time

Wasters from the workshop of potter Johann Rehn reveal interesting information concerning the production of the master. The large assortment of products from the workshop is amazing. So far, wasters of redware tripod pots and pans with a spout, pots, unglazed vessel lids, multi-coloured platters and bowls with slip and

lead glaze, clay sieve, simple pot-like stove tiles and plate tiles with brown glaze have been found. All of these have been spoilt during burning.

While in bigger centres (e.g. in Lübeck), there existed specialized masters for producing clay vessels and stove tiles (see Mührenberg 2002), the potters of smaller places had to produce larger quantity of items for living. For example, the potter working next to the Cathedral of Turku, the biggest city of medieval Finland, produced both stove tiles and clay vessels at the end of the 16th or the beginning of the 17th century, on the basis of production remains (Tulikki 2003, 219).

It seems that during its existence, the workshop of Johann Rehn fulfilled the greater share of the demand of the inhabitants of Tartu for simple tripod pots and pans with lead glaze. All the pottery of that type, found from the layers of the second half of the 17th and the beginning of the 18th century is similar to wasters found from the territory of the workshop under consideration. For example, among the pottery collected from the yard of 15 Rütli Street, fragments of tripod pots, which had definitely been in use³, were found (e.g. TM A 92: 1759/1) beside wasters. A platter with text with Christian contents (TM A 45: 2, 3) was probably also produced in the workshop of Johann Rehn. It was found from the inner yard of the 7th Block of Tartu just north of the Town Hall. Fragments of vessels with dark brown glaze, the rim shape of which was identical with the products of the workshop have also been found from the territory of the building at 3 Lossi Street (e.g. TM A 30: 88, 89, 93), the yard of 8 Jaani Street (TM A 150: 16), etc. The potters of Livonia had to compete for the whole medieval period, and also during modern times, with pottery imported in quantities from the West. Thus it is no wonder that in Tallinn, which is a bigger town than Tartu, only a few potters could earn their living. The Guild of Potters was organized only in 1643 in Tallinn, as there were four active potters (Kaplinski 1995, 107). Written notices exist of two more potters of Tartu during the 1690s, in addition to Johan Rehn (Strauss 1969, 152). However, it is not certain what kind of pottery they produced, if any.

Redware tripod pots, pots and platters with multicolour slip had close parallels among ceramic finds from other Estonian towns, dating from the contexts of the second half of the 17th century. For example, close parallels to redware platters with polychrome paintings, found in front of the priest's house of the Church of Dormition of the Theotokos in 1993, can be seen among the finds collected from the 17th–18th century cultural layer of Võllamäe (Gallons Hill) suburb of Tallinn (AI 6011: 119). Even the rim profile of tripod pots and pots, produced in the workshop of Johann Rehn, is not a unique one. Very close parallels to it can be found from the cultural layer of Tallinn (e.g. excavations at Toompea, 5 Rahukohtu Street, AI 6205: 21) and Haapsalu (excavations at 2 Lossiplats (Castle Square), HM 8241: 31). The Baroque stove tiles with plant ornament, produced in the work-

³ Wear marks at the bottom of the vessel, or on their feet, and a layer of scrouch inside the vessels, which has emerged during cooking, can be considered as evidence for the usage of the vessels.

shop of Johann Rehn, have a design rather widespread in the Baltic Sea countries during the second half of the 17th and the beginning of the 18th century. In the whole territory of Estonia, the use of brown glaze for covering simple redware vessels and stove tiles spread during the second half of the 17th century, instead of green and yellow glazes, more popular during the 16th century, and the first half of the 17th century. In that sense, the production of the workshop of Johann Rehn reflected rather closely the fashion of the period. So far, no close parallels have been found to the mould for a stove tile depicting a rider, and the mould depicting a fish, found in 1993 in front of the priest's house of the Church of Dormition of the Theotokos.

