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BASALT FIBRE for concrete reinforcement

Pan Mixers South Africa (PMSA) – a leading supplier of concrete brick, block and paving-making machinery and technology in Africa has launched StoneRod, a product made from crushed and melted basalt rock with the use of groundbreaking basalt fibre technology for reinforcing concrete.

PMSA's marketing and sales manager, Quintin Booysen, says Basalt Technology was officially established as a member of the PMSA group of companies in January 2012 to promote the substantial benefits of this new concrete reinforcing product.

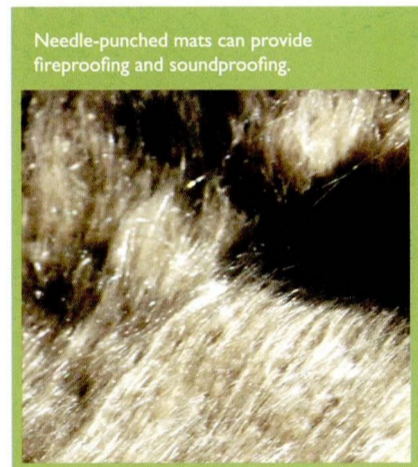
chemical properties to glass fibre, and the StoneRod materials may be used in all the applications traditionally produced in glass fibre."

"In addition to being almost 50% stronger than glass fibre, StoneRod is also impervious to water and heat, which negatively impacts E-glass," he continues.

StoneRod fibres can be manufactured into concrete rebar using a pultrusion process, and Forrester notes that StoneRod rebar is corrosion-proof, in addition to being 87% lighter than steel, and has a tensile strength of 1 200 MPa.

According to Forrester, StoneRod is also more environmentally-friendly than steel or glass. "During glass or steel production, the products are compounded using a blend of materials, many of which negatively impact on the environment. StoneRod is 100% natural lava rock and significantly reduces the carbon footprint, due to the fact that during the formation of the lava all the harmful emissions had already been released," he continues.

"Basalt Technology is at the cutting edge of concrete construction technology with StoneRod, which has unlimited potential across numerous industries in Africa and beyond.

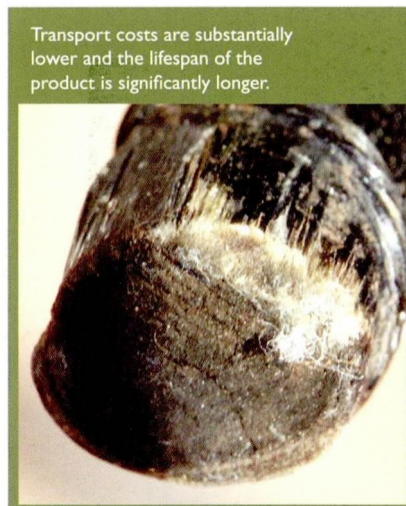


StoneRod rebar is currently being tested at the civil engineering department at Wits University.

He says: "StoneRod is a revolutionary basalt-fibre material that serves as a cost-effective alternative to industry-standard steel and E-glass concrete reinforcement for numerous industrial applications, and perfectly complements PMSA's existing range of concrete-related products and technology."

Basalt Technology's director, Gordon Forrester, explains that the basalt rock is transformed into fibres by taking the rock in its purest form and melting it, before drawing it through dies. The material can then be spun to produce a twisted yarn, or can be wound as a single filament material.

"Once the StoneRod fibres are formed, they are processed to create numerous different products. StoneRod has similar



Transport costs are substantially lower and the lifespan of the product is significantly longer.

"Due to the light weight of the product, StoneRod substantially reduces transportation costs, as well as minimising delivery vehicle requirements and resultant pollution. The light weight also means that StoneRod requires less labour to install. What's more, it has no resale value for thieves when compared to steel," he adds.

StoneRod has many applications outside the concrete market. "The fibres can be used in vehicle brake linings and as heat and acoustic insulation. Needle-punched mats can provide fireproofing and soundproofing and the fibres can be used to produce geogrids. Building cladding panels can also be produced using the fibre."

"Although the initial purchase cost of StoneRod fibre is slightly higher than glass or steel, transport costs are substantially lower and the lifespan of the product is significantly longer, making it considerably more cost-effective in the long term. However, as more industries test the product and experience the advantages of it first-hand, I have full confidence that the demand for StoneRod will increase substantially in the years to come," he concludes.

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