# Section 2 – Ceramic Investigations

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TR13_175_176 R. 536

## McHUGH'S BRICKWORKS, PROSPECT.
## PRODUCTION OF TAN FACING BRICKS.

### Samples

The department was supplied by Mr. J. Gilbert of McHugh's Brick Works with samples of clay and sand used in normal brick production, together with a sample of manganese dioxide.

### Preliminary Remarks

Previous work (R.541, 1967) had indicated that a wide range of colours could be obtained by the incorporation of controlled amounts of manganese dioxide into the clay sand mix. The department was subsequently requested to extend this investigation to cover bricks with a two and five per cent manganese dioxide content.

### Investigation

The usual mixture of 30 per cent sand 70 per cent clay was modified by the introduction of 2 per cent and 5 per cent manganese dioxide, this addition being made at the expense of the sand. Approximately 40 bricks of each mixture were made, using normal extrusion techniques.

The bricks were then humidity dried at the brickworks to parallel normal production practice. After drying, the bricks were sited in various parts of the kiln and fired as part of a normal production schedule.

### Results

Trial bricks distributed throughout the length and breadth of the kiln showed the wide degree of colour divergency that can occur with these mixtures.

(*a*) bottom sited—colour similar to normal production;

(*b*) middle sited—orange brown to light brown but very little uniformity;

(*c*) top sited—mainly light brown, but variations occuring through the length of the kiln.

**Conclusions**

It would seem that for the production of a coloured brick using manganese dioxide, a considerable amount of variation in colour would have to be tolerated. The ecomonics of sorting, grading and matching would have to be considered as too would be the restrictions imposed on normal production.

The venture into a tan facing brick would not be recommended with these materials.