

TR 12-178-179

R. 535

**MATERIAL FOR MACHEN'S BRICK WORKS**

**Sample**

Material in current use at Machen's Brick Works was submitted for examination, with special reference to improving the surface appearance of pressed bricks.

### Summary

Exhaustive tests carried out indicate that very little improvement in the surface appearance of pressed bricks can be obtained by a variety of treatments applied to the raw material.

These treatments included, drying completely and hand grinding to an extremely small particle size, partially drying followed by standard crushing and grinding with combinations of both. Clay from this processed material was treated with water, alkali, and other chemical agents to assist in the production of a homogeneous mixture for pressing.

The improvements obtained with all methods of treatment were too insignificant to merit their adoption.

The nature of the material being unsuitable for plastic pressing suggested that extrusion, with little or no clay modification, might be possible. This was tried with significant success yielding a final product of satisfactory appearance over a considerable range of firing temperatures.

It is recommended that extrusion of this material be adopted to improve the surface appearance of bricks, and to make a more efficient use of the raw material in question.

Results on shrinkage of extruded bricks at various temperatures are appended:—

	<i>Green/Dry</i>	950° C	1000° C	1050° C	1100° C
Total contraction	8%	10%	10%	10%	13%