The production of the workshop under consideration represents the last stage of the tradition of producing redware vessels, which had started in Germany and the Netherlands already during the 13th century, and had spread to Livonia during the 15th century at the latest. It is likely that the tripod pots, produced in the workshop of Johann Rehn until 1708, are the latest tripod pots produced in Tartu. In the property lists of the merchants of Tallinn from the 18th century, tripod pots are present, but only metal ones (Suurmaa 2004, 105).

The location of the workshop of Johann Rehn – in a remote place next to the town wall – is rather typical potters' workshops. The 13th century potter's workshop of Viljandi (see Tvauri 1999; 2001), and the supposed workshop that existed at Olevimägi in Tallinn also during the 13th century (personal comment by Erki Russow), were both located at the edge of the medieval town, next to the town wall. The remains of the potter's workshop of Turku, Finland, originating from the end of the 16th and the beginning of the 17th century, were also located at the outskirts of the then-existing town (Tulkki 2003, 219). Also in Rhineland, the numerous potters' workshops were mostly located at the outskirts of towns, or even outside the towns (Gaimster 1997, 47–48). Air pollution that inevitably forms during firing, a fire hazard caused by firing at high temperatures, as well as the considerably low social position of the potters can all be seen as reasons for such a situation.

The fact that production remains of the workshop of Johann Rehn have spread over considerably large areas – up to 300 metres from the place of production –, is rather unusual. The possibility that the potter could lay down his waste to neighbouring and even further parcels is highly unlikely. It seems plausible that production remains spread after the year 1708. In that year, the citizens of Tartu (including Johann Rehn) were deported to Russia, and the town of Tartu was systematically destroyed. After the Northern War, in 1753, the Russian Orthodox Church of the Dormition of the Theotokos was established at the place of the former Dominican monastery. In all probability, the construction debris and soil, originating from the destruction of the ruins of the monastery, and the digging of the foundation pit for the new church was transported to various parts of the town as fill, including the pit 31 Kroonuaia Street outside the medieval town wall.

Acknowledgement

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Andres Tvauri ja Romeo Metsallik**TARTU POTTSEPA JOHANN REHNI TÖÖKOJA
(UMBES 1684–1708) TOODANG***Resüme*

Eesti kesk- ja uusaja linnade 16.–18. sajandi arheoloogilise keraamika hulgas moodustab valdava enamiku pliiglasuuriga punasavikeraamika, mida valmistati kogu Läänemere piirkonnas. Küsimus, mille põhjal 16.–18. sajandi punasavikeraamikat täpsemalt ajandada ja kuidas eristada importi kohalikust keraamikast, on uurijaid vaevanud aastakümneid. Eesti punasavikeraamika päritolu ja ajandamise küsimustele annavad osalise vastuse Tartust Magasini tänava äärest leitud 17. sajandi lõpu ja 18. sajandi alguse pottsepatöökoja valmistuspraak ja kahlimatriitsid. Pottsepatöökoja olemasolu oli seal (joon 1) teada juba aastast 1909, mil ajalooarrastaja Richard Otto korraldas keskaegse dominiiklaste kloostril alal kaevamised ja sai pottsepatöökojale viitavat leiumaterjali. Alates 1993. aastast Magasini tänava piirkonnast ja mujalt Tartust saadud uued arheoloogilised leiud on andnud rohkesti lisamaterjali, mis on aluseks ka käesolevale artiklile.

Otto tegi 1909. aastal šurfe Tartu Uspenski apostliku õigeusu kiriku krundil. Umbes 1,2 m sügavusel maapinnast paljastusid maakivist hoonete müürid, mille vahelt leiti pottsepasavi tagavara ja suur hulk savinõukilde. Kõige tähelepanuväärsemaks leiuks oli ratsaniku kujutisega ahjukahlite valmistamisel kasutatud savimatriits (joon 2), mille tagaküljel on kiri: JOHAN REHN anno 1684 FR BN d. 3. Majus. Otto kaevamiste leiumaterjal on enamjaolt kaduma läinud. Lisaks kirjeldatud kahlimatriitsile on jõudnud Eesti Rahva Muuseumi vaid üks peaaegu tervena säilinud graapen (joon 3), mis oletatavasti leiti samuti Otto kaevamiste käigus.

