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Treatment Report

Polychrome Organ Case
by Gilbert Scott Jr and Thomas Kempe, ca. 1870

St Michael and All Angels Church
Moccas, Hereford

Bristol, October 2020

INTERNATIONAL FINE ART CONSERVATION STUDIOS LTD
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INTRODUCTION

Treatment of the polychrome organ case was carried out in July 2020. This followed on from a Condition Survey produced by IFACS in February 2018. At the time of treatment, access to the organ case was facilitated by an in-situ decked scaffold. Several wood panel components of the organ case had been detached due to parallel, ongoing restoration and re-installation of the organ mechanism, and were thus treated separately on-site.

As noted previously in the condition survey, there was no evidence of the polychrome decorated surfaces of the organ case having previously undergone restoration treatment but evidence emerging during conservation suggests otherwise. A pencil inscription on the reverse of one of the bottom white panels reads: 'Cleaned by J. H. and E. G., September 1923'. A commemorative plaque on the wall under the organ says ' This organ was re-built in 1980.

As well as the extensive surface dirt and spider web deposits and small paint losses on the case surfaces, many of the gilded stars along the blue border near the centre of the screen were missing or damaged. The lower part of the organ had suffered from extensive wear and tear, and damaged caused by candles (burning and candle wax spills), finger and hand marks, and several drip and stain marks.

The painted sections of the organ were varnished in the past, except the gold leaf sections, and this coating discoloured over time. However, it was not possible to remove the varnish on this occasion without damaging the original paint, which is soluble to solvents. Therefore, it was left on the surface.

Following cleaning the surface was re-varnished using a conservation grade varnish, stable and re-soluble, and losses and damages were retouched using synthetic dry pigments in a synthetic varnish.

TREATMENT

Replication of missing stars

The missing stars were re-cast in composition ornament paste by taking a moulding from an extant, undamaged original. The replica stars were given a coating of yellow bole followed by gilding with 22.5 ct. gold leaf. The new gold surface was then patinated using a thin wash of Van Dyck brown and rottenstone glazes, in order to achieve a visual match with the surviving, aged originals.

The replacement stars were attached to the blue border using a paste composed of a mixture of PVA adhesive and powdered coconut fibre, employed as a bulking agent. Each star was held in place during the curing process by a soft foam pad held against the star and supported by a wooden pole.

Surface cleaning

Significant loose surface dirt and dust deposits were present on the organ case, chiefly on the upward-facing surfaces. These were removed using dusting brushes and a vacuum cleaner. Numerous spider webs were also removed from both the organ case and the surrounding areas of the walls and ceiling joinery using the vacuum cleaner.

A range of cleaning tests were performed on the ingrained dirt on both the painted and the gilded surfaces of the polychrome decoration, using a variety of aqueous and solvent-based cleaning mixtures.

A suitably efficient and safe cleaning method was devised using cotton wool swabs of an aqueous solution of triammonium citrate in de-ionised water with addition of isopropanol and two surfactants, synperonic N and trietanolamine. Controlled application of this mixture facilitated the removal of most of the ingrained surface dirt, producing a noticeable change in appearance and general brightening of the original colour scheme. After cleaning with this mixture, the surfaces were wiped with cotton wool swabs of de-ionised water, followed by Shellsol D40 in order to remove any residues of the cleaning agents. Some very resistant staining, such as finger/hand grease, was cleaned further with acetone.

The very numerous small spots of insect or spider droppings found across most of the polychrome surfaces could not be removed by these cleaning methods. This was partly due to the irreversible chemical staining and darkening of the paint layers by the droppings.

Application of isolating varnish

Following the surface cleaning, a protective conservation-grade isolating varnish was applied to all the painted surfaces of the organ screen, excluding the gilded areas. The varnish was composed of a mixture of Paraloid B 72 synthetic resin, dissolved 10% in Shellsol A. The varnish was applied thinly and rapidly using flat brushes to achieve a thin, uniform coating.

The varnish had the effect of re-saturating the paint layers and matching them more closely to their original appearance. The varnish also serves as a protective barrier over which the reversible retouching could be applied, and as protection against future dirt and foreign matter.

Filling of small losses

Some small damages to the wooden surfaces had been caused by impacts, scrapes and minor abrasion over the years, particularly where the organ case was handled, such as around the keyboard and pedals. A few small dents and losses were filled where necessary with fine Flügger acrylic filler.

Retouching

Some expansive areas of paint loss, found on some of the elements of the organ case such as the panels on the underside of the wings, and the panels that fit around the pedals and keywell, were first retouched using modern acrylic paints.

Retouching of the smaller but very numerous paint losses and blemishes found across the majority of the organ case was carried out using raw powdered pigments dispersed in Laropal A81 synthetic resin, with a 40:60 mixture of Shellsol A and Shellsol D40 as diluent. The retouchings were applied using fine sable brushes over the new fills coated with acrylic paints, and over the paint losses and many of the small dark spots caused by insect droppings.

The forms of the stencilled decorative patterns were re-created where they had been lost. In some areas were the dirt was very ingrained and not fully removed during cleaning, such as stubborn areas of candle soot and burning marks, retouching was applied over the discoloured original paint to closely replicate the original colours.

Finally, gilt wax glazes (Liberon gilt cream) were applied to damaged areas of the gold leaf.

Application of a final varnish

After retouching was completed, a final top coat of protective varnish was applied to all of the painted areas. This varnish was composed of a mixture of Regalrez 1094 synthetic resin with a 2% addition of Cosmolloid 80H microcrystalline wax, dissolved at 20% in Shellsol D40 solvent. The wax addition served to reduce the gloss of the dried varnish and impart an overall semi-matte appearance to the polychrome surfaces.

