

SCHWING Technologies GmbH

Press release

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Thermal cleaning ensures nonwoven production for respirators and medical protective clothing

SCHWING Technologies cleans machine parts in the nonwovens industry 24/7

Production lines for nonwovens are running at full speed worldwide: In times of the coronavirus pandemic, the material is urgently needed for the production of medical textiles. There is a shortage of masks, surgical or protective gowns everywhere. In order to secure the production processes of nonwovens and supply of medical protective material, precise working machine parts are critical. It is therefore essential to reliably clean the polymer-contaminated toling and return them to the production process quickly.

SCHWING Technologies cleans machine parts in nonwovens production

"More than ever before, we have to use our know-how to reduce machine downtimes with short cleaning times and make tools available again quickly," emphasizes Thomas Schwing, Managing Director of SCHWING Technologies. The equipment manufacturer specializes in thermal cleaning systems. Systems by the medium-sized, German company clean machine parts – e.g. spin packs, spinnerets up to six metres long or melt-blown and spunbond dies. In addition to PET, PP and PE, other polymers are also removed. At the NRW headquarters in Neukirchen-Vluyn, SCHWING also cleans process components as a 24/7 service provider, supplementing its service with the corresponding logistics.

Optimized cleaning process with two-side sound

In order to accelerate the cleaning of machine components in nonwoven production, the SCHWING development team has optimized the ultrasonic cleaning process. Thanks to the new two-side sound, even large machine parts no longer have to be manually turned. This saves time and, above all, manpower. In addition to a thermal vacuum pyrolysis system, the Company uses other post-treatment equipment, including ultrasonic cleaning systems. Previously, this

process required two steps, explains Schwing: "What's new is that with two-side sound, the time-consuming turning of machine parts is no longer necessary." Savings in personnel costs, rapid use of tools and reduced machine downtime are the advantages, the expert knows. At the same time, the process minimizes the risk of damaging dies. The entire process, which takes about 8-12 hours, includes several cleaning steps: These imply thermal polymer removal as well as subsequent high-pressure and ultrasonic cleaning. The final drying phase is followed by a final inspection.

24/7 cleaning service and logistics

SCHWING offers its customers complete cleaning services at the company headquarters in Neukirchen-Vluyn: this includes disassembly, thermal cleaning and, depending on the component size, post-treatment and inspection. The systems run around the clock 24/7 at the location on the Lower Rhine. Seven specialists contribute their entire know-how and experience from many years of cleaning very sensitive parts reliably and without residue. In addition, four drivers work up to ten hours a day to collect contaminated tooling and return the clean components to customers throughout Germany and neighbouring countries.

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Further information: <https://www.thermal-cleaning.com/en/cleaning-services-247.html>

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About SCHWING Technologies

SCHWING Technologies has been operating for over 50 years and is the worldwide technological leader for high-temperature systems for thermal cleaning, thermo-chemical finishing and heat treatment of metal parts and tools. The owner-managed company designs, manufactures, and operates systems at its headquarters in Neukirchen-Vluyn in Germany's Lower Rhine region. Built upon the achievements of German engineering, the medium-sized business is globally the best-known specialist in the removal of plastics. Among SCHWING's approximate 2,500 international clients are companies from the plastics and fiber industries, as well as from the chemicals and automobile sectors. For every cleaning need, the company with its approximately 80 employees offers the most economically, ecologically and qualitatively best technology and cleaning solution. SCHWING is also a reliable service partner for contract cleaning by processing more than 250,000 tools and parts each year to the highest environmental and qualitative standards. So far, there has not been a single component that we have not been able to free from polymers and inorganic contaminants, confirm the three managing directors Ewald Schwing, Thomas Schwing and Alfred Schillert. Founded in 1969, the company celebrates its 50th anniversary in 2019 and opened SCHWING Technologies North America Inc., a new sales company in the USA, this year.

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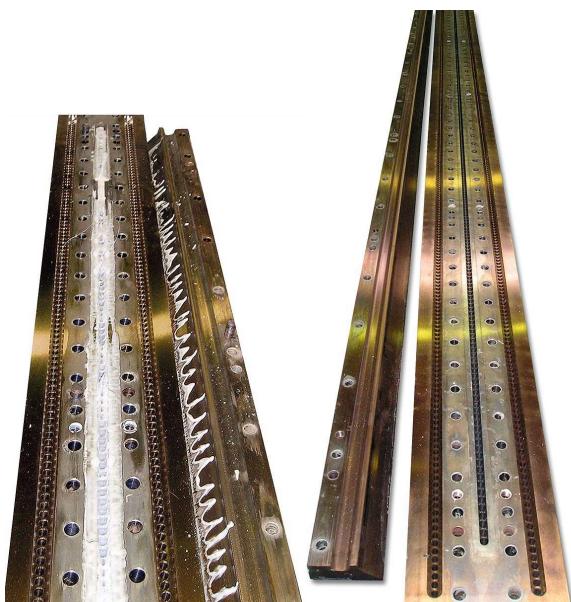
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Respiratory masks made of polyester and polypropylene

Photo Credit: SCHWING Technologies

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Melt-blown dies before and after cleaning: An optimized cleaning process with thermal pyrolysis, two side sound and further post-treatment removes polymer residues from machine parts in the nonwovens industry.

Photo Credit: SCHWING Technologies

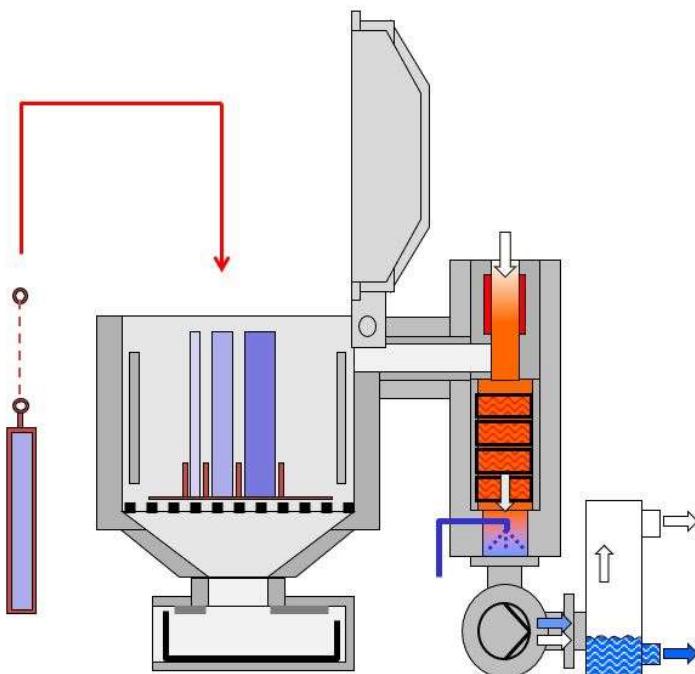
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VACUCLEAN vacuum pyrolysis system from SCHWING Technologies removes polymer residues from spin packs, spinnerets as well as melt-blown and spunbond dies with lengths of up to six meters by thermal vacuum cleaning.

Photo Credit: SCHWING Technologies

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Functional principle of thermal vacuum pyrolysis: The cleaning process takes place in an electrically heated vacuum cleaning chamber. The temperature is measured directly at the machine parts, which are initially heated slowly and particularly gently. Here, a large part of the adhering polymer melts off and flows out. The decomposition of the remaining material takes place at approx. 450 degrees Celsius - remaining carbon is finally removed by adding air (oxidation).

Photo Credit: SCHWING Technologies

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