

MANCETTER - GLASS FURNACE W64 ⑦; W69 ⑦ (Magnetometer: M98/(i))

Contexts relating to Glass Furnace.

1964

- W ⑦ 4 Filling of the glass furnace. Very tightly wedged filling: tile and lining fragments; clayey earth. A flow of liquid glass immediately visible on the lining - see photographs, especially one colour slide.
- W ⑦ 5 Upper filling from what was intended to be half-section of stokehole but due to its tiny size, it was more like a 3/4 section. Tile, hard red clay and earth. Spread of lining debris and hard red clay above and beyond the flue entrance to the furnace.
- W ⑦ 6 Stoking area: ashy filling underneath debris & clay in layer 5.
- W ⑦ 7 Second ashy layer; some clay underneath to west.

Glass and furnace lining were also found in other contexts.

Furnace carefully lined with plastic and refilled in 1964; covered and left for future return to area.

1969

- W69 ⑦ 3 Remaining portion of stoking area. Sealed as
in 1964, by semi-hardened red clay (this is just the
natural hardening of raw clay spread out and used
to seal filled-in pits etc.).
- W69 ⑦ 48 Pottery found in removal of lining from furnace. Not
clear whether this was in removing the latest patching
on furnace as found (Version A) or whether it is
removal of latest complete relining (Version B).
Probably B.
- W69 ⑦ 52 Sealed beneath the broken tiles used to make the floor
of Version C. Tiles laid on red clay. Since this tile
floor served Versions C, B, and A, this might be
regarded as a major reconstruction. Glass found.
No mortaria.
- W69 ⑦ 65 Found in removing lining D from glass furnace.
No mortaria.
- W69 ⑦ 86 Found in taking away the lining of Version E.
No mortaria.

Glass and debris fragments recorded from many other contexts;
distribution over Areas 7 & 7A to be considered. Especially tile
fragment with molten glass from stokehole of Kiln 7C and large amount
of glass in tiny unexplained furnace 7E which opened off the stokehole
of Kiln 7C; and large amount of glass in vicinity of stokehole area of
Kiln 7D. Check on proportion of tile recorded from Area 7 compared to
elsewhere; probably much higher.

No possible fragments of any 'crucible' used for glass, were recorded
anywhere in Area 7 or elsewhere.

Metal - no evidence but check

FACTS

In 1969 the glass furnace, the pit through which it was cut, the 'platform' of shale and stone and the pit beneath the 'platform', were excavated out of sequence because of the necessity of waiting for a visit from Dorothy Charlesworth and others and also until someone with adequate experience was available to excavate the glass furnace.

There are drawings, either two or possibly even three if there is one at Warwick of VERSION A, i.e. as found in 1964. There is a reliable drawing of what survived of the earliest version, VERSION F.

There were no drawings of the intervening stages but the photographs record the sequence clearly. Measurements were recorded but not as clearly as they should have been. I have quoted those which are reasonably certain below. It might be possible to superimpose the drawings of Versions A and F and dot in some of the intervening changes from the measurements and the photographs.

The glass furnace had six periods of patching or reconstruction; the tiles were inserted as floor for version C and retained thereafter. When lining C was removed, a red, unreduced area was exposed at the edge of the tiles. See below. The alterations vary between heavy repair work to virtually complete reconstruction.

Generally speaking VERSION A is largely the result of heavy packing on the west side of earlier VERSION B and a chunk of clay bowing into the furnace on the east side. VERSION B has a much more regular shape in every way.

The surviving tiles appear to have been used first for VERSION C, which was evidently a major reconstruction. The sides of this furnace are noticeably more splayed than those of Versions B & A and version E. The sides of B and E are the most regular in shape. D is splayed on the east side. Linings C, D and E differ little if at all on the east side of the furnace.

MEASUREMENTS

LINING A: See drawings.

This is Version B very heavily patched especially on the west side.

LINING B:

The tiles in the floor:

Broken big tile: 12 inches on north/south axis

7.25 inches along front edge, which
is broken away on west side

*10.75 inches along back edge

(this measurement could just be the full length of
tile on north edge when exposed after version C
removed - other measurements not affected)

Tile behind big tile: 3.5 inches on N/S axis, east
edge. See comment * above.

From a point 3 inches back from the front corner of
the big tile to the lining on the east side it is 7
inches.

*From the same point 3 inches back from the front
corner of the big tile to the lining on the west
side it is 13 inches. The big tile continues under

lining on the west side.

Above measurements taken I believe on floor of furnace.

Height of wall on west side 7 inches.

Height of surviving lining on east side 7.5 inches.

LINING C:

From front corner of big tile to entrance to furnace 8 inches.

Height of lining at back of the furnace at its highest point is 10 inches.

*Depth of wall 9 inches near entrance

*wall in this part is 2 inches thick at bottom and 3 inches thick at top

Lining on west side from above point on east edge of big tile, 13.5 inches.

Lining on east side is same distance from this point as in Version B.

*From centre back of furnace to this point 18 inches

Version C is rather splayed in shape.

The tiles were placed in position for this version and re-used in versions B and A. This is major construction period. Fragments of glass were found sealed beneath the tiles.

More greyness noted in versions C & D at back of GF on lining, than anywhere else.

LINING D:

When lining C was removed, the edges of the big tile remained red where they had been protected from the heat and from reduction.

Little if any difference on east side from Lining C.

Walls generally more vertical than C.

No tiles on floor but almost certainly some lining on the floor.

LINING E: Several box-tile fragments in clay in walls (see photograph)

Diameter on bottom of furnace 22 inches

Diameter at top of furnace 25 inches

Length from back to front 33 inches

Maximum depth 13 inches

General depth 12 inches

Walls fairly vertical.

There is clay at the front in the flue area but none at the back where there is only red sand.

LINING F:

Original furnace. See Drawing.

Only one tiny fragment of lining survived on the wall. A small portion of floor lining was also recorded and this looks as though it would have fitted well with the use of tiles.

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