

Machinery developed for soil-brick

Pan Mixers, South Africa's largest manufacturer of concrete block, brick and paving machinery, was excited about developing soil brick machinery for Ikhaya Brick Technologies (IBT), says Walter Ebeling, Director of Pan Mixers SA.

Pan Mixers was considering manufacturing soil brick machinery and Ebeling was impressed with IBT's interlocking soil brick as it overcomes the shortcomings of existing soil bricks in the market.

"It is a different market to our conventional concrete machinery. The partnership evolved with Pan Mixers investing in developing an engineering solution to producing a sustainable portable solid, high quality machine that is capable of producing good quality stabilized soil bricks and, at the same time being robust enough to withstand rural building operations."

The international manufacturer built a progression of prototypes, and then the machinery was put through vigorous tests to increase strength, production capacity and increased compacting pressure. Ebeling says the current IBT machine can produce a brick of good quality with production capacity of up to 2000 bricks per day. The double-sided mould allows

one to be pressed while filling the second mould. Ebeling is impressed with the interlocking soil brick and says "what is great about IBT's system is that the stabilized soil brick not only uses cement as a binder, but the resulting product manufactured is inherently weatherproof." There was a lot of research and development, which involved specialist engineers developing the machine design. "We used AutoCAD to simulate and test the designs, and we

investigated different hydraulic systems. The first prototypes had a single mould, but it doesn't cost that much more to have two, which doubles the productivity without doubling the price. It takes two operators to load the raw materials into the mixer, two operators to load the mixed soil into the IBT machine, two for unloading the bricks and a machine operator who controls the pressing and stripping process." Ebeling says "what was important for us was to ensure the

machine could withstand the forces exerted on it during the compaction process, as the pressures are higher than existing soil brick machines. The IBT machine perfectly complements Pan Mixers' existing machinery for building and construction and I believe that both products have a place in the market. The soil brick is suitable where building materials for concrete products are not available - it has its own market."

"The soil brick is suitable for housing and rural communities and, as the community develops and infrastructure is required, concrete products can be brought in to manufacture roads and paving. I don't think it's a case of one or the other - it's whichever is best suited."

"Part of the reason that we got involved in manufacturing the machine is that we understand that government needs to create more employment - especially in rural areas. The IBT system meets the needs of local employment training, and uses local raw materials to manufacture the bricks, which is an extension of Pan Mixers' technologies. What's more, we offer service and technical back-up, which will be a big advantage. The sole selling rights for the machine will be through Ikhaya."

For further information contact Pan Mixers SA on 011 397 3754.



Walter Ebeling enthusiastically shows the IBT machine