

CONSERVATION ACTIVITIES, 2003

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Monitoring inside the cult chapel of Merefnebef has shown progressive stabilization of the condition of the wall paintings. This permitted most of the conservation effort to be directed at the

painted reliefs in the newly uncovered cult chapel 15.¹⁾ Wooden objects and pottery from the current excavations were also subjected to conservation measures as required.

THE CULT CHAPEL OF MEREFNEBEF

Some minimal detachments were noted by tapping, but overall the condition of the stone appears to have stabilized forming a relatively thick and stable layer that is in no direct danger of becoming detached. Most of the tiny and thin detachments have occurred in the layer of whitewash below the decorated panel. To fix these, a 6-8% water solution of PRIMAL E330 was applied after the area in question had been dampened with a solution of water and alcohol (1:1). Either syringes or brushes were used. Some empty spaces under the polychromy (for instance, in the northern part of the facade) were filled with a suspension produced using PRIMAL AC-33 as the base and adding calcium carbonate, chalk, and pigments for the sake of color homogeneity at the edges of the filled spaces. The choice of this method was dictated by the facility with which it allows empty spaces to be reached without piercing special holes for this purpose.

New concentrations of salinity have grained out, but mostly in the parts where there is no decoration and it is easy to remove them with a brush. In view of this,

it proved necessary to increase humidity in this part of the shelter. The thermo-hygrometer record showed oscillation of relative humidity in the range from 34% to 53%, never once reaching the level of 55% between November 2002 and June 2003.

The measures undertaken in 2001 and 2003, consisting of filling in the crevices and bonding the splits in the most endangered central section of the lateral walls of the façade, gave very satisfactory results. Therefore, during the 2003 campaign, the same procedure was applied to several spots on the northern lateral wall of the façade, such as the head of the vizier, the large-size hieroglyph representing a vulture near the northern wall of the shelter, and the hand of the tomb owner in the same large-size figure. FUNCOSIL KSE 500 STE (Remmers) was used with fillers FUNCOSIL KSE Füllstoff A and B (1:2) and adding pure, fine-grained, sieved sand and pigments.

The same mixture was used for the bands securing the edges of detaching spots. However, it was applied only in areas devoid of polychromy because of the dark

1) Cf. excavation report by K. Myśliwiec in this volume.

hyperchromatism appearing as a result of this procedure, an effect that needed to be

removed by washing with acetone after ten days had passed.

CHAPEL 15

The polychromy found on the west wall just north of the entrance to the newly discovered chapel is fairly well preserved, except for some detachments and peeling of the painted layer. Large sections of the relief decorating other walls of the chapel have lost their original polychromy, bits of the painted decoration being found on the surface of the fill. The decoration of the north wall was damaged extensively, the rock here having collapsed because of a later shaft cut too close on the other side (*Figs. 1,2*). Parts of an offering list decorating this wall lay in the debris. The remains of the polychromy on the surface of these fragments were secured with a solution of PARALOID B72 in acetone with alcohol added. A reconstruction of the decoration will be attempted. On the east wall of the chapel the remains of painting are insignificant and found only in the northern end. The decoration on the south wall was never completed, the sketch lines still being visible.

Large parts of the drawing can be seen cut in the mortar that fills the crumbling and missing cavities in the rock. Gypsum appears to have been the main component of this mortar, similarly as in the case of the Merefnebef chapel. The use of mortar for this purpose was due to the extremely poor quality of the indigenous rock. Large losses in the southern thickness of the doorway were completed with stone blocks bonded in gypsum mortar (as above). Remnants of mortar used to level the rock surface are also to be seen on the façade, but no trace of any decoration in relief or painting has been preserved in this spot. Fillings are particularly extensive on the

south wall of the chapel, the east wall and the southern part of the west wall.

Two layers of different mortar are visible in places. The above described mortar occurs deeper, is coarse-grained and has a pale pinkish color. The other one is a finer-grained, thin cream-to-white layer on the surface of the pinkish one. Sketch lines, in black and red, can be seen in a few places on the upper mortar layer, under the paint layer. The mortar is very friable, crumbling under the touch.

The ceiling of the room, painted red to imitate granite, displays many cracks, some as broad as 0.5 cm, resembling those in the vizier's chapel. The polychromy on the ceiling is powdering, the rock decomposing and displaced in places.

