WHAT COMES TO MIND WHEN YOU HEAR MOSAIC?
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EXAMINATION OF HUNGARIAN ART NOUVEAU MOSAICS: THE RÓTH WORKSHOP

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Abstract

The conservation of early 20th century mosaics of Budapest executed by the Miksa Róth workshop provides valuable opportunities to study the characteristics of Hungarian Art Nouveau. The styles and iconographies of these mosaics refer to historic events and Hungarian mythological motifs. The contribution discusses the artists and artisans involved, the architectural contexts, the different characteristics of indoor and outdoor mosaics, the methods of execution, and reports on examinations of the mortar compositions and their contribution to the artistic effect. The materials discussed include glass tesserae, enamelled ceramic inlays, seashells, and coloured preparatory mortars.

Keywords: Miksa Róth, Art Nouveau, mosaics, mortar stratigraphy, indirect technique, Budapest

The artist and his technique

Miksa Róth (1865-1944) was a mosaic and stained glass artist, appointed to the Imperial and Royal Court of Austria-Hungary, also known as one of the pioneers of Art Nouveau in Hungary. He learned the art of painting on glass in the studio of his father, then continuing his education in Venice. In 1883 he established his own studio in Pest, after which he began work in mosaics. At this time he invited the Italian master mosaicists Giovanni Barbus and Pietro Labuss to join the studio – a collaboration that would survive until World War I. Róth is credited with the introduction of mosaics to Hungary, as an art of building decoration. He experimented successfully with specific stratigraphies of mortar, integrated iridescent "eosin" glazed ceramics tesserae and tiles from the Zsolnay factory of Pécs, and used Tiffany opalescent glass. His workshop also produced its own glass for mosaic tiles, including opalescent glass. He cooperated with a number of other Hungarian artists. As well his surviving production in Austro-Hungarian locations, his stained-glass works can also be seen abroad, in monuments such as the Church of Mariensdorf, Burgenland, Austria, the Royal Palace of Amsterdam, the Fageborg Church of Oslo, and in the dome of the Gran Teatro Nacional of Mexico City (Varga 1993: 75-76).

At the turn of the 19th to 20th century, many Hungarian artists had delicately designed monograms, applied as a maker's mark. The monogram of Master Róth often appears in his mosaics, in some cases in *schwarzlot* ("black lead") on a tile of glass and gold leaf (Fig. 1). One of his characteristic techniques was the so-called "checkerboard" arrangement of tiles. His style also often involved an additive colour-mixing technique, involving the interplay of different hues of glass, in some cases using material produced by his own studio.

Fig. 1. Normal and colour-inverse view of the Miksa Róth monogram, executed in *schwarzlot* technique, from the *Guardian angel* mosaic, Budapest, V. József Attila u. 24 (photo B. M. Kürtösi)

The three works in mosaic reported here were created in the studio by indirect technique. Róth (Roth 1943: 58-59) himself described the use of paper as the temporary support on which to draw the intended composition. This was the full-size, mirror-image copy of the intended mosaic (Kölber 1910), prepared from the original plan designed by the artist. The prepared drawing was cut into units of suitable size before beginning the process of applying the mosaic tesserae, adhered using starch paste or gum Arabic with honey.

The prepared sections were then transported for mounting on site, where the mosaic, at this point visible only from the reverse, was laid into the bedding mortars. Once the paper support was removed the mosaic was finally seen intended. The boundaries of the workshop sections can typically be distinguished in the finished mosaic.

Different buildings, different materials and technology

From examination by the author in the microscopy laboratories of the Hungarian University of Fine Arts, in 2014 to 2017, it results that the bedding mortars used by the Róth studio were varied, in particular in relation to the location of the mosaic in indoor or outdoor contexts.

An example is a wall mosaic designed by Róth, composing on important aspect of the entrance foyer of the Liszt Ferenc Academy of Music (architects Flóris Korb, Kálmán Griegl, opened in 1907; Kürtösi 2014). The tesserae mosaic integrates with a fountain basin carved in red compact limestone from Tardos, filled by water flowing from a gargoyle, the latter executed in "shell mosaic". The bedding mortars were lime-based, with the largest fraction being calcite marble powder. The micro-analytical examination of the joint mortars reveals the presence of deep purple, green and white coloured glass splinters used as additives, detected in the

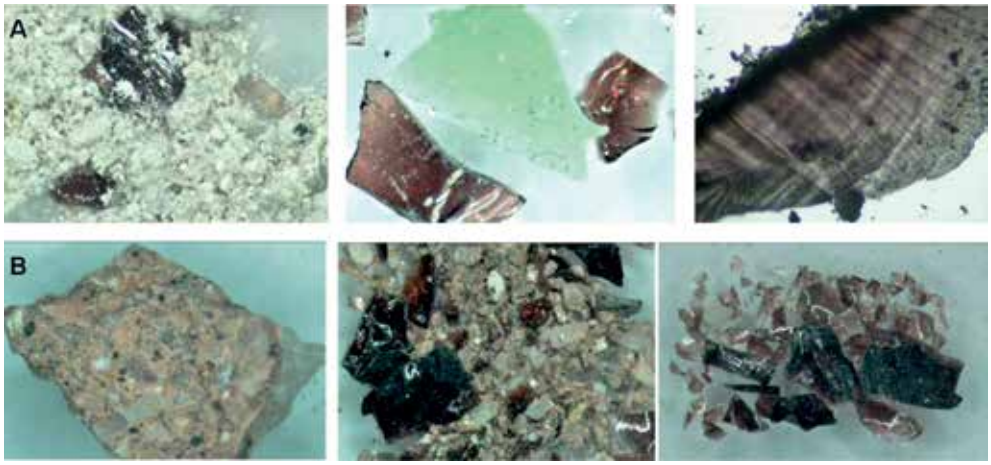

Fig. 2. Mortars of the fountain mosaics, Liszt Ferenc Academy of Music, Budapest; stereo-micrograph of glass splinters from the acid-proof residue: A) bedding mortar, B) joint mortar (photo B. M. Kürtösi)

