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Venetian Mirrors. Technological and conservation issues of two neo-Rococo mirrors from the collection of the Karkonoskie Museum in Jelenia Góra, inv. no. MJG 36s, MJG 1245Ps

Doctoral dissertation summary.

The subject of the dissertation is the historical, technological research, conservation and restoration issues of 19th-century mirrors originating from Venice, made with the silver plating technique for glass panels. These are works of applied art, found in museum and private collections, often requiring specific conservation and restoration treatments. At the same time, this is an area that is unrecognised among researchers in Poland and very little in Europe.

The work is a contribution to the project of a methodology for the conservation and restoration of mirrors of this type, as objects of complex construction in the context of recognition of the technique and technology of manufacture and the destruction processes. There is a lack of standards for proceeding with this type of historic object, the introduction of which is intended to serve museum professionals and non-conservators and restorers in the field of glass conservation and restoration, taking care of collections which include the objects in question. The manufacture of mirrors involved coating the glass with an amalgam of mercury and tin, and from the second half of the 19th century, with silver compounds. The ability to identify and distinguish between the two techniques is, unfortunately, not common and appears to be necessary from the point of view of conservation prevention, including storage conditions. The safety aspect associated with the presence of mercury compounds in older mirrors is also important.

The identification and standardisation are based on a conservation and restoration work (case study) carried out by the author between 2020 and 2023 on two 19th-century mirrors from the collection of the Karkonoskie Museum in Jelenia Góra. The concept of the work was born during the author's many years of practice in the field of glass conservation and restoration, and

participation in work related to the conservation and restoration of mirrors. The above-mentioned aims were realised on the basis of historical research included in the work, a formal and technological analysis of the mirrors mentioned, moreover, an analysis of the state of preservation and the interrelationship of the materials used to make them. In addition, specialised examinations of the objects, constituting a physical and chemical analysis, were carried out. These included modern analytical techniques, such as scanning electron microscopy with EDS analyser (SEM EDS), optical coherence tomography (OCT), X-ray fluorescence spectrometry (XRF) and mass spectrometry with sample ionisation in inductively coupled plasma after laser ablation (LA ICP MS). The whole process allowed the development of an appropriate programme of conservation and restoration work, the details of which are discussed.