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LINKING PAST AND FUTURE

文物修復辦事處 Conservation Office


Lion sculpture after restoration.

Reviving a Chinese 'Mosaic': The Art of Jiǎn Cí

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1. Introduction

This poster reports on the discovery, analysis and conservation of an artistic sculpture which features traditional Chinese craftsmanship and was originally located in the Tiger Balm Garden.

The Tiger Balm Garden

The Tiger Balm Garden, once the only thematic garden in Hong Kong, was constructed in 1933-1936. It was decorated with numerous statues and animal sculptures depicting Chinese folklore about compassion and honesty. Due to their important historical value, around 100 pieces of sculpture were salvaged by the Hong Kong Antiquity Authority before the garden was demolished in 2004 for a residential development.

Initial Condition

Amongst the salvaged series, a lion sculpture which measured 120(H) x 150(W) x 70(D) cm came into the laboratory for conservation in 2015. Constructed in concrete over an inner metal framework, the sculpture was structurally unstable with a broken tail, detached legs, corroded inner metal components and flaking surface paint.

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(1) Lion sculpture before conservation work.

2. Inspection

Upon close inspection, the sculpture displayed different shades of colour and glossiness between the flaking surface paint and its under-surface. The under-surface was found to be smooth compared with the textured surface paint. Minor surface paint removal in some inconspicuous areas revealed that the original surface of the sculpture was fully covered with ceramic sherds. As some of these pieces had been lost with the passage of time, the lion sculpture's former owner had tried to mask such losses with heavy over-paint.

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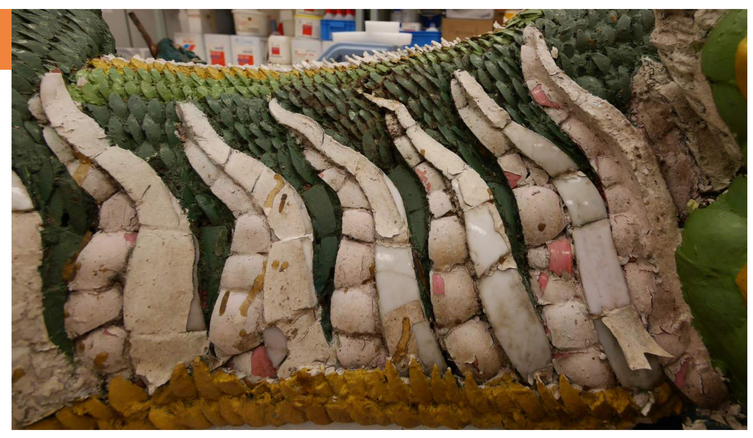

(2) Flaking surface paint.

3. Cleaning

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(3) After removal of surface heavy over-paint.

The heavy over-paint was removed by benzyl-alcohol-based paint remover and the underlying surface was thoroughly steam cleaned. Six colours (blue, yellow, green, orange, pink and light green) on the ceramic sherds were revealed after cleaning.

4. Fabrication: the Jiǎn Cí Diāo Technique

After a literature survey, the fabrication technique of the sculpture was identified as *Jiǎn Cí Diāo* (剪瓷雕) which has been popular in China since the Ming (1368-1644) and Qing dynasties (1644-1913). Similar to *Trencadís*, as practiced in Catalan Modernism since 1900, Jiǎn Cí Diāo makes use of ceramic sherds to form mosaic artworks. While Trencadís makes use of flat tiles, Jiǎn Cí Diāo makes use of sherds cut out from ceramic bowls with various curvatures. Sherds adhered to the surface in a convex form create a three-dimensional effect.

5. Glaze Analysis

High power microscopic study indicated that all colours except orange were an over-glaze. The composition of the colourants was confirmed by scanning electron microscopy with energy dispersive x-ray spectroscopy (SEM/EDX).

Colourants on Glazes	
Blue	Cobalt Blue
Yellow	Lead Tin Yellow (Naple Yellow)
Green	Cobalt, Chromium & Zinc Green
Orange	Red Lead (paint film)
Pink	Iron Red (still uncertain)
Light Green	Chromium Green

SEM/EDX result of glazes

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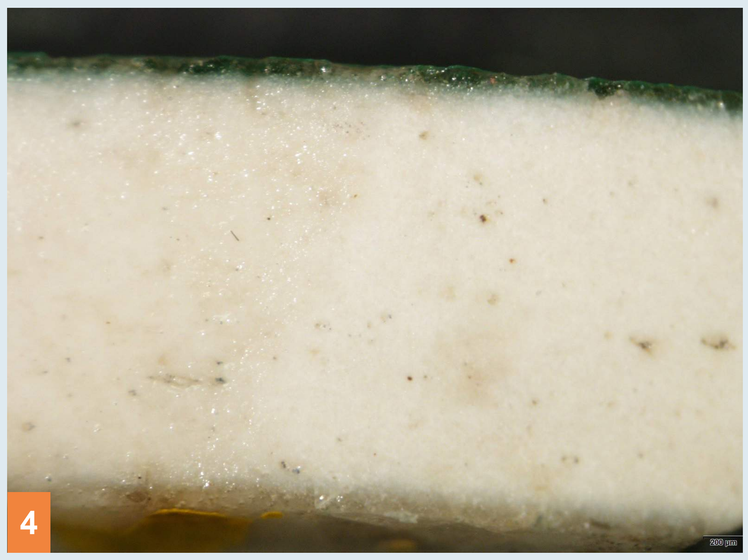

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(4) Cross section of green ceramic fragment;
(5) Cross section of yellow ceramic fragment.

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6. Replication of Glazes and Fragments

As many ceramic sherds had been lost, giving the object a dilapidated look, it was necessary to replicate the lost fragments in order to reinstate the integrity of the sculpture. Glaze recipes were simulated and tested on white bowls. A coloured glaze layer was replicated after firing. Using modified pliers, pieces of sherds were cut out from the new colour-glazed bowls and attached in position using natural hydraulic lime.

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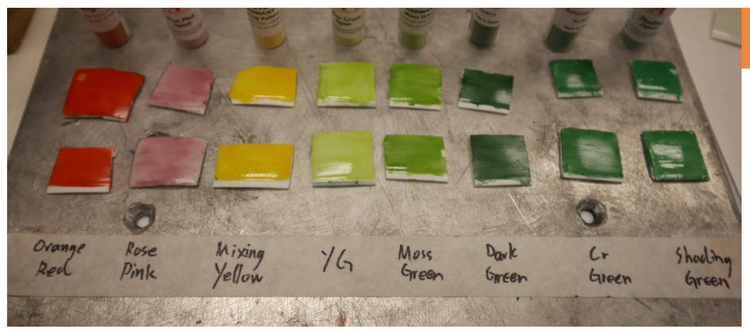

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(6) Replicating coloured glaze layer;
(7) Applying glaze to bowl;
(8) Kiln to fix colour;
(9) Cutting the desired shape;
(10) Attaching into position using natural hydralic lime.

7. Other Treatment Procedures

Other treatment procedures included rejoining broken parts by welding the metal components, in-filling the lost substrate with cement and natural hydraulic lime and consolidating the sculpture using CaLoSil E25 (70%) + ethyl silicate (Remmers KSE 300) (30%).

The treated sculpture was then welded onto a metal supporting platform as the last step of restoration.