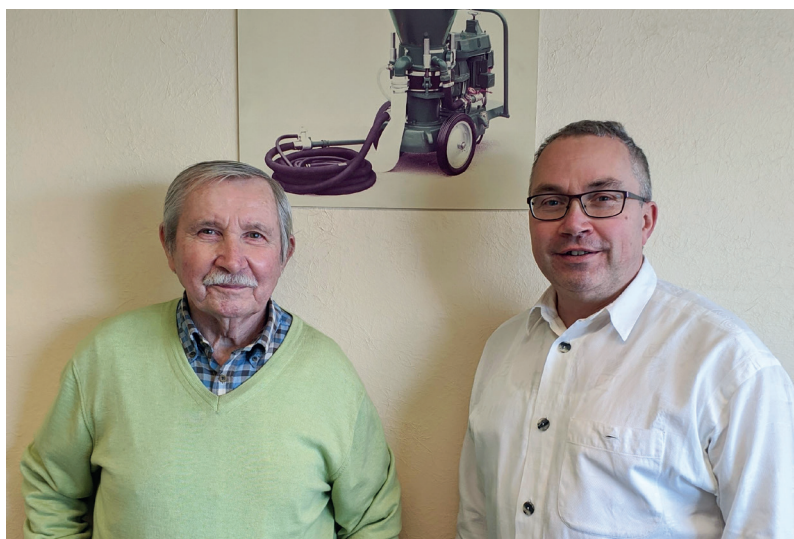


Germany

## VELCO Celebrates 50<sup>th</sup> Anniversary

VELCO GmbH is a medium-sized enterprise based in Velbert/DE, between the three cities of Dusseldorf, Essen and Wuppertal. Its core competences are machine engineering for the installation of gunning material, wear-resistant conveying of abrasive bulk materials and the injection of these materials into all kinds of processes. The customers from steel plants, foundries, the refractory and construction industries value VELCO's competence. VELCO gunning technology is very important for the refractories segment. Pulsation-free conveying as well as good and homogeneous moistening of the dry mixes is important for the quality achieved with the dry gunning technique. For this purpose, VELCO supplies rotor and pressure vessel gunning machines. For hot repairs in steel and metallurgical plants, VELCO has designed different types of gunning manipulators, which improve the working conditions of the steel workers and reduce the risk of accidents.

In this interview, Managing Director Christian Wolf (CW) reflected on the development of the company, which was founded in 1971 by his father and handed over to him in 2004.



**Fig. 1** Kurt (l.) and Christian Wolf

**rwf:** *What motivated your father to found the company?*

**CW:** As a young man, my father learned about dry gunning from the construction industry and mining. He later became a freelance representative for the sale of gunning mixes and dry gunning machines and had here in Velbert, in those days a centre for foundries, a very good network of foundry experts. These foundries produce grey cast iron in so-called cupola furnaces (shaft melting furnaces).

The refractory lining of the cupola furnaces has to be repaired on a daily basis. This was a very demanding and strenuous for the workers, as a wet compound had to be rammed behind a form. A better solution for this work was sought. In the talks with foundry experts and refractories industry, the possibility of using dry gunning here was considered.

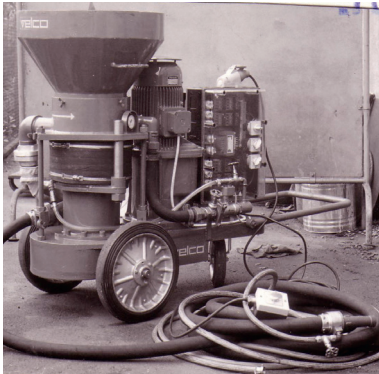
The machines available on the market were only suitable for this purpose to a certain extent. Then in the garage at home, my

father developed and built an improved machine. This was effectively the prototype of the VELCO Rotamat.

With the introduction of the Rotamat gunning machine in combination with a lifting platform, the refractory repair could be completed faster, more safely and more cheaply. In the logistics, too, there were improvements because the refractory compound could now be delivered in big bags or a silo truck.

