

MATERIAL WASTAGE MINIMISATION: READYMIX PROCESS

Gauteng, South Africa

PROJECT TYPE: Concrete heat monitoring

PROJECT CHALLENGE:

Mortar is used on most building sites to fill gaps between bricks and surfaces. This mixture of sand, cement and water is applied as a paste, which then sets hard. If not applied within a specific timeframe, it hardens, is unworkable and becomes waste. Various processes in the manufacture of mortar was investigated to reduce the generation of rejected or non-use mortar.

PROJECT SOLUTION:

On this site two processes to mix and deliver mortar to application areas was run side by side for comparison:

- A ready-mix option:
 - All mortar needed for the day was mixed as a single batch off site and delivered.
 - The batch cured singularly but was used throughout the day.
 - Consequently as the day passes on a portion of the batch had hardened and would have to be removed as waste.
 - Wastage and curing issues require intense quality assurance.

versus

- A on-site mix as need option:
 - A small mixing plant with hydraulic pipes stretched throughout the various floors.
 - Exact amounts needed at the work space is issued to the on-site mixer.
 - No wastage or curing issues from this process.
 - Raw materials have to be kept on site however and be readily available for the mixing process. This can be problematic if a site has limited space.

Both mix and deliver processes have value. They must be planned and applied correctly to minimise process wastage.

