

CONSERVATION TREATMENT RECORD

Lab number: 8426
Brief description: Small metal pressed disc
Name of owner: c/o James Hales
Owner's number: Thwing small find no. 425

Name of student: Katy Elizabeth Smith
Date allocated: 05/02/09
Date completed: 08/06/09

Material type

Copper alloy

Dimensions

Maximum width across surface: 23mm
 Minimum width across surface: 21mm
 Diameter of hole: 3.5mm
 Thickness of metal: 0.2mm
 Depth of turned edges: 2mm

Weight: Before – 1.4g After – 1.4g

Technology

The disc of metal may have been cut from a larger sheet, and the edges pressed back while still hot and malleable. The leaf pattern has been created using a die, which has pressed the pattern into the metal from top to bottom. The central hole has been cut from the top side downwards.

Pre-treatment condition

The object was soiled with dirt from the burial environment and minimal corrosion, this was obscuring some of the fine detail of the design. The shape of the object had become distorted, with two cracks in the edge, one of which extended across the upper surface.

Significance

The object may have been a button cover or fitting, but a firm identification has not been possible. It was recovered from the site spoil heap, so its original context has been lost – this may have been indicative of its date.

Examination

The object was examined using an optical microscope at 30X magnification. It was also subjected to x-ray fluorescence spectroscopy in order to provide a breakdown of the composition of the metal alloy. The major elements are copper (81%), aluminium (4%) and zinc (3.6%). Trace elements include magnesium, iron and lead. The analysis was conducted prior to cleaning, and only analyses the surface of the object, this means that the results are slightly distorted by the presence of corrosion products and soil.

Justification for treatment

The soiling and corrosion products were obscuring some of the finer detail of the leaf design on the surface of the object. It was requested that the object was cleaned and prepared for long-term storage. The surface coatings will protect the metal from the effects of atmospheric pollutants and moisture. Re-shaping the object is not necessary for either stability or aesthetic reasons.

Cleaning

The soiling was removed using Industrial Methelated Spirit and cotton swabs. The corrosion products were loosened with a wooden skewer then removed with IMS and cotton swabs. Both of these stages of the treatment were carried out under the microscope.

Stabilisation

Two surface coatings were applied. The first was Paraloid B44 5% w/v in xylene, applied with a fine brush and left to dry in the fume cupboard. The second was a layer of microcrystalline wax, mixed with a small amount of white spirit and brushed lightly onto the surfaces of the metal.

Packaging

The metal object was packaged for long-term storage with the archive of artefacts from the Thwing excavations. It was placed in a small crystal box with a Plastazote lining to buffer against movement. A label was included with

Condition after treatment

The condition of the object is stable. The surfaces have been cleaned of soil and corrosion products, and protective surface coatings have been applied. The two cracks in the metal remain, and the object has been misshapen, probably during burial.

Student evaluation of treatment

I am satisfied with this treatment, which was straightforward with no complications.

Recommendations for further care

The object should be kept in an environment without large fluctuations in temperature and relative humidity. The packaging should provide protection against airborne dust, atmospheric pollutants and small changes in humidity. The condition of the object should be checked periodically for signs of deterioration.

Photography / other illustrations

Colour slide/digital/ print

Other documentation (analytical, object report, etc)**Student signature****Date****Staff signature****Date**