Kahlimatriitsil esinev nimi Johan Rehn kuulub pottseppmeistrile, keda on mainitud Tartu raeprotokollides esimest korda 1684. aastal. Johann Rehn on ka 1708. aastal tsaar Peeter I käsul Venemaale Vologdasse küüditatud Tartu saksa kodanike nimekirjas. Vologdas ta ka 1711. aastal 71 aasta vanusena suri. Lisaks leidub 1734. aasta Tartu revisjoniraamatus märge: "...sellel platsil mis mungakiriku juurde kuulub, on viimasel Rootsi ajal pottsepp Johann Rein elanud."

Pärast 1909. aastat tehti esimesed arheoloogilised uuringud Johann Rehni pottsepatöökoja piirkonnas 1993. aastal, mil Romeo Metsalliku juhendamisel toimus kaabli paigaldamisel järelevalve Uspenski kiriku preestrimaja esisel alal. Selle käigus avastati keraamikapraagi lasu, millest korjati kokku 477 keraamilise toote kildu. Neist 425 pärinevad punasavikeraamilistest nõudest. Lisaks leiti 12 nõukaane-, 19 ahjupoti- ja 14 ahjukahlikatket. Neile lisandusid üks kahlimatriits, 2 keraamilise sõela katket ja 2 katusekivitükki. Leitu näol on tegemist keraamiliste toodete põletamise käigus tekkinud praagiga. Selle tõestuseks on paljud üle põlenud, lausa klinkerdunud killud. Kildudel esineb rohkesti glasuuridefekte, näiteks mustaks kõrbenud või mullitavat glasuuri. Kindlalt on põletusahjus purune-

nud nõud, millel on glasuur murde pinnale valgunud. On ka kilde, millelt glasuur on savis olnud sobimatute lisandite tõttu tükati lahti tulnud. Lisaks on kogu leiu-kogum valmistusviisilt ja välimuselt väga ühtne.

1993. aasta kaevamistel saadud keraamika valmistuspraak annab ülevaate Johann Rehni töökoja toodangust. Selle põhjal võib otsida samast pärit praaki ka mujalt Tartu vanalinnast kogutud arheoloogilise leiumaterjali hulgast. Ilmneb, et vaadeldava töökoja valmistusjääke leidub Tartu kultuurkihis laialdasel alal (vt joon 1).

Johann Rehni pottsepatöökojaga seotud kahlimatriitse on leitud vähemalt kaks. Neist esimese (joon 2) leidis Otto juba 1909. aastal. Barokkstiilis lamekahli matriitsil on kujutatud pea kohale tõstetud kõvermõõga ja sulgedega ehitud kiivriga ratsanik. Leiu teeb erakordseks see, et tegemist on täiesti terve matriitsiga ja lisaks leidub selle tagaküljel tekst: JOHAN REHN anno 1684 FR BN d. 3. Majus. Ratsanikumotiiviga kahlid on Läänemere piirkonnas haruldased. Johann Rehni kahlimatriitsil on kujutatud kas kreeka mütoloogiast tuntud Assüüria kuningat ja Niinive asutajaks peetud valitsejat Ninust, Julius Caesarit, Aleksander Suurt või Pärsia kuningat Kүүros II Suurt. Kõiki neid valitsejaid on Saksa kultuurialal 17. sajandi ahjukahlitel ratsanikuna kujutatud. Kahli tagaküljel on pottsepp Johann Rehni nimi. Pole teada, mida märgib daatum 3. mai 1684, kuid kõige tõenäolisemalt on tegemist matriitsi valmistamise ajaga. Ebaselgeks jääb tähtede FR BN tähendus. Ühtki selle matriitsiga valmistatud kahlit pole seni teada.

