

Wasa AG, 64293 Darmstadt, Germany

Polyurethane wearing parts and accessories

Since time immemorial, wearing parts such as feeding pawls have been made almost exclusively of steel. In the meantime, however, plastic-covered pawls are increasingly seen in the circulations of concrete block plants. There is a good reason for this – plastic pawls can give the user a variety of advantages. Wasa AG has recognised that and has been offering wearing parts and accessories made of polyurethane for some months now. It has thus extended its product range by an essential accessory for its customers.

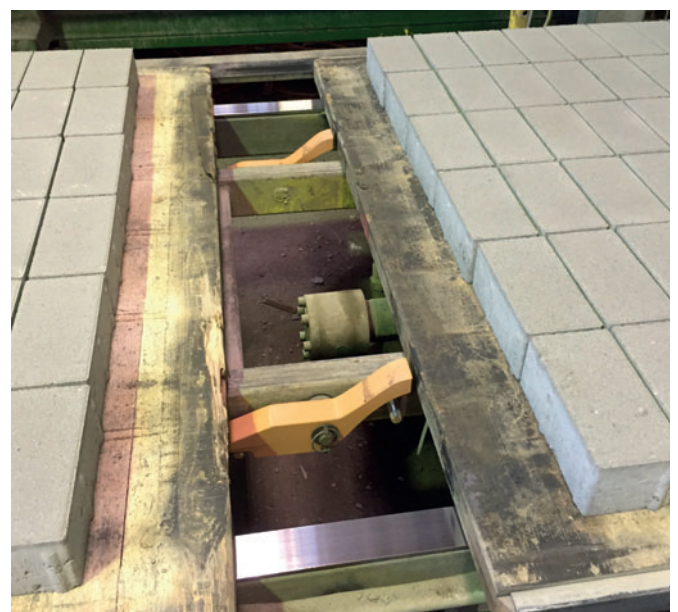
The pawls manufactured by Wasa consist of a steel core that is sheathed by a one centimetre-thick layer of polyurethane. The PU used is highly wear-resistant with a high breaking point. Such PU-coated pawls can pay for themselves in particular during the retraction of the pawls, where they scrape along the underside of the production boards: due to the lower friction effect of the "softer" PU pawl in comparison with steel, not only is the production board, which is grazed every day in the same place by the pawl, scratched much less. There is also less damage to the pawl itself due to the wear-resistant

PU. Steel pawls frequently develop a sharp edge on the top side over the course of time. This often leads to damage to the contact surface of the production boards during transport. With the exception of sheet steel boards, Wasa recommends the use of PU pawls with all types of board, because they significantly reduce the risk of damage to the production boards. The service lives of production boards can thus be prolonged. That applies in particular to coated wooden boards. Their plastic coating, which is thin in comparison with the total board thickness, can be damaged very quickly through worn and sharp-edged steel pawls. In particular with sheathed laminated wooden boards, such damage can expose the wooden core. The consequence is that moisture penetrates into the timber layers, they swell up and the board thus becomes unusable.

"In the concrete block plant we very often find defects in parts of the circulation to which little or no attention is paid, although everyone makes sure that the machine parameters are set correctly and the moulds are also inspected regularly. The vibrating table and its wearing strips are inspected much



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less frequently. Are they still within the tolerance? Or are they perhaps worn to different degrees, which then negatively affects the production boards? Is every feeding pawl in good condition? Do the mould and board form a clean vibrating unit or does the mould jump in an uncontrolled manner during vibration? Does the cleaning brush on the dry side clean the boards completely? Does it even contact the boards? As ironic as the last remark sounds, we frequently encounter steel and nylon brushes that whirl nothing more than fresh air – and don't come into contact with the board surface at all. We shouldn't then be surprised about concrete residues and small stones remaining on the boards that are pressed into the board surface later on and leave unwanted holes there. They are many points in the circulation and in the machine to which little attention is paid individually, but which, when taken together are an important part of the big wheel", says Matthias Bechtold, CEO of Wasa AG, making general reference to the importance of a conscientious inspection of the circulation.