In the 1970s, the core focus was the foundry sector, with its demand for refractory gunning machines and pneumatic conveyors. Then we developed in the direction of the steel industry. For this, the first gunning robots were developed. These offer more efficient repair of the hot refractory lining of the equipment (electric arc furnaces, ladles, RH snorkels, converters, etc.), improved working conditions and increased work safety. With our pneumatic conveyors, we inject fine carbon, lime, alloy carriers but also residues such as filter dusts in metallurgical equipment.

Even if foundries only make up around 20 % of our business, for this branch of industry we develop and engineer injection machines for foundry residues to meet increasing requirements for cost saving and environmental protection.



**Fig. 2** VELCO Rotamat 1971

**rwf:** Various refractory manufacturers are now offering services from one source, which besides gunning mixes also included gunning machines and even the execution of the work itself. Do you have any problems with such developments?

**CW:** On the market, there are always different aspects that advocate complete service packages or separate equipment and refractories purchasing. A “full service package” provides cost certainty, but also always leads to dependence on the supplier. In addition, you lose some flexibility when it comes to addressing individual problems, reacting to market adjustments or testing a new supplier. This is where we come in. We cooperate closely with the users and understand very well how refractories are installed. With half a century of experience, we are a reliable partner. If required, we can make hire or test machines available to companies.

**rwf:** After joining the company in 1995, you worked specifically on building up international business, amongst other things. What was your motivation there?

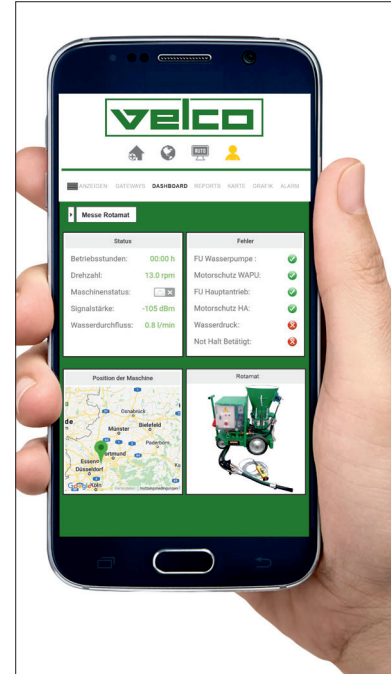
**CW:** Naturally, we wanted to grow with international business. The reality is that we need exports to compensate for fluctuations in domestic business.

As, after studying mechanical engineering in Bochum/DE, I went on a student exchange to Sheffield/GB and then gained some initial experience at Mannesmann Demag/DE, I also enjoyed forging international contacts. Trade fairs like IREFCON/IN, AISTech/US are, alongside GIFA–METEC/DE, very important for us. In addition, we are always represented with a stand at international conferences like ICR/DE or UNITECR, and we are supported by local representatives abroad.

**rwf:** What relatively new technical developments do you consider to be particularly important?

**CW:** We are always looking to further develop dry gunning. The modern ULC and NC gunning mixes are very sensitive with regard to the addition of water. Excessive water leads to a drop in compressive strength. That’s why we have developed the GUNMIX® system, which uses compressed air to form a mist from the liquid (water or other binders). With this, we offer the refractory installer the possibility to work with low dust exposure in the dry gunning process and achieve installation qualities close to that of “shotcrete”.

We were able to implement remote maintenance for gunning robots a long time ago



**Fig. 4** Remote access module using a smartphone (Figs.: VELCO)

and that is now being transferred thanks to state-of-the-art communication technology to smaller machines. You can look at your mobile phone to see where a machine is and how well it is working. Moreover, we are currently collaborating on a future project concerning 3D-printing of concrete.

**rwf:** What effect has COVID-19 had on your business activities?

**CW:** In international business and to an extent in domestic business, we have been forced to slow down. On account of corona-related shutdowns, projects have been and are still being delayed. Commissioning cannot always be completed. A lot has been moved to virtual meetings, but it is not possible to cover everything with these. But we see this difficult time as a challenge to offer our customers a reliable service and so far we have been able to meet this challenge.

**rwf:** What is important for you in the following years?

**CW:** Providing customers with optimum service. For us this means staying close to our customers, with technical consulting, prompt service and dispatch of replacement parts, support with maintenance and reconditioning of installations. We rely on solid quality and manufacturing exclusively in Germany.

**rwf:** Thank you for talking to us. KS



**Fig. 3** Gunning robot Hytop near the company’s new building