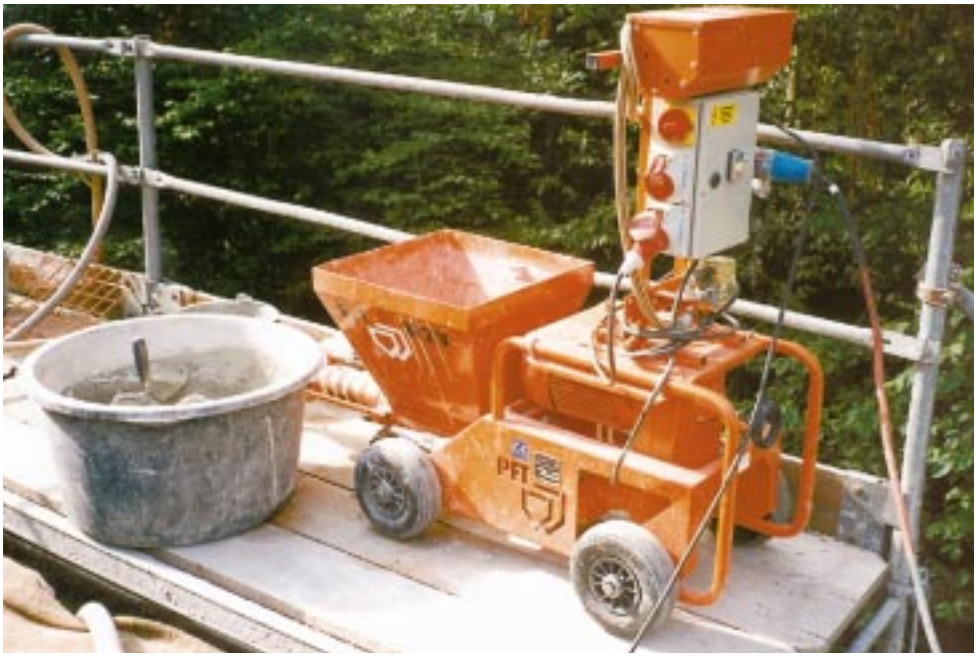
Optimal joining on the quarrystone wall of Castle Mitterfels

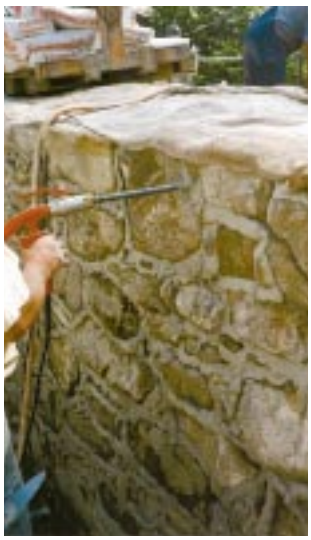


Solving problems with slowness: The open conveyor pump PFT N 2 V was set to its lowest rotation speed for the processing of the hard, grainy joint mortar.

Often what is larger, faster and travels further is considered progress. But sometimes it is better to go slow. An example of this is to be found in the restoration of the reinforced walls in Castle Mitterfels in the Straubing area. Optimal filling of the medieval quarrystone wall was only possible with low pressure and an intentionally slow mortar flow.

A typical assignment for Michael Dankerl-Bau GmbH in Willmering: the restoration of the reinforced wall in Castle Mitterfels. A large portion of the structures built towards the end of the 12th century are still standing. The history of the Castle Mitterfels is closely tied with the district and municipal court of Mitterfels, which has survived for over 700 years, and was even in use as a prison in 1948. Currently a local museum is documenting the history of the region's arts and trades, agriculture and criminal justice system.

The Dankerl building firm, which has been in business since 1930, employs about 150 workers, does both overground and underground construction, creates turnkey projects and carries out large restoration projects. With Michael Dankerl, the second generation is now at the helm, but the third is already active in the firm.



With the PFT cement pistol, joints several centimetres wide can easily be filled. The conveying output of the PFT N 2 V corresponds precisely to the work pace.

The medieval walls originally constructed in the 12th century for the Castle Mitterfels in lower Bavaria are now fit for the new millennium.

Restoring medieval walls is hard work.
Some stones in Castle Mitterfels have a volume of up to half of a cubic metre and can only be moved with the help of a crane. Hollow spaces and joints several centimetres wide gape out from between the uneven quarry stones. To provide the walling with new stability, first the joining mortar had to be knocked out, then the hollow spaces were injected with grout, and finally the joints were supplied with new mortar.

This process demonstrated that the machine selected to carry out high-pressure grouting was inappropriate for the joining work. Especially troublesome was the high degree of wear on the pump caused by the abrasive joining mortar, which was pumped at a relatively high speed. Working according to the methods of our forefathers, that is by hand, was obviously no longer a consideration in the year 2000. So Dankerl turned to various machinery experts for the solution to this problem.

The most convincing solution was presented by PFT Putz- und Fördertechnik GmbH &

Co. KG in Iphofen. Building machinery dealer Michael Hess from Hemau and PFT consultant Otto Iff brought an open conveying pump N 2 V with D 4-3 screw pump to the construction site, and the Vario pumps demonstrated that in this case slowness was what was needed. The Vario motor, with a capacity of up to 280 U/min, was set to its lowest speed, 70 U/min. The relatively inflexible, grainy joining mortar Marke Colfirmit Rajasil could now be processed as required. Since that time, well over 2000 m^2 of castle walling has been completed.

The PFT N 2 V now also offers its welcome services at other Dankerl construction sites.