The detached and disintegrating layers of painting had to be treated first. A solution of PARALOID B-72 (5-7%) in acetone with alcohol was dripped in. Melinex was then applied and the endangered parts of the polychromy pressed to the wall to mount them in place. This procedure was repeated several times as required. The mortar in particular had to be treated. The reinforced parts of the decoration had to be stuck to a matrix (as needed) using a water solution of PRIMAL E330 (6-8%) or AC-33 (10-12%). Each application of PRIMAL was preceded by dampening the area in question with a water solution of alcohol (1:1).

Detached edges of decoration executed in the mortar filling (sticking c. 0.2-0.5 mm away from the matrix) were secured with bands made of lute having PRIMAL AC-33 (10-12%) as the base and calcium carbonate chalk, fine-grained sand



*Fig. 1. Cult chapel of Ny-ankh-Nefertem, north section upon discovery
(Photo M. Jawornicki)*



*Fig. 2. Cult chapel of Ny-ankh-Nefertem, north section after preliminary conservation
(Photo M. Jawornicki)*

(1.5:1.5:1) and pigments as fillers. The same kind of substance was used for filling easily and safely accessible voids under the surface of the mortar.

Detached fragments of wall decoration found in the fill were protected with PRIMAL E330.

Disintegrating rock in the façade of Chapel 15 (a rock layer that corresponds to

a similar layer in the façade of Merefnebef's tomb) was trickled with FUNCOSIL ANTIHYGRO, the objective being to minimize the hydrological heave of loamy minerals found in the rock. Subsequently, a suspension based on FUNCOSIL KSE 500 STE with FUNCOSIL FÜLLSTOFF A and B (1:2), fine-grained sand and pigments as fillers was injected into the crevices.

WOODEN OBJECTS

Two planks from the bottom of a coffin, bearing a painted column of inscription in the middle of the outer face (no. 363, from sector 1906), were first cleaned of loose dirt, after which the peeling and extremely friable layer of polychromy (including blue, red, black and white paint) was dripped with a solution of PLEXISOL P550 in benzene (2-4%). Following evaporation of the dissolvent, the painting layer was stabilized. The wooden ground did not require any intervention.

A group of votive wooden figurines from shaft C2/3 in Corridor 2 revealed modest remnants of paint: black on the hair, red on the torso, and traces of white on the wooden bases. The wood had all but lost its inner cohesiveness, requiring immediate attention. The layer of polychromy was treated with a solution of PLEXISOL P550 in benzene (2-4%), after

which the figurines (as well as other accompanying objects, such as wooden models of vessels and wooden head rests, cf. *Fig. 7* on p. 121 in this volume) were dripped with a solution of PARALOID B-72 in acetone (8-10%) and left enclosed in fumes of extraction benzene waiting for the dissolvent to evaporate.

Work continued on the wooden harpoon found in Corridor 1 in 2000²⁾ and in particular on the very thin, cracked, and partly deformed walls of the case which needed consolidating. Wood balsa was used to fill in losses of original material. Small pieces of this wood were pasted in with c. 20% solution of PVA MOWILITH-50 with acetone. The surface of the plug with its layer of a crumbling white substance was reinforced and pasted to the ground with a 2-4% solution of PLEXISOL P550 in benzene.

POTTERY DEPOSIT

The fragmentary bandages wrapping the pots found in the deposit discovered in shaft 16 in Corridor 2³⁾ were straightened, reinforced and secured. The process of elasticizing and reinforcing the bandages

required the use of a 3% solution of KLUCEL GF in alcohol. Loose fragments of bandages, preserved in this way, were subsequently mounted on Japanese tissue-paper using a 3-5% solution of PVA

2) Cf. *PAM XII, Reports 2000* (2002), 124-125 and Figs. 3a,b,c, also 115-116, Figs. 7-9 for the discovery.

3) Cf. contribution by T.I. Rzeuska in this volume, especially p. 138.

MOWILITH-50 in acetone. Bandages still adhering to the vessels were further secured in place with a 5-6% solution of PRIMAL

E33. The two bowls from the deposit were recomposed using PVA MOWILITH-50 in acetone (20% solution).