Teine, samuti põletatud savist matriits (joon 9), leiti 1993. aastal. Matriitsil on kalakujutis. Arvestades matriitsi väikseid mõõtmeid, on sellega valmistatud mõnd väiksemat kahli detaili. Vasteid valmistoodete näol pole ka sellele matriitsile leitud. Kalamotiiv on kahlitel üpris haruldane. Lähedasim autoritele teadaolev vaste on leitud Miri linnast Valgevene lääneosas ja see pärineb 17. sajandist.

Johann Rehni töökoja toodangu iseloomustamiseks sobivad 1993. aastal kogutud praaktoodete killud. Enim leidub nende hulgas graapenite katkeid. Graapenid olid Saksa kultuuriruumile omased kolme jala ja tõstenäsaga potid (vt joon 3). Vähem on tõstenäsaga kolmjalgpannide katkeid. Jalgadeta potte on vaadeldava töökoja kontekstist seni leitud praaknõude hulgas olnud vaid üksikuid.

1993. aasta leius on nõude ülaserava kilde 173. Nende **servaprofiili** tunnusteks on lopsakas profileering, mida iseloomustab vähemalt neli selget tunnust (joon 10, 11, 12: 1, 2, 5):

- 1) nõugus võriku sisekülge;
- 2) võriku moodustamisel on kasutatud võtet, kus nõu treimisel on nõu ülaserav vastu võriku väliskülge maha keeratud. Nõnda võriku sisse moodustunud liitekoht on murdel sageli näha; harvadel juhtudel on võriku ülaossa jäänud tühik. See on olnud ka põhjuseks, miks osa nõude võrik on põletusel pikuti lõhenenud;
- 3) mahakeeratud osa tipust moodustab võriku ja õla vahele mõika. Mõika kuju vaheldub kolmnurgast poolkerani;
- 4) sageli, kuid mitte alati on võriku ülaosas madal vagu.

Muid profiilikujusid leidis 1993. aasta leiu hulgas vaid kahe üksikeksemplari näol (joon 12: 3, 4).

Punasavist graapenite eriti iseloomulikuks osaks on torujad **tõstenäsad**. Selliseid näsaside või nende katkeid on 1993. aasta leius kokku 24. Need kuuluvad kahte tüüpi. Ühtedel on lai ja veidi lehterjas tugevdusvõruga suuosa (joon 13: 1–4), teistel aga kitsenev profileeritud suuosa (joon 13: 5–7). Kahjuks ei ole 1993. aasta leiu hulgas ühtki terviklikumat graapenit, kuid mõne tõstenäsa kinnitusnurga põhjal võib oletada, et lehterja suuosaga näsad kuulusid kolmjalgpannidele, aheneva suuosaga näsad on aga kolmjalgpottide küljest (vrd joon 3).

Kolmjalg nõude **jalad** või nende tükid on leius esindatud arvukalt – kokku on neid 97. Tegemist on lihtsate kooniliste jalgadega (joon 14), vaid ühel juhul on jalal pikisoon (joon 13: vasakpoolne jalg). Leitud graapenijalad on ligikaudu 7,5 cm pikad.

Lisaks on 1993. aasta leius veel 108 kildu, mis on pärit graapenite külje- või põhjapiirkonnast. Neil on vähe iseloomulikke tunnuseid.

Kõik leitud graapenite killud pärinevad nõudest, mis olid siseküljelt **glasuuritud**. Tegemist on pliiglasuuriga, mille värvus vaheldub kollakaspruunist tumepruunini. Mõnel nõukillul leiduval pruunil glasuuril on kergelt rohekas varjund. Üks servakild pärineb nõust, mille glasuur on värvuselt samblaroheline. Aga seegi kild esindab töökoja jäätmete hulgas kõige tavalisemat servaprofiili.

Vaadeldavas leius on 12 nõukaane glasuurimata katket (joon 15, 16), mille läbimõõt jääb vahemikku 8–15 cm. Kaantest suurimas on õhutusauk.

