

WHAT'S IN A MOULD?

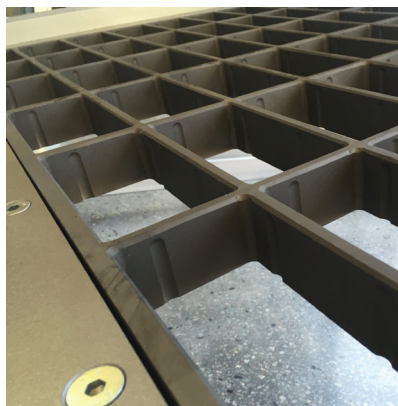
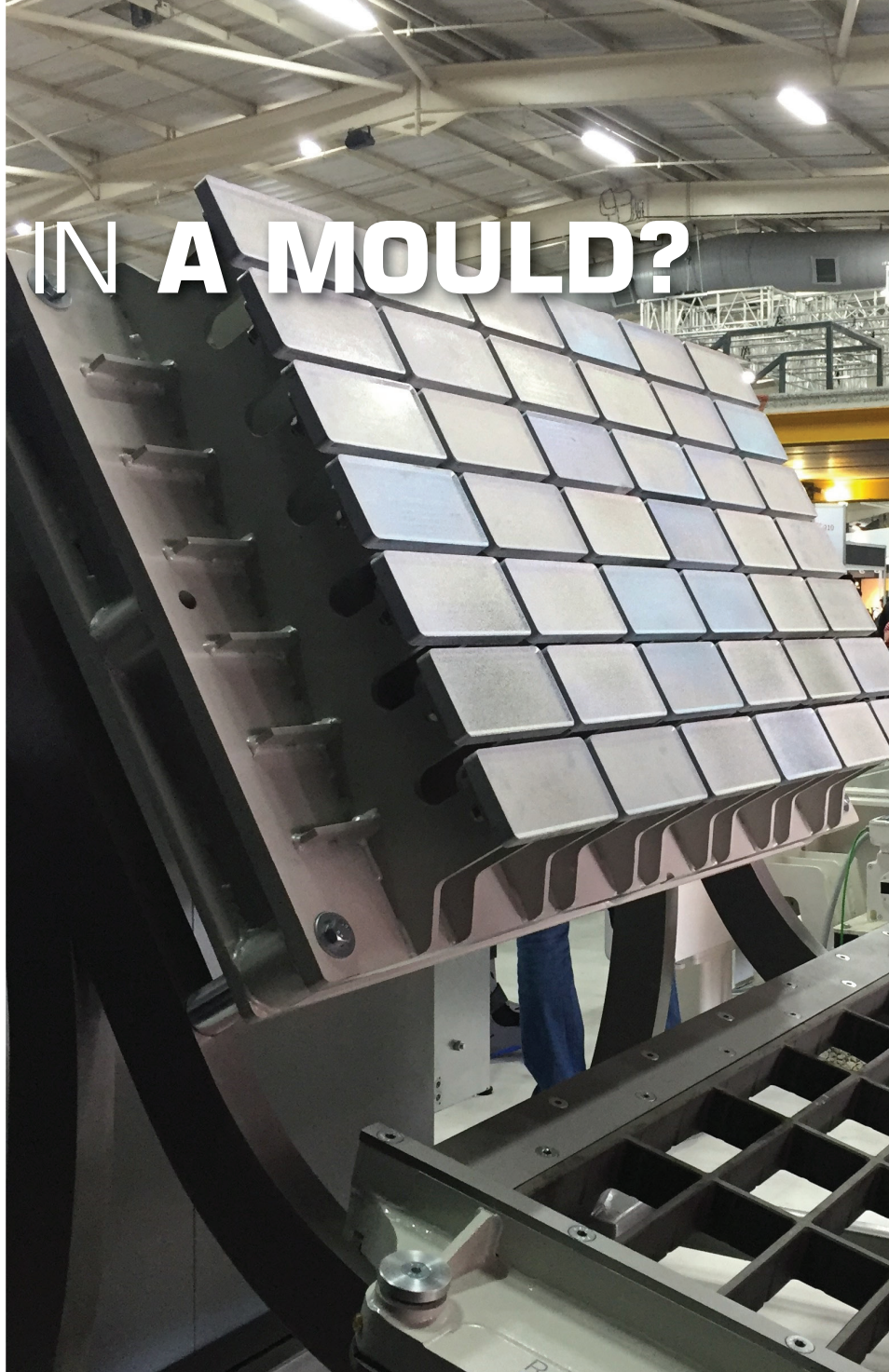
Contrary to the belief of some in the concrete manufacturing industry's that a "mould is a mould", there is sufficient evidence to prove that a carefully designed and well-made mould has the potential to save valuable time and material, increase productivity and turn a small profit into a bigger one.

