

AUTOMATIC CLEANING SYSTEM CLEANS EVERYTHING!

Small Laundry, Big Laundry... in the Pressroom

(free translation of the Dutch newspaper article about the Wegener company)

When installing the new printing presses in Best about 2 years ago, they also ordered a new automatic cleaning system. But what is so special about this new machine?

Does this system work - just like a washing machine at home - with hot wash program, spin cycle, temperature adjustment, water stop, number of revolutions? And is the automatic cleaning system also operating with a cleaning agent?

Mr Sander van den Reek works as machine operator in the printing company in Best. Mr Ron de Bruin, project coordinator of IPB, tells us that Sander is the "father of the machine": "Sander knows exactly how the EASYLAC system works, which procedures are necessary for cleaning the parts and how the machine has to be serviced." When Sander is on day shift, he is co-responsible for the servicing of the inking units of the presses, mainly on Monday and Thursday. Then, the parts of the 3 printing presses have to be cleaned thoroughly and the automatic cleaning system helps him do this work. The system cleans the removable printing press parts.

"I put the removable parts on a trolley with a rack. The rack on this trolley is mounted on wheels. After having collected all parts, I roll the trolley in front of the cleaning system. The height of the trolley can be adjusted, so when I adjust the height of the trolley to the cleaning system, the parts can be rolled on the rack into the machine." The parts which go into the cleaning system, are most of the time very dirty:

"The thickest ink lumps are removed with an ink spatula, but afterwards, all parts go into the machine. And - usually, the parts come out of the machine completely clean!

Ultrasonic Cleaning

The automatic cleaning system provides a great advantage: It has a big trough with a capacity for approx. 1350 ltr liquid. The cleaning is not done with an ordinary detergent, but using a mechanical-chemical process. "We are adding vacuum bubbles to the liquid. These imploding bubbles make sure that the dirt on the parts gets soaked. In addition, we have a program in the machine which cleans with spray nozzles." The cleaning with the bubbles is the ultra sonic cleaning process: The cleaning liquid gets in vibration when the vibration elements beneath the liquid trough are activated. The vibration produces bubbles in the liquid and when these (vacuum) bubbles implode, the energy which is set free removes the dirt from all edges and angles.

Drying Device

The system works very well, says Sander. "With the previous cleaning machine (Renzmann?), all parts had to be put in separately. Besides, the machine could only spray, which means that not everything got clean. Also, the cleaning liquid at that time contained undesired solvents which had to be recovered with the help of an energy consuming distilling process." This situation has much improved with the new system. "But we have to dry the parts afterwards. With a drying device? No, I do not think this is necessary. We just use cloths!"

Huge Reduction of Chemicals Consumption

As project coordinator, Ron de Bruin was member of a group that investigated the question which cleaning machine would be best suitable for Wegener Best. "After all, we decided to take this system, because it works with the highest efficiency and it corresponds with our ecological requirements."

The automatic cleaning system from EASYLAC is a new and special machine: All over the world only 4 systems are in use.

"This one fit best in our situation." We checked several options, also abroad, but EASYLAC was excellent! A new machine also means that there have been "teething problems", but now everything works just the way it should.

Less chemicals necessary

One of the most important advantages of this system is that it only consumes one fifth of the chemicals compared to the previous machine. "And this is better for the environment, but it also means cost savings." How does that system work? The cleaning liquid is a VOC-free cleaning agent (*VEGRA Pressroom Cleaner Concentrate GREEN 220400 Zi*). In the machine, the cleaning liquid is automatically mixed with water. Sander places the parts on the racks and immerses these into the cleaning container. After having selected the cleaning program depending on the degree of contamination, the cleaning process starts using the mixture of water and chemicals. Depending on the selected program, the rack can also move vertically, it can produce a wave bath and the parts can also be rinsed.

Ceramic filters

The special feature of this system is the processing of the dirty chemicals. This is a closed system with a separate filtration unit. "When you use the washing machine at home, the dirty water is pumped into the sewage system." The dirty water from the automatic cleaning system first goes into a settling tank. The big dirt particles settle there and are later disposed of. The remaining slightly dirty mixture goes to the filtration unit, into a concentrator tank. From there, the mixture is continuously filtered with a highly efficient ceramic filter unit. These filters are also rinsed clean periodically in the opposite direction with already cleaned chemicals. The cleaned filtrate then flows back into the filtrate tank. When the machine is re-started, the filtrate can be used again. Then the fully automatic process of cleaning, settling, filtration and mixing starts over. Of course, this process cannot be repeated indefinitely: Every 6 weeks, maintenance work has to be carried out on the EASY-CLEANER. All of the content is pumped to the settling tank and to the filtration unit in order to initiate a complete filtration.

During this process, part of the liquid (with a high dirt concentration) is disposed of and replaced by a new mixture of water and chemicals.