1993. aasta leius on 17 liua või kausi katket. Need pärinevad erineva suurusega (läbimõõt 14–31 cm) nõudest (joon 17), mille servas on paksem tugevdusvõru, mis sarnaselt graapenite servale on tekitatud treimisel nõu ülaserava välisküljele mahakeeramise teel. Kõik valmistusjäätmeteks peetavad vaagnate ja kausside katked, mis leiti 1993. aastal, on kaunistatud mitmevärvilise angoobmaalinguga ja seejärel kaetud läbipaistva pliiglasuuriga. Põhilised kaunistusmotiivid on spiraal- ja lainjad jooned (joon 18). Ühel vaagnakillul on näha maalitud teksti.

Huvitavaks leiuks valmistuspraagi hulgas on kaks savist sõela katket (joon 19). Sarnase, kuid kollase glasuuriga kaetud keraamilise sõela katke tuli välja ka Magasini tänava vee- ja kanalisatsioonitrassist segatud kihist Uspenski kiriku esiselt alalt. Kirjeldatud katked pärinevad liiakujulisest sõelast.

Ahjupottide katkeid leiti 1993. aasta kaevise hulgast 19. Seal on nii nelinurkse kui ka ümmarguse avaga ahjupotte (joon 20). Viimaste suuava läbimõõt on 13 cm. Paar kildu pärinevad ahjupotist, mis on seest olnud kaetud kollase glasuuriga.

Johann Rehni töökojaga kindlalt seostatavad praakkahlid on tumepruuni glasuuriga barokkstiilis kahlid. 1993. aasta leius on üks peaaegu terve servakahhel (joon 21: 1). Lisaks kuulub sellesse leidu 3 katket tugevasti ülepõletatud plaatkahlitest, millest ühel (joon 21: 2) glasuurimata katkel on kujutatud roos. Väga sarnase kujunduse ja teostusega praakkahleid on leitud veel Rütli 15 hoovist (joon 21: 3). See kahlitüüp oli Tartus tavaline. Ka mujal Eestis ja Läti alal oli see motiiv 17. sajandi teisel poolel kahlite kaunistamisel üpris levinud.

1993. aasta leius on neli katket kahhelahju simsitükkidest (joon 22), mis pärinevad poolkerakujulise läbilõikega simsiribast, mille paksuseks on 2,5 cm. Need on kaetud munakollasevärvi glasuuriga, mis on põletuse käigus ilmselgelt kahjustunud – hakanud mullitama. Huvitav on mainida, et täpselt samasugune, tõenäoliselt samast praakpartiist pärit simsifragment on leitud 1993. aasta leiukohast loode poolt Magasini tänavalt.

Johann Rehni töökoja alalt leitud praaknõude savimass on põlenud enamasti helepunaseks. Ülepõlenud ja klinkriks muutunud keraamika on omandanud tumehalli või punakaslilla värvitooni. Iseloomulikuks üksikasjaks on savimassis üpris sageli leiduvad väikesed lubjakivitükikesed, mis põletuse käigus paisudes on lõhkunud nõu pinna ja glasuuri (joon 23). Nõusid põletati kaks korda, teisel korral koos glasuuriga. Sellise tehnoloogia kohta on tunnistuseks esmasel põletusel purunenud graapenite ning sõela (joon 19) katked. 1993. aastal saadud praak on siiski tekkinud reeglina nõu teistkordsel põletamisel, sest see on juba glasuuriga kaetud või esineb kildudel glasuuritilku. Nõudel leidub jälgi, mis on tekkinud ahjus üksteise külge kleepunud nõude lahtimurdmisel (joon 24). Seega võib öelda, et nõud laoti ahjus sageli üksteise otsa. Otsustades glasuuri valgumise ja tilkumise suuna järgi, olid nõud ahju laotud nii õiget- kui ka tagurpidi – ka nõude välispindadel ja tõstenäsadel on glasuuritilku. Ühes ahjutäies põletati koos nii esmast kui teist põletust vajavaid nõusid. Selle tõendiks on Ülikooli 15 hoovilt leitud ahjukahhel (joon 25), mille pealispind on glasuurita, kuid tagaküljele, randi sisse on paksu kihina valgunud tumepruun glasuur.

