

Concrete roof tiles boast best green credentials

Independent research from the Öko-Institut Freiburg (Ecological Institute) in Germany places concrete roof tiles well ahead of clay roof tiles in combating the greenhouse effect, acidification potential, eutrophication, photo-oxidation, and fine dust.



THESE IMPORTANT FACTS led to Pan Mixers South Africa (PMSA) entering into a partnership with world-leading Swedish roof tile expert ABECE, to distribute its equipment in Africa.

"The emphasis on infrastructure development in Africa, particularly in terms of government-funded projects, means that we foresee tremendous growth opportunities here," ABECE area sales manager Fredrik Toftemo comments.

"Working closely with an established partner such as PMSA allows us to remain at the forefront of this market," he adds. PMSA marketing and sales manager Quintin Booysen highlights that the two companies have been collaborating successfully since 2005, and have worked on fully automated roof-tile plants in South Africa, with capacities of up to 140 tiles a minute.

Responding proactively to customer requirements

PMSA is the largest supplier of concrete brick, block, and paving manufacturing machinery and technology on the continent. It recently displayed ABECE equipment at its stand at Totally Concrete 2015, at the Sandton Convention Centre in Johannesburg.

"Long-term strategic partnerships such as the one we have established with ABECE allow us to stay ahead of market trends.

"It also gives us the added flexibility to be able to respond proactively to specific customer requirements, as well as providing robust and user-friendly equipment that can withstand the harsh operating conditions in Africa," Booysen emphasises.

Meet the SPS extruder

The SPS semi-automatic extruder can manufacture up to 5 000 concrete tiles in a nine-hour shift, depending on the specific plant

Concrete roof tiles versus clay roof tiles (based on a roof area of 160 m², the average roof size in Germany)

Concrete roof tiles	Clay roof tiles	C3: Bridge City to Pinetown
Greenhouse effect	1.542 kg	3.404 kg
Energy	16.090 MJ	55.964 MJ
Acid rain	4.5 kg	9.4 kg
Over-fertilisation	0.49 kg	1.13 kg
Fine dust (PM10 equivalent)	4.49 kg	9.97 kg

Source: Öko-Institut Freiburg (Ecological Institute), Germany

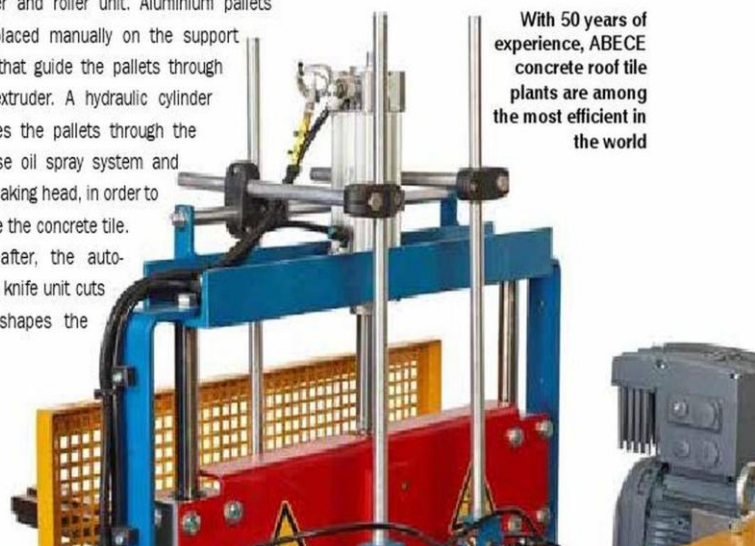
configuration; this equates to about ten tiles a minute. The main benefits of this extruder are that it is easy to install, operate, and maintain – all important considerations in remote project sites in Africa.

The SPS extruder features a heavy-duty design that incorporates high-quality material and components in its manufacture. It has a 1.5 kW motor power roller and a 5.5 kW hydraulic power pack for the pusher movement. A standalone depalleter is also available, as well as ridge and trim tile manufacturing equipment.

Toftemo explains that concrete is fed from a conveyor into the concrete hopper above the slipper and roller unit. Aluminium pallets are placed manually on the support rails that guide the pallets through the extruder. A hydraulic cylinder pushes the pallets through the release oil spray system and the making head, in order to shape the concrete tile. Thereafter, the automatic knife unit cuts and shapes the

ABOVE The SPS tile extrusion machine from ABECE of Sweden, distributed locally by PMSA

tile. This knife unit is kept clean by means of a water-spray system. The manufacturing process only requires three to five labourers, depending on the level of automation and the skills level of the staff. "Combined with the fact that concrete roof tiles are such an eco-friendly product, the SPS extruder is the ideal machine for African conditions," Booysen concludes. **35**



With 50 years of experience, ABECE concrete roof tile plants are among the most efficient in the world