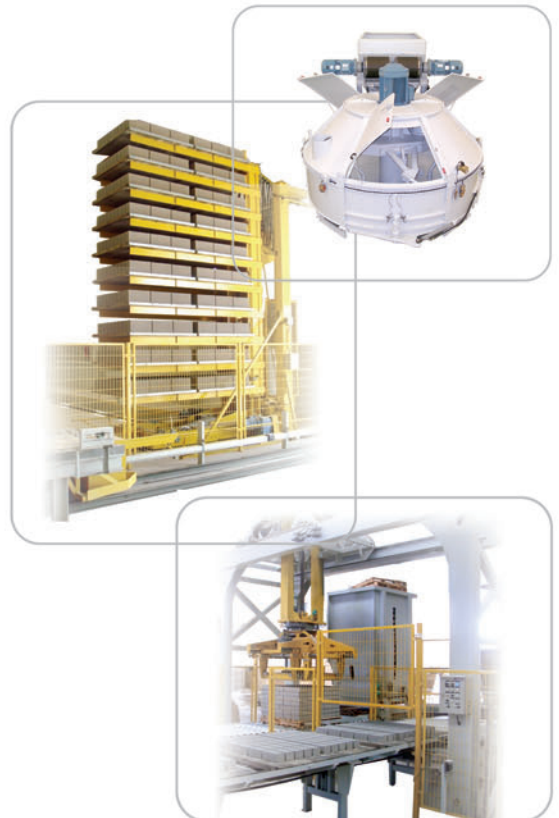
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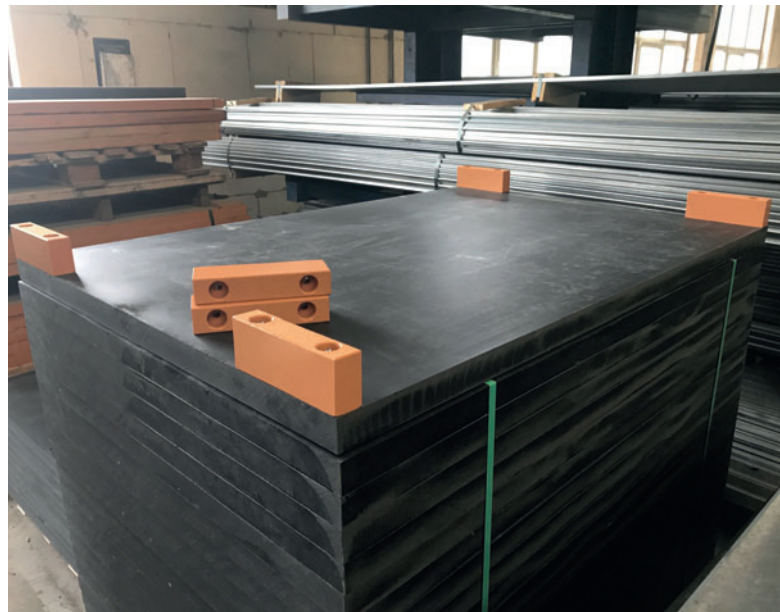
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Apart from feeding pawls, Wasa has recently begun to offer feet for PU production boards.

Feet for PU production boards

Apart from feeding pawls, Wasa has recently begun to offer feet for PU production boards. Production boards with feet are used whenever the customer has dispensed with a curing chamber and allows the fresh stone products to cure by forming board stacks, which are driven by a fork-lift truck from the wet side to a dry place.

Such feet are made either of wood, solid plastic or steel. Wooden feet have the advantage that they are the least expensive alternative. The disadvantage on the other hand is that wood, as a natural material, warps easily with changing temperature and environmental humidity. A straight and stable stack of boards cannot be formed if the feet are warped, and this can lead to a not inconsiderable safety risk. Steel feet or bases are very stable, but they are also very heavy and tend to corrode, which customers will probably regard as a disadvantage. Not only that, steel feet are also quite expensive.

"Solid plastic feet, which are made of the same material as the Wasa Uniplast and Wasa Uniplast Ultra boards, are insensitive to fluctuations in temperature and humidity and therefore do not warp. If stainless steel screws are used to fasten the feet to the boards, the total solution is even fully free from any rust formation", explains Matthias Bechtold.

The new polyurethane feet combine all of these advantages. In addition, they can be provided with an anti-slip underside. This is done by incorporating an anti-slip profile corresponding to the customer's wishes, which is created by placing a form liner in the mould in which the foot is then cast. This anti-slip property can be strengthened in that Wasa is capable of

varying the Shore-D hardness of the polyurethane. Since the feet are always manufactured in a luminous orange, they catch the fork-lift truck driver's eye more than conventional dark plastics. Damage due to inadvertent contact with the fork-lifter's forks can thus be avoided.

Not only that, individual shapes and the application of contours such as blind holes or chamfers are possible. The special casting process and the mould technology additionally allow a highly precise fit and reproducibility. Minor damage to the feet can be repaired by the customer himself.

"Generally speaking there are no limits to sheathing with polyurethane. Wasa is capable of coating all components with polyurethane on which production boards are pushed and stored, or with whose help the boards are gripped", says Matthias Bechtold, summarising the possible applications. ■

FURTHER INFORMATION



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