The Royal Theater of Denmark

Architectural conservation of decorative paintings

DET KGL·TEATER

Nationalmuseet
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Introduction

The conservation of two important interiors at The Royal Theater of Denmark was completed in 2016: the decorated ceiling of the main theater hall and the walls and ceiling of the exterior loggia. Both contain decorative paintings of high artistic quality.

History

The Royal Theater was built in 1874 by the architects Vilhelm Dahlerup and Ove Petersen. It was built in the main period of historicism in architecture and the building contains clear references to other European theaters and cultural buildings of the time, eg. the Santa Maria della Sapienza in Napoli (1625), Künstlerhaus in Vienna (1865-68) and the Opera National de Paris (built 1875, but designed 1861).

The Royal Theater of Denmark contains numerous decorated surfaces of high artistic quality in the late Pompeian decoration-style.

The ceiling motif of the main theater hall is the nine muses in Greek mythology. It was painted by the famous Danish artist Constantin Hansen. The nine muses were originally painted on paper and subsequently glued to the ceiling in circular fields surrounding a large crystal chandelier. The colors used are very bright and intense and are very different from the contemporary use of dark and bleak colors in ordinary interiors of the time. It demonstrates the position of the theater, a scenography of dramatic effects. The ceiling was previously restored in 1894 and 1942.

The exterior loggia was originally donated by the Danish enterprising patron Brewer I.C. Jacobsen and was painted by master painter Schmiegelow (later the firm C. Møllmann). Due to weather conditions the loggia had been restored several times, most recently in 1985 by the National Museum of Denmark.

Condition

The Ceiling Of The Nine Muses was executed in various materials including distemper, oil paint, gilded wood and stucco. After nearly 70 years of deterioration and decay, it was in need of thorough repair due to active flaking, cracking, and water damage. The loggia was primarily excecuted with oil colors and gilding. Situated next ot a busy road and partly outdoors, it was badly degraded by pollution, sun, rain, wind, and pigeon droppings. These factors had deteriorated the layers of paint which appeared worn and faded, with many cracks and delamination in the uppermost paint layer and plaster substrate.

Method of conservation

The conservation treatment of the painted surfaces has been formulated based on prior analyses which determined the original painting materials and techniques. Testing determined the most appropriate and effective methods of conservation for the paper-, plaster, and stucco surfaces.

All building elements have been photographed or measured and the subsequent stencils was used to monitor the work and to isolate the treatment areas.

The aim has been to preserve all original surfaces. Damaged surfaces were retouched and loose parts consolidated. On the Ceiling of The Nine Muses cyclododecane was used to isolate the sensitive distemper surfaces during stabilization. Only when surfaces were totally damaged were they re-painted using a stencil technique as was used originally. Architectural paint research determined that some of the original colors had altered and required adjustment according to the original color scheme. The reconstructions and retouches were carried out with pastels, acrylic colors, gouache, and distemper. The main objective has been to clean, retouch and retain as much of the original material as possible. Restoring – with all its history and patina - the magnificence of the artwork as it would have appeared in 1874.

Research

The Ceiling of The Nine Muses underwent scientific investigations to determine the original primer, colors and composition. Surveys were made with microscopic testing, FT-IR spectroscopy, and X-ray fluorescence spectroscopy-(XRF). The results showed that the primer was gypsum and that the background colors consisted of chromium oxide green, cinnabar and a blue copper-based pigment, presumably Bremen blue (copper hydroxide). Gildings on wood and stucco consisted of metal foils of copper-zinc alloy and, surprisingly, in one of the samples of what was assumed to be gold leaf. These results clearly illustrate that a variety of different metallic finishes were deliberately used to accentuate architectural highlights throughout the ceiling.

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The Ceiling of the nine muses after - FOTO@Roberto Fortuna

Balcony after - FOTO@Roberto Fortuna


Loggia after - FOTO@Roberto Fortuna


Loggia before - FOTO@Roberto Fortuna


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