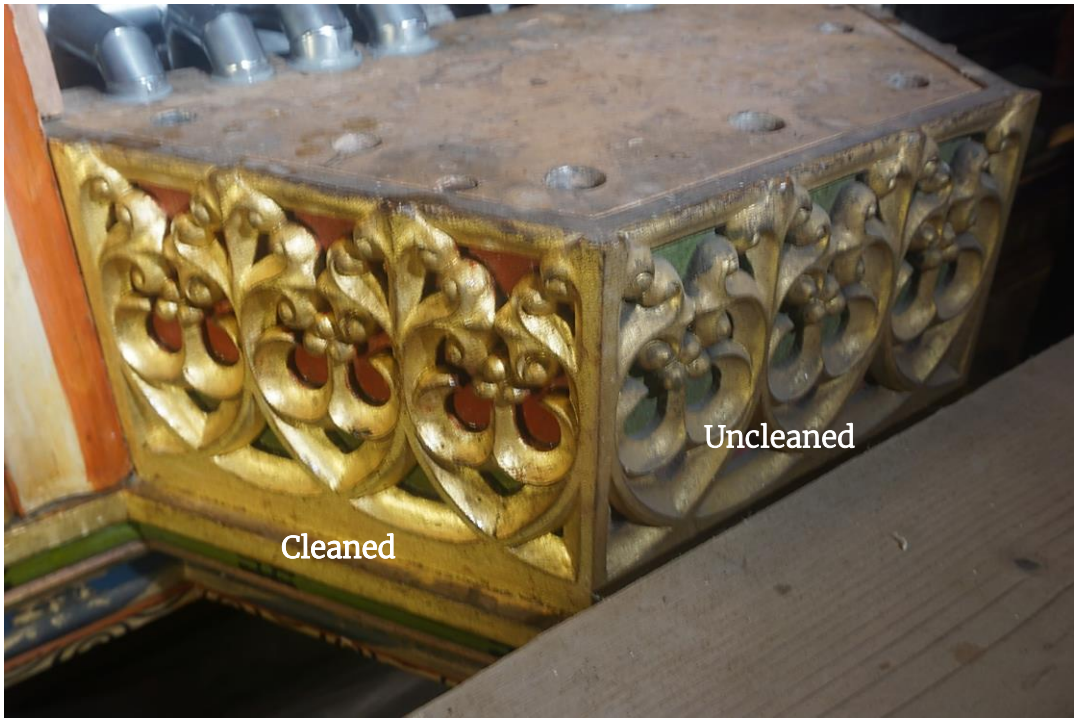
The varnish was heated to above 50°C to melt the wax and kept warm during the varnishing process by placing the varnish container in a water bath over a hot plate. The varnish was applied thinly and evenly using flat brushes.

ILLUSTRATIONS

Star replication process showing three stages from casting to gilding of new stars.

Original star still in place alongside a missing one.

Old yellow varnish clearly visible over a white painted section.



Details during cleaning of dirt and grime layers.

Details during cleaning of dirt and grime layers.

Details during cleaning of candle soot layers.

Insect and spider spots remaining on the surface after dirt removal

Images before and after treatment.

Details during application of the new stars and retouching of blue background.

Images before and after treatment.

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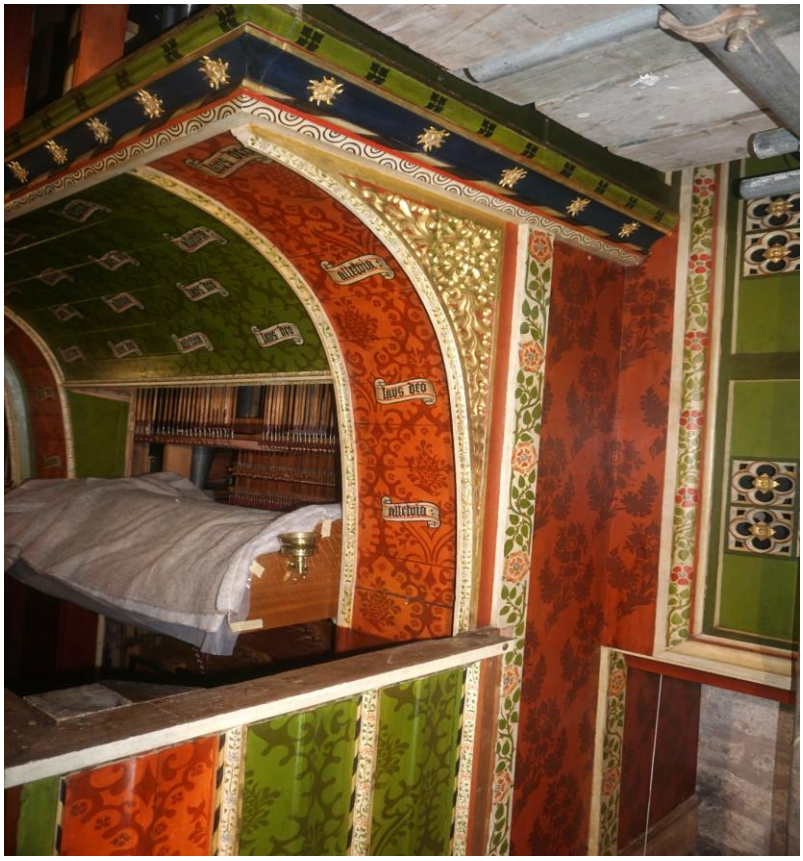

Images before and after treatment.

Details showing burn marks after cleaning, and after varnishing and retouching.