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Local Treatment for Monochrome Outdoor Painted Metal Sculptures: Assessing the suitability of conservation paints for retouching

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When outdoor painted sculptures get chipped, scratched or abraded, conservators might consider local retouching treatments as an option that would protect the exposed metal substrate and restore the aesthetic integrity, thus postponing a very costly and invasive overall repainting. Unfortunately, matching colour gloss and texture on large monochrome surfaces is always challenging. This paper reports on research undertaken to investigate some of the materials and application techniques that could be used to improve the matching of local areas of inpainting as part of a broader maintenance strategy for painted works in sculpture parks, and discusses some of the advantages and disadvantages of working with both industrial products and conservation materials.

Previous work by the lead author investigated the use of industrial paints to retouch monochrome painted metal sculptures, using Claes Oldenburg's *Trowel* (1971) from the Kröller-Müller Museum as a case study. Several industrial products were tested and for *Trowel* it was found that using a paint of the same type as the original, manipulated to modify its gloss and colour, gave the best results. However, the original paint is not always available on the market because of

product discontinuation or paint formulations changing over the years, and so research on alternative products was carried out at the Getty Conservation Institute. Instead of investigating industrial paint systems, a range of conservation paints and products that are usually employed in indoor applications were tested. Although these materials are unlikely to match the durability of industrial products in outdoor settings, they offer a number of advantages that might make them appropriate for temporary treatments, including a better workability for colour and gloss adjustments, a generally easier application procedure, better availability in small quantities, and a lower cost than their industrial counterparts.

For the present study, a matte industrial paint that was recently developed as a coating for Alexander Calder sculptures was used as the target surface. Various conservation retouching paints were selected and used to retouch mock-ups prepared with these matte industrial paints, which were damaged with scratches and other mechanical means to reproduce typical damage to painted sculpture. The simulated scratches and losses were first primed and filled using materials that were selected in consultation with conservators and the paint industry. Since the composition of some of these products was unclear they were analysed and determined. The retouching was then carried out as a last step, applying the paint with an airbrush and using an 'over-the-edge spray technique'. Some of the retouching paints were modified following the advice of the manufacturer to improve workability or durability. The colour retention of the various products is currently being tested with artificial aging in a weatherometer; the adhesion of the local treatment and the compatibility with the overall paint will be tested with the mock-ups placed outdoors for an extended period of time. Preliminary results show that the workability of some of the products tested is satisfying and that the retouching, when carried out properly, reintegrates both the paint coherence and the visual aspect of the artwork.

KEYWORDS:

**outdoor painted metal sculpture • local treatments • retouching
• product testing**

ABSTRACTS