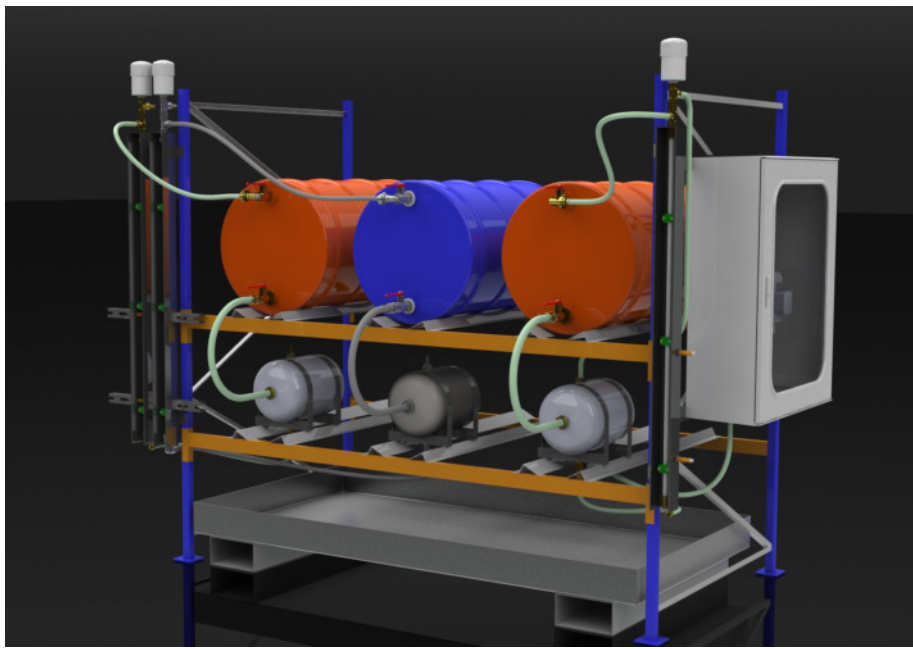


Anlagentechnik

Binder Storage and Dosing Equipment



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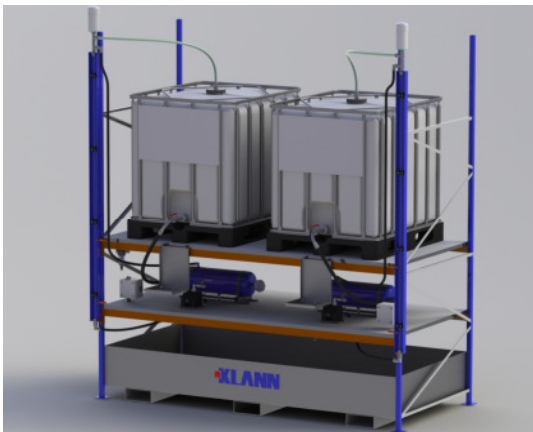


In order to optimise the core production process in regards to core quality and productivity, the core sand processing equipment has a significant influence, in addition to the core shooter itself.

The binder storage and dosing is an essential part in the core sand preparation process and has the following requirements:

- appropriate dosing of binder components at high core quality;
- limitation of air contact of binder;
- bubble free dosing of binder;
- temperature control of binder components;
- easy drum/barrel change;
- intermediate storage of binder to avoid lack of binder during binder procurement and/or changeover;
- capture of spillages in approved retention tanks;
- easy control of binder storage status, signalling for new procurements;
- low wear and maintenance costs.

Based on their decades of experience with various core processing equipment, KLANN developed binder storage and dosing equipment appropriate to customer binder processes and budgets.



Pic.1: Binder Container storage with intermediate, heated reservoir and pumping station.

For the binder component storage different solutions are available, as there are:

- drum/barrel storage with intermediate tank
- drum/barrel storage with intermediate tank and pump system to pump the components to remote binder preparation systems
- drum /barrel storage incl. binder heating

All systems are equipped with spillage retention tanks, quick connections for container change and adequate filter/adsorber systems to limit air contact.

To achieve high core quality by low binder component consumption the choice of the right binder dosing equipment is essential.

The dosing accuracy is depending on different parameters, which can be summarized as following:

- variation of binder component density
- variation of binder viscosity
- variation of binder temperature
- choice of dosing technology

As liquid binder dosing technology KLANN offers a double piston system, working with a standard pneumatic cylinder actuating a binder piston dosing cylinder. The dosing volume is either controlled by limit switches, offering 2 – 4 dosing volumes, or by a way measuring sensor offering free programmable dosing volumes.



Pic. 2: Binder dosing cabinet with two piston pumps.

The binder cylinder is made of glass to inspect the binder quality and to check binder for bubbles or impurities, which could cause dosing inaccuracy.

The double piston dosing pumps are working batch wise and are offered in following standard volumes:

Pump type	Volume	Volume range
BD-200	200 ml	0 – 200 ml
BD 500	500 ml	100- 500 ml
BD-1000	1.000 ml	500 – 1.000 ml

By the use of special injection nozzles in the mixer, the binder is poured directly under the mixture, which ensures best mixing quality. For easy inspection and injection of the binder volume in a beamer for calibration, these nozzles are connected to the mixer by quick release couplings.