

Press Release

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Sustainable Cleaning of Electric Motors: Preserving the Valuable Raw Material Copper for the Long Term

NEUKIRCHEN-VLUYN, Germany – Electric motors are the heart of modern industrial applications and contain copper, one of the most valuable and at the same time limited raw materials of our time. The professional cleaning and reconditioning of these motors therefore plays a crucial role—both economically and environmentally. Modern pyrolysis systems now enable particularly gentle and sustainable cleaning that ensures the preservation of copper in the highest quality.

When reconditioning electric motors, the focus is no longer solely on removing varnishes, resins, or insulation materials. Instead, preserving the value of the contained materials—especially copper—has become paramount. Mechanical or aggressive chemical processes can damage the copper surface, promote oxidation, or cause material loss, negatively affecting recyclability and reuse.

Gentle Pyrolysis Instead of Material-Damaging Processes

Cleaning by means of pyrolysis offers a clear advantage here: in a low-oxygen environment, organic components are thermally decomposed without attacking the copper or other metallic components. The result is clean, virtually unchanged copper that is ideally suited for reuse or high-quality recycling.

Pyrolysis systems from **SCHWING Technologies GmbH** rely on precisely controlled processes specifically tailored to industrial requirements. Exactly regulated temperatures ensure that insulation materials are removed without residue while the metal structure is fully preserved.

Sustainability as an Economic Factor

Preserving copper is not only an ecological contribution but also an economic advantage. Copper prices are volatile and availability is limited—making efficient use of existing resources all the more important. Pyrolysis technology supports a functioning circular economy, reduces waste volumes, and lowers the demand for primary raw materials.

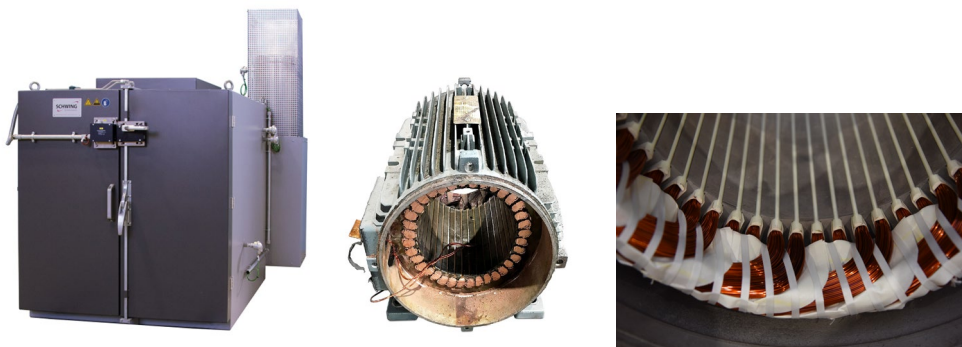
In addition, the process stands out due to low emissions, high energy efficiency, and the possibility of utilizing pyrolysis gases for energy recovery. Companies that adopt this technology not only improve their environmental footprint but also clearly position themselves as sustainable and future-oriented market players.

Copper: A Raw Material of Near-Gold Value

As electrification, the energy transition, and the expansion of e-mobility progress, copper is gaining increasing strategic importance. Global availability is limited, and new sources are complex and costly to develop. In terms of industrial relevance and value stability, copper today is nearly comparable to gold. This makes it all the more important to preserve existing copper in electric motors as effectively as possible and to avoid quality losses.

Link for more information: [Schwing Technologies: Applications and industries of Thermal Cleaning](#)

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Thermal pyrolysis system MAXICLEAN removes varnish and resin residues from electric motors, generators, stators, and other large components
Image credit: SCHWING Technologies

About SCHWING Technologies GmbH

SCHWING Technologies GmbH has been a global technology leader in high-temperature systems for thermal cleaning and material refinement for almost 60 years. The owner-managed company, headquartered in Neukirchen-Vluyn, develops and manufactures its systems in Germany and serves around 2,500 customers worldwide from industries such as plastics, packaging, chemicals, and automotive.

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