1993. aasta leius on praaknõude ja ahjukahlite katkete hulgas ka kaks katusekivi klinkriks põlenud katket. Võib oletada, et katusekive või nende katkeid kasutati ahju pakkimisel nõude üksteisest eraldamiseks.

Hämmastav on Johann Rehni töökojas valmistatud toodete lai sortiment. On leitud kolme jala ning tõstenäsaga graapenite ja pannide, pottide, nõukaante, angoobmaalingu ning pliiglasuuriga kaetud liudade ja kausside, miniatuurse kannukese, savist sõela, ahjupottide ja plaatkahlite põletuse käigus riknenud eksemplare. Kui suuremates keskustes (nt Lüübek) valmistasid savinõusid ja ahjukahleid erinevad meistrid, siis väiksemates kohtades pidid pottsepad äraelamiseks tootma laiemat sortimenti. Näib, et Johann Rehni töökoda täitis oma tegutsemise ajal suurema osa Tartu vajadusest tavaliste pliiglasuuriga punaste graapenite ja pannide järele. Kogu 17. sajandi teise poole ja 18. sajandi alguse kihtides leiduv sedalaadi keraamika vastab vaadeldava töökoja alalt leitavale valmistuspraagile.

Johann Rehni töökojas valmistatud kolmjalgnõudel, pottidel ja angoobmaalinguga liudadel olid lähedased vasted ka teiste Eesti linnade 17. sajandi teise poole keraamikaleidude hulgas. Tema töökojas valmistatud graapenite ja pottide servaprofiil pole unikaalne. Johann Rehni töökojas valmistatud baroksed taimornamendiga kaunistatud ahjukahlid olid 17. sajandi teisel poolel ja 18. sajandi algul kõikjal Läänemere maades levinud kujundusega. Ka hakati 17. sajandi teisel poolel kogu Eesti alal lihtsamaid punasavikeraamilisi nõusid ning kahleid 16. sajandil ja 17. sajandi esimesel poolel enam levinud roheline ja kollase glasuuri asemel

tumepruuni glasuuriga katma. Selles osas vastas Johann Rehni töökoja toodang täpselt oma aja moele. Seni pole aga ratsanikukujutisega kahli matriitsile ja 1993. aastal leitud kalakujutisega matriitsile lähedasi vasteid leitud.

Vaadeldava töökoja toodang esindab Saksamaa ja Hollandi aladel 13. sajandil alanud ja hiljemalt 15. sajandil Liivimaale levinud punasavikeraamiliste nõude valmistustraditsiooni viimast järku. Ilmselt on Johann Rehni töökojas tõenäoliselt kuni 1708. aastani valmistatud graapenite näol tegemist kõige hilisemate graapenitega Tartus.

Johann Rehni töökoja asukoht kõrvalises kohas linnamüüri piirneval kruntil on pottsepatöökodadele tüüpiline. Põhjuseks oli nii keraamikapõletusel tekkiv õhusaaste ja tuleoht kui ka pottseppade suhteliselt madal sotsiaalne positsioon.

Huvitav on asjaolu, et Johann Rehni töökojast pärit valmistuspraak on Tartu linna kultuurkihis levinud suurel alal – tekkekohast kuni 300 m kaugusele. Vaevalt oleks pottsepp võinud oma rämpsuaaber- ja kaugematele kruntidele vedada. Valmistusjäägid levisid ilmselt pärast 1708. aastat. Tollal küüditati Tartu saksa kodanikud Venemaale ja Tartu linna hävitati süstemaatiliselt. Pärast Põhjasõda, 1753. aastal valmis endise dominiiklaste kloostri kohale Uspenski vene õigeusu kirik. Ilmselt veeti kloostrihoonete lammutamise käigus ja uue kiriku vundamendisüvendite kaevamisel tekkinud ehitusrusu ning pinnast täiteks mitmele poole linnas, sh väljapoole keskajal linnamüüri piiratud ala.