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Application Notes

Moisture in Ceramic Powder

Control of clay powder moisture is paramount to the production of quality floor and wall tiles of consistent dimension.

Too high moisture results in a badly formed, flexible tile in the dry press, and too low moisture in easy breakage.

On line moisture measurement:

- results in tighter control of bulk density of powder and consequently more consistent product in terms of final dimension
- enables achievement of optimum moisture level minimizing wastage
- saves energy through not over drying

Tile manufacturing process

Clay, talc and other mineral constituents are quarried, refined, mixed and dried to a set moisture level prior to forming in a Dust or Ram Press at very high pressure. The formed tiles vary in moisture by as much as 6%, and must be oven or air dried to within 1%, prior to kiln firing. This prevents explosion of tiles within the kiln.

Gauge Installation

The sensor is located perpendicular to, and approximately 8òabove a conveyor transporting the clay powder. Ideally the sensor should be viewing freshly turned product, so an ideal location is immediately after a conveyor change.

Measurement Performance

Measurement	Location	Range %	Typical Accuracy%
Moisture	Post drier, over conveyor	2-7	0.15%

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