In fact, a mould is one of the important tools in the brick, paving and hollow block precast manufacturer's arsenal, as it has an immediate and direct impact on production in terms of volumes and quality produced. Well-manufactured products also have indirect advantages further down the process, as there will be fewer rejects and packaging is simplified due to uniformity of shape and size.

According to Quintin Booysen, PMSA sales and marketing manager, a quality mould will also produce more drops than standard ones and specialised wear-resistance steels used in the manufacture of a mould will ensure that it maintains its dimensions to ensure uniformity of size and shape of the products produced. PMSA also offers more advanced moulds with replaceable wearing strips, mould inserts and shoes that can provide further advantages in terms of longevity and serviceability. Despite a higher initial purchase price, these deliver improved costs of ownership in the long run.

Massive savings

"For example, in a standard bevel paver of 100 x 200 x 60mm, the product should weigh approximately 2,52kg. If it were to wear-down just 1mm all around, it could lead to an extra 80g of material being required per unit. To put this into perspective: if a manufacturer makes 84 000 units per day, it can equate to an extra 134 tons of concrete or the equivalent of the material to produce 53 000 pavers per month. Using the same example on a maxi brick 290 x 140 x 90 mm, an extra 332 tons of concrete per month would be used due to only 1mm wear all round on a mould.



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"As a result, the savings on concrete and labour over the period of this month are close to or even exceed the cost of a quality new insert on a bolted mould. But monetary value aside, of more concern to manufacturers should be that units entering the marketplace from worn moulds will be irregularly sized and more difficult to place. This makes the work of installers more difficult. As a result, the pavers will become unpopular among the workforce and probably not be purchased again.

"Furthermore, our findings have shown that quality moulds actually play a critical role in sustaining high levels of production. As a result, we focus our attention on manufacturing rugged

and reliable moulds that deliver the best possible returns on investment and give buyers the edge in a hotly contested industry," says Booysen.

Market-driven

As a wholly-owned, local company PMSA also had the advantage of involving customers throughout the process of developing its range of moulds. This input and refinement has led to the evolution of its moulds to the point where concrete manufacturers with PMSA moulds are getting more drops out of them due to better surface hardening techniques and materials being employed by PMSA.

He adds that in the case of PMSA and its branded Rock Solid range, quality is standard, with customers being able to select the right kind of mould for their requirement in either solid, welded or bolted moulds. "We looked at different solutions based on common requirements of our customers and developed products to match these," says Booysen.

The company also invested heavily in technology to manufacture moulds that can compete with the very best in the world. But, says Booysen, local concrete manufacturers also enjoy the benefits of dealing with a home-grown company with fast turnaround times and easy access to spares. The additional access to technical support is a windfall and many a manufacturer has benefited from expert advice of PMSA support staff when servicing or selecting moulds that best suit their operations.

Well supported

Customers also have access to PMSA's bespoke moulds that can be designed inhouse to strict requirements, with the additional benefit of being able to provide advanced surface finishes to create unique and eye-catching products. This type of ability allows manufacturers to move from a low-value product to a higher-value product while still using the same materials, processes and equipment.

"Among the examples of our moulds in operation is Cape Brick, where our Rock Solid moulds have increased the mould replacement intervals to almost double before needing a mould insert replacement. Even when they are worn, parts of the mould can be re-used to reduce

pricing and contribute further towards reducing the cost per unit produced by them," says Booysen.

According to Anthony Gracie of Cape Brick, the initial price of the PMSA Rock Solid moulds is approximately one-third more expensive than competitors' moulds, but have up to double the lifespan with better tolerances and more accuracy. This ensures the products are symmetrical and the right weight, which amounts to big savings in material as well better equipment availability and vastly improved operational costs.

Booyesen concludes that this type of attention to detail can give manufacturers a considerable advantage over competitors through improved operations and lower life-cycle costs. "With good-quality aggregates, capable machines, correct settings and the right moulds, manufacturers can set themselves up to succeed. With the right maintenance and support from PMSA, their operational success is another step closer." ■



(Above): Walter and Robert Ebeling of PMSA.

(Below and left): A premium-quality Rock Solid mould on display at the Totally Concrete 2017 exhibition.

