K1166: Condition Report

Conservation Started: July 11, 2011
Conservation Finished: July 13, 2011
Conservator: Krysia Spirydowcz
Time Taken: 18 hours
Including digital photography, report, conservation and packing.

Dimensions: (H) 21mm (Diam) 23-23.5 mm
Weight before: 19.83 g
Weight during: 19.45 g
Weight after: 16.52 g
No. of Cells: 78 **No. of garnets:** 48
Catalogue number: 579

Digital photography:
Taken with a Nikon Coolpix 4500 digital camera, under daylight or bulbs and Meiji Techno RZ Stereo microscope with an Infinity 1 camera (with analyses capture software) and fibre optic lights, 7-75x magnification. Taken before, during and after.
No additional before treatment photos taken as object was extensively photographed earlier. Photomicrographs were taken after treatment.

Annotation on any of the storage bags or boxes:
SSH 09 1971
SF 412 1001
7/8/09 K7

Description: Visual and microscopic examination using Meiji stereo microscope 7-75x magnification
Check to see if the object has been examined or treated previously. If so, reference that report, review the document and add additional information or changes to the current report.
See previous Condition Report for this object: <K1166 – condition report 2010.doc> for a comprehensive description.

Associated Objects: None

Pre-Conservation Condition: Visual and microscopic examination using Meiji stereo microscope 7-75x magnification

See previous Condition Report for this object: <K1166 – condition report 2010.doc> for a comprehensive description of condition as received.

Treatment: Carried out using a Meiji stereo microscope
Purpose: Display/ Analysis
Aim: Partial cleaning
Materials: Soft natural/synthetic brushes, cotton swab, cocktail stick, thorn in pin vice/holder, water on garnets, water/IMS on metals, other – specify

See <K1166 condition report 2010.doc> for details of prior treatment. Sides ‘a’ and ‘b’ were cleaned in 2010. The soil deposit was not removed from the interior cavity. The goal of treatment in 2011 was to clean sides ‘c’ and ‘d’. The granular soil on the exterior/interior surface was mechanically removed or reduced where possible using a fine thorn tip secured in a pin vice and a small pure bristle brush. IMS or water was used to soften the soil to facilitate removal. A water pen filled with IMS was also used for precision application of IMS to specific areas. Loose particles of soil were then removed with a small swab of IMS.

Cleaning began with side ‘d’. Removal of soil from an edge cloison revealed that the garnet was missing but the underlying gold foil was still in situ. The foil was stamped with a waffle pattern as are all the other foils on this object. These were previously described as having a corrugated pattern (Condition Report 2010). Traces of green powdery material were revealed at the five o’clock position, indicating that this cloison may have contained enamel and could have been a repair. Removal of soil from the central cloisons revealed small spots of green powdery material in most of the cells aside from the central area.

Cleaning of side ‘c’ proceeded as described above. When soil was removed from another edge cloison (between sides c and d), it was empty except for powdery green residue. No foil layer was present. Two small cloisons contained a powdery orange residue which may be traces of a paste used by the metalworker. Fewer traces of powdery green residue were found on side c than on side d. Most of these were located close to the top edge. Final cleaning of resistant dirt on garnets was carried out using 50/50 IMS and water, applied on cotton swabs.

Excavation of a small triangle directly below the main motif on side ‘b’ revealed another small triangular garnet, sunk deep in the recess.

The paper K number had already been adhered to the interior surface with HMG brand Paraloid B72 (ethyl methacrylate copolymer) from the tube, applied with a fine paint brush.

A new storage box padded with white polyethylene foam was constructed to house the object. A strip of Tyvek (spun bound polyethylene fibres) was used as a cushion for the object and to help lift it out of the foam.

Addition 24.03.2015 (Rachel Altpeter):

The soil left in the cells that do not hold garnets or gold foil was reduced as far as possible without removing the green corrosion product left in the cells. This green corrosion, probably from an enamel filling, was found in the cells in the central area of all sides. Some cells are nearly completely filled with the material, others only hold traces. In two of the cells traces of a black material, probably organic, could be observed at the very bottom of the cell and were left in situ as well.
The soil was removed by softening with IMS on a soft brush and taking it off in thin layers with a natural thorn secured in a pin vice.
The soil in the inside and bottom of the pyramid was fully removed with IMS, a natural thorn and cotton wool swabs dampened with IMS.

weight before: 19.30g weight after: 16.50g

The paper K number label was temporarily removed during cleaning as it was adhered to the soil filling the inside, and readhered at the end of the treatment to the inside rim along the bottom edge using Paraloid B72 35% w/v in acetone.

Post-Conservation Condition/Findings:

24.03.2015: The green corrosion product can now be seen in most of the cells holding no garnet or foil. These are also significantly deeper than those used for garnet cloisonné on other objects in the hoard.

Analysis undertaken
XRF analysis of the object was performed. See document 'KXXX XRF Report'.

Samples:
1. K1166 Soil from side c ADDED TO SAMPLE 4
2. K1166 Soil from side d ADDED TO SAMPLE 4
3. K1166 Green from cell (Previously collected by another conservator) ADDED TO SAMPLE 4
4. soil
5. garnet
6. possible paste DISPOSED
7. possible enamel DISPOSED
8. possible paste
9. possible enamel retrievd from C face DISPOSED
10. possible enamel

Please remember to mark the sample tube with the K number and sample tube number.

new samples taken 24.03.2015:
soil a: removed from inside the cells without garnets on all sides
soil b: removed from inside the bottom of the pyramid

References: if applicable