acid-proof residues (Fig. 2). The pinkish colour of the mortar in the figurative areas was obtained using hematite. The gargoyle was executed using a wide range of seashells. The XRD examination of the bedding mortar for this part of the work showed the presence of vaterite, once of the calcite polymorphs. The encrustations covering the surfaces of the fountain area were carbonates, as were the original shells, requiring that the conservation process proceed by slow mechanical removal.

The corner facade of a residential building in Budapest, in Art Nouveau style, was decorated by a figurative image known as the *Guardian angel*, designed by Károly Lotz. Both the figurative work and the name of a pharmacy, placed immediately below, were executed by the Róth workshop in around 1905. These mosaic elements were framed by enamelled tiles from the Zsolnay factory, laid in relief stucco-work. The whole of the exterior wall decoration suffered severe damage during World War II; shot holes visible in the work probably dated to the 1956 Revolution (Fig. 3). In this case the bedding layer and grout were in the same type of lime-based mortar, filled with sharply crushed limestone particles in different fractions. These mortars showed a strong reddish tint, except in the area of the woman's dress, where a darker greyish hue had been prepared. The colouring of these

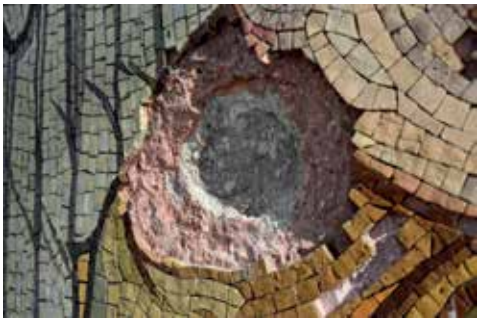

Fig. 3. Preparatory mortar stratigraphy of the *Guardian angel* mosaic, revealed following removal of a glass tile inserted in a shot hole, during a previous treatment. Budapest, V. József Attila u. 24 (photo B. M. Kürtösi).

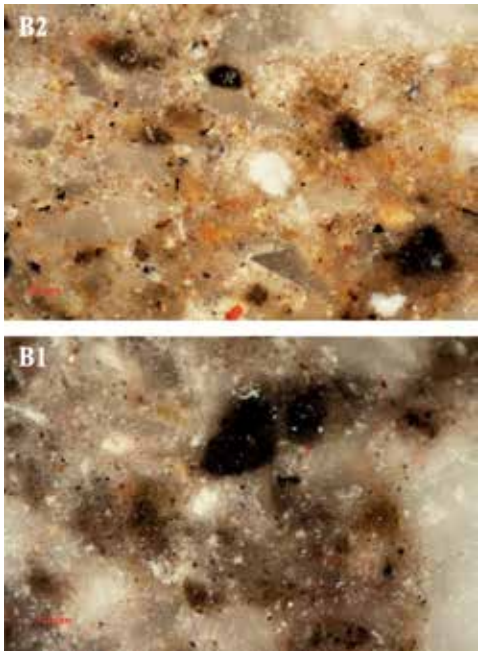

Fig. 4. Fiume Road National Cemetery Monument cross-section details of the preparatory mortars from the geometric mosaic frieze decorating the archway of the northeast dome: B1, B2) bedding mortar layers. PLM 10x obj. Budapest VIII. Fiumei út 16-18 (photo B. M. Kürtösi).

grouts had been an important element in achieving the painterly effect of the overall composition.

Funerary architecture incorporating mosaics represented an important current at the turn of the century, and the Róth workshop created a number of decorative works for funerary buildings. One of these was the complex of mosaics decorating the four domes and the archways of the Monument of the Fiume Road Cemetery of Budapest, 1906-1909, by architects Lajos Gerle, with mosaic designers A. Körösfői-Kriesch, A. Dudits, Zs. Vajda and J. G. Stein. The mosaics of a representative archway and dome were examined. The mortar stratigraphy is very complex. The basic mortar mixtures generally used crushed carbonate rock particles as aggregate. The mosaic sections were mounted on the hemispherical dome used a lime-based mortar with hydraulic components; brownmillerite (Ca_2 (Al, $Fe3^+)_2$ O_5 and larnite (Ca_2SiO_4) were found by XRD. We can find a composition related to that of a mixture of the early type of Portland cement and air-lime (Fig. 4), which would have served well for rapidly executed, secure work on the curved inner surface of the dome as well. This observation suggests new potentials for related uses of such mortars, subsequent to further research and examination.

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Brigitta Maria Kürtösi graduated as painting-conservator from the Hungarian University of Fine Arts (HUFA), Budapest, and received her Doctorate in Liberal Arts in 2017. She is a freelance conservator and assistant lecturer at the HUFA, specialising in historical mural techniques and conservation. Two of her aims are to promote the knowledge of Hungarian mosaic heritage within the international context, and to strengthen education on mosaic techniques at the HUFA.