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RESTORATION OF GOUACHE PAINTINGS ON PAPER

Riassunto

Oggetto dell'articolo che segue è il sondaggio complessivo ed il restauro conservativo del complesso di sei pitture a guazzo su carta barocche. I dipinti, che sono aggiustati in cornici di legno e che secondo i risultati del sondaggio di scienze naturali potrebbero essere stati fatti prima del 1720, fanno parte delle importanti collezioni del castello barocco di Jaroměřice nad Rokytnou. Le opere sono state sottoposte ad un complesso processo di restauro comprendente la pulitura meccanica e capillare della loro superficie, il raddrizzamento del supporto cartaceo, l'integrazione della materia cartacea mancante ed il ritocco della superficie colorata. Sono state sottoposte ad interventi anche le cornici ornamentali con listelli dorati.

Keywords: Conservation-restoration, paper, gouache, cleaning, retouching

The presented work describes the restoration process of six gouache paintings on handmade paper assembled in decorative frames originating in the same period, with wooden backing and glass. The artworks are the property of the National Heritage Institute in České Budějovice. They originally belonged to the collections of the chateau of Uherčice.

The dimensions of the framed artworks are 48 × 38 cm with one exception of 60 × 41 cm. The artworks were unsigned and undated, and their provenience is unknown. Based on preliminary examination revealing original watermarks in the paper, the collection might have been painted in the 18th century.

The watermark probably comes from the paper factory in Nedošín near Litomyšl. The watermark was used after 1785 and consisted of a crowned cartouche with a post tube and the letters *IP*. In the second half of the folio, there was the inscription *C* and *I HONIG* with a crown-tipped image. This part from the second half of the folio is the same as the watermark on the paper support of the artwork.

All the paintings depict floral still-lives with vases. Various motifs, such as putti, lions, artichokes, or the bust of a young man with rocailles can be found at the bottom of the still-lifes. The paintings are executed in opaque and semi-transparent layers that cover fine underdrawings. The paper support was not entirely covered with paint layers.

The decorative frames were made from oak profiled wood. There are decorative gilded relief ledges with hallmarks on the inner side of the frames. In some cases, the

Fig. 1: The gouache painting before conservation-restoration

Fig. 2: The gouache painting before conservation-restoration in raking light

ledges were missing. The wooden supports were made out of unspecified softwood. As the painting was exposed to direct day light, outlines of the motives on the wooden backing appeared.

The examination was conducted to consider the condition and defects of the artworks and to identify the material composition. The surface of the paintings was covered with dust and dirt including insect excrements. The paper supports were deformed due to moisture, and there were visible tidelines in many areas, disturbing the aesthetic value of the artworks. There was also foxing in parts without the paint layer. The paint layer was fragile and flaking off the supports. These defects were examined in visible daylight, raking and translucent light. The paper support was examined in translucent light, which revealed the presence of Vergé and watermarks. The UV luminescence photography allowed the proper location of the tidelines and foxing defects. The painting media used were sensitive to water and water-ethanol solution. It was necessary to pre-consolidate the paint layers before wet cleaning. The measurement of pH brought the average value to 5.3. The average pH value increased to 6 in the course of the restoration.

The XRF examination proved the presence of lead white, minium, cinnabar and pigments based on copper in the paint layer. The invasive examination using scanning electron microscopy (SEM) was carried out for more accurate determination of the paint layer composition, particularly of the blue pigments. The blues contained particles of azurite, calcium carbonate and dolomite. There was no evidence of Prussian blue, so we assume the creation of the paintings occurred before the 1720s, the time of a worldwide expansion of this blue pigment. Nevertheless, the watermarks shift the date of creation to the late 18th century. The presence of the natural gum in the binder was proved by micro-chemical reactions. The paper support of the gouache paintings consists of linen and hemp fibres. The examination of microbiological attack showed negative results.

Fig. 3: The gouache painting after conservation-restoration

Pre-consolidation of the fragile paint layers was executed using 0.25% water solution of sturgeon glue in aerosol form. The artworks were dry cleaned with soft brushes and Cleanmaster gums.[1] Then, wet cleaning was performed. The paintings were slowly and carefully moistened, firstly in the climatic box and after that on the water surface. Moistening of the parts with the presence of white pigments was quite tricky and took more time than with other parts. Wet cleaning on capillary non-woven fabric[2] was provided after the paper support was completely and evenly moistened. This process reduced dark and visually disturbing leaks. The final step of the wet cleaning and flattening of the treated objects took place on a low-pressure table. The recto sides of the artworks were cleaned with demineralized water, water-ethanol solution 1:1 and 0.25% solution of Tylose MH 300 using an airbrush, vacuum pressure of ca 160 hPa and at temperature of 60 °C. The whole process was repeated until the impurities washed away from the paper support into the wet filter paper laid under the artwork. In the end, a 0.25% solution of Tylose MH 300 was applied to resize the paper and fix the paint layer.

Finally, the artworks were mounted on the paper board, 2 mm thick, with alkaline reserve using the strip-lining method. Strips of Kawashahi Japanese paper (35 g/m^2) were adhered to the edges of the verso of the paintings and to the paper board with Klucel G.[3] Retouching was performed using pastels and pigments bound in the solution of Paraloid B 72 in ethanol.

The wooden decorative frames and wooden supports underwent an overall conservation-restoration treatment as well. They were cleaned from the impurities and unsuitable coatings and glues.

A solution of fungicidal and insecticidal preparation Bochemit QB[4] in demineralized water (1:9) was applied to the wooden frame and the wooden supports to prevent infestation by fungi and wood-destroying insects. The gesso base of the gilded frame was reinforced after the penetration solution (demineralized water and ethanol 1:1) with a solution of 7% animal glue in water. The back of the wooden supports was coated on both sides with a 10% solution of Paraloid B 72 in toluene. Minor deeper defects of the wooden frame were filled with a mixture of beech sawdust bound with wood dispersion adhesive. Subsequently, the fillers were treated with wax-resin filler, tinted with pigments.

1 100% clean soft latex gums without chemicals, solvents and other additives.

2 Paraprint OL60 non-woven material, made of 100% viscose, reinforced with an acrylate binding agent. https://gmw-shop.de/en/tools-and-material/diverse-materialsnon-wovenspolyester-filmmesh/102/paraprint-ol-60-capillary-non-woven-fabric

3 See methodology for preparation of adhesive foils of Japanese paper and cellulose ethers, Czech National Library 2013. https://text.nkp.cz/o-knihovne/odborne-cinnosti/sprava-a-ochrana-fondu/odborne-texty-a-informace/metodika-vyroby-adhezivnich-folii-z-japonskeho-papiru-na-bazi-etheru-celulozy

4 Bochemit QB fungicidal and insecticidal agent contents alkylbenzyldimethylammonium chloride and boric acid. https://www.bochemitshop.cz/index.php?controller=attachment&id_attachment=338&inline=1

The gilded ledges were filled with Bolognese chalk, glued in 7% with glue in water, in the place of a scraped or fallen clinker base. This was followed by gilding on red ground. Finally, the protective coating of microcrystalline wax – a 5% solution of Cosmoloid H 80 in petroleum solvent was applied to the oak timber battens and polished with a soft cloth after solvent evaporation.

The restored paintings were finally assembled back into the original set consisting of the treated frames, the wooden supports and the glass covers with spacers of non-woven textile between the glass and the paper.

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