

K 1314 Condition Report

Conservation Started: 03/03/11

Conservation Finished: 03/03/11

Conservator: Deborah Magnoler

Time Taken: 3hrs

Including digital photography, report, conservation and packing.

Dimensions: (L) 21.3 mm (W) 15.4 mm (D) 7.1 mm

Weight before: 4.89g

Weight after: 4.71g

Catalogue number: 539

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.

Annotation on any of the storage bags or boxes: none

Description: Visual and microscopic examination using Meiji stereo microscope 7-75x magnification a single, cabochon semi-circular red garnet mounted on a gold and silver setting. The perimeter of the mount is decorated by (starting from the topmost) a linear twisted filigree wire, a twisted wire, twisted further to create a rope, another linear twisted wire. The back features three rivet holes, with portion of silver rivets still in situ. The topmost hole is torn and open, and reveals some of the inner construction detail in the form of a solid base of a silver or silver alloy metal, presumably placed between the stamped foil and the gold backing where the rivet holes are. The stamped gold foil behind the garnet is in a **4x4** squares waffle pattern. A **5x5** squares pattern has also been noted in some areas of the foil; however this is difficult to ascertain at present due to material behind the garnet obscuring the foil.

Associated Objects: folded cross K655-659

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

Previously treated. Minor traces of soil still present around the gaps in the front edge and within chips/breakages on the stone. The back is still partially covered by a thick layer of compact but fine soil. the exposed gold has localised dark/black tarnish and a portion of the filigree decoration on the straight edge has been worn or flattened, erasing the detail (old damage). The pattern on the fold stamped foil behind the garnet is partially clouded by a opaque light coloured material. The chips on the surface tend to extend onto micro-crack on the surface or within the body of the garnet; when the damage extends to the inside, a phenomenon in the form of evenly distributed small bubble-like inclusions (fingerprint inclusions) has been noticed (under magnification x20 and over). This localised fingerprint inclusions tend to be distributed along the same plane as the breakage, and at least two planes have been noted:

one running parallel to the surface and one running perpendicular to the surface, towards the centre of the garnet- see photographic report for more detail. The setting seems secure and the garnet structurally stable within it. Contact with moisture should be avoided, as water may permeate the surface via the cracks and become trapped within the garnet.

Treatment: Carried out using a Leica M60 microscope

Purpose: Display/ Study

Aim: Total cleaning

Materials: Soft natural/synthetic brushes, cotton swab, cocktail stick, thorn in pin vice/holder, water on garnets, IMS on metals

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. Loose particles of soil were then removed with a small swab of IMS.

The paper K number was adhered to the interior surface with 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.

Post-Conservation Condition/Findings: micro-excavation of the central rivet hole at the back has revealed a silver or silver alloy metal layer between the stamped foil and the plain gold backing. The portion of the silver rivet still in situ here may have fastened together foil and silver layer, and eventually the hole object onto an exterior support.

Analysis undertaken

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

Samples:

1. Soil from front
2. Soil from back