

Techniques for gilding of metal vases from present-day Northwestern Bulgaria (4th – 3rd c. BC) (Abstract)
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The present paper aims at shedding light on the terminology that is used for describing different variants of the ancient gilding technique, as well as at introducing some new observations on gilding techniques that were applied on artifacts from the territory of Ancient Thrace.

One of the main methods that were used for gilding metal vases is the technique of mechanical gilding. It has two variants – gilding with foil and gold-figured decoration. Gilding with foil is the oldest gilding technique. It uses the exceptional malleability of gold that could be hammered into thin foil and then mechanically pressed against the surface of a metal object.

The technique of gold-figured decoration differs in that shallow grooves were incised on the surface of the item, where the edges of pieces of gold foil, already shaped as various figures, were then inserted and pressed. Until now, no artifact has been discovered in Thrace to illustrate the use of that technique.

The other group of popular gilding techniques unifies them under the term low-temperature gilding techniques. They share two common features – gilding takes place under the effect of temperature and the gold leaf that is used is considerably thinner than foil.

The simpler method is to use some binding substance, such as organic glue. The available analyses of artifacts from the Thracian territories offer no evidence of the use of this technique.

The second method of attaching gold leaf to silver or bronze surface consists of applying the gold leaf and careful heating in the contact zone. The method is known as binding by diffusion or thermo-diffusion gilding. Several vases from the Rogozen Treasure attest the use of this technique on

artifacts from Thrace. At this stage, two approaches to decorating through thermo-diffusion gilding could be distinguished.

In the first case, the gold leaf is applied directly on the surface of the already finished item. A good example is the pitcher, Inv. No. Б 470, from Rogozen Treasure. Elements of the decoration on the external surface are gilded by means of golden leaves that were prepared in advance and added after all main operations of shaping and decorating the vase were completed. This is attested by the penetration of gold in the zones with lower relief. The gold leaf was fixed through pressing and smoothing with fine instrument following the decoration's contours. What followed was a low-temperature local heating, in order to speed the process of adhesion between the gold and silver surfaces. After the heating, the places of attaching were smoothed one more time. This operation additionally strengthened the bond between metals that was created by temperature, and a better contact was achieved between the gold leaf and silver. It could be assumed that the gilding of this vase was made in stages. First, each of the elongated “almond-shaped” elements was gilded, and then the relief bands that delimited the decorative fields.

The gilding of another pitcher from the same deposit was made in the same way, with the only difference that the gold leaves were of rather irregular shape and their edges leave the zones that were to be decorated.

Another method for leaf gilding by diffusion could be observed on one of the phialai, discovered along with other artifacts in the burials in Mogilanskata Tumulus in Vratsa. On the inner side of the vase, there is a round medallion with the

image of a young woman. The gold is applied only on the surface of the medallion, without leaving its outer diameter and touching other elements of the decoration. In this case, the medallion and the gilding were made separately from the vase. A thin silver plate of round shape was used for the appliqué. The gilding was made of thin leaf. It may have been larger than the silver plate, but after it was applied, the excessive edges were carefully removed. The finished element was applied to the base of the phiale, probably by soldering. This operation was preceded by deliberate roughing of the surface of the

base.

Amalgam gilding is one of the most interesting techniques, part of the group of low-temperature gilding techniques. It requires laying a paste of gold and mercury on well cleaned, smooth metal surface. After the surface is heated to a temperature, sufficient for evaporating the mercury, a tightly bonded layer of precious metal is achieved. The exceptionally fine gilding on one phiale from Rogozen Treasure, Inv. No. Б 465, provides grounds to consider it amalgam gilding, but there is still no positive chemical and physical evidence.