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THE TECHNOLOGICAL FINDS FROM VINDOLANDA, NORTHUMBERLAND

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The finds submitted for examination were a bag of slag (AM 813609) and ten worked stones (AM 822463, 822536-44).

The slag is all porous, friable iron-working slag. The fragments are all pieces of large smithing hearth bottoms (the slag that collects in the bottom of a smith's hearth) and suggests the working of raw iron into objects on a large scale. One would expect this sort of process to produce large quantities of slag but the sample submitted weighed only about 3.5kg. Without knowing whether this was all the slag found or merely a representative sample, it is not possible to comment further.

Of the ten stones submitted, AM 822541 is not a mould and AM822542-4 are quern fragments. The remaining six stones could have been intended for use as ingot moulds though in no case were traces of metal visible and nothing was detected by x-ray fluorescence analysis. Three of the stones (AM 822536 and 822538-9) had one or two grooves cut into one flatish surface. Those on AM 822538 looked like rough-outs as they were very shallow (c.3mm) and relatively ill-defined. The other two stones had deeper (c.7mm) grooves varying in length from 7 to 8.5 cms and about 1cm wide. In cross-section they varied from U-shaped to flat-bottomed. All but one of these narrow grooves (on AM 822538) had a short addition at right angles roughly in the centre producing a T-shaped plan. The function of this addition is not clear, it is not generally found on otherwise comparable moulds but these are all of rather later date, coming from Late Saxon or Viking Contexts rather than Roman ones.

A second group of stones (AM 822463, 822537 and 822540) could also have been used as ingot moulds. The depressions in them measured respectively (length x width x depth, in cms) 18 x 3.5 x 2.5 and over 16 x 1.5 x 1.5 (both on AM 822463), 7 x 5 x 2.5 and 9 x 2 x 2.

There is no positive evidence to suggest than any of these objects were used as ingot moulds but such things must have existed in the Roman period as all the wrought non-ferrous metal-work must have been formed from these sort of blanks. The only one of these objects for which an alternative use can be suggested is AM 822537 which could have held a timber upright, eg a door post, to keep it off the ground.