



The brick machines are manufactured by Pan Mixers South Africa



A showhouse built using the IBT construction method

Soil-based brick offers proper insulating properties

Five years ago iKhaya Brick Technologies (IBT) set its mind to create a site-based brick making system that would be compatible with 85% of the soils found throughout Africa – no small feat.

Nico le Grange of IBT explains that initial soil tests revealed that only 25% of soils would be compatible with the additives he intended to use in the sand mix – and that this sent him back to the drawing board to develop a resin that would enable him to reach the goal of 85% compatibility. This was crucial as the resin developed gives IBT bricks their water and damp proof properties.

The bricks, made to specification with machines developed by Pan Mixers South Africa, are compressed by a pressure of 20 t and once cured have a 10 mPa rating. The outer surfaces are smooth and the under side of the bricks have aligning ridges to make sure that even unskilled labour will find building a wall easy enough. Power conduits can be steered through holes in the bricks allowing a neat finish to walls build using the system.

The interlocking bricks thermal and waterproofing properties are further enhanced when the "Achilles heel" of most interlocking brick systems – the gaps between the layers of bricks – are sealed with another specially developed bonding compound.

An i-brick machine can manufacture between 3 000 and 4 000 bricks a day – and with the with a 42 m² government grant house using in the region of 2 800 bricks – it is possible for one brick machine to produce enough bricks to construct 20 such houses a month.

Le Grange reports that the Free State local government has just purchased six brick making machines – one for each municipality within the province. IBT has also developed window and door frames that are suited to the construction system, as well as foundation design – making their construction method a complete and modular system.

The i-brick system allows for steel reinforcement to be added horizontally and vertically for additional structural strength. ■