

## Application note

# Demagnetization prior to cleaning



Image: Coil module in Helmholtz configuration, horizontal orientation of the components, suitable for elongated parts lying in the washing basket.

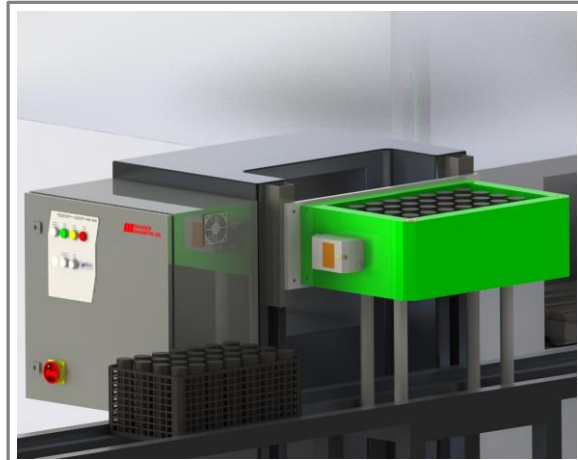


Image: Vertical orientation with a lifting station, suitable for elongated parts standing in the washing basket.

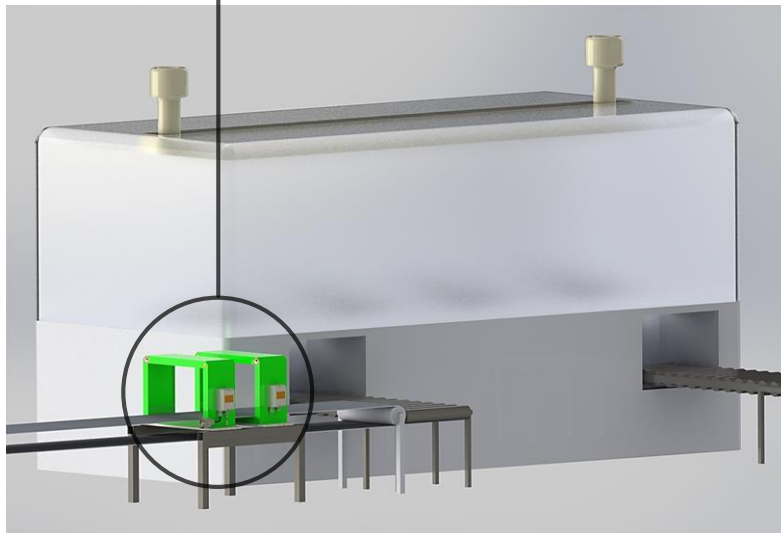


Image: Demagnetizer MM DN1850-1000 + SE88 integrated in front of a cleaning system. Preferably a space saving conveyor technology is used e.g. a conveyor belt retraction below the coil module.

Degaussing prior to cleaning is becoming an increasingly important topic. Residual magnetism and cleanliness are closely related. The higher the residual magnetism on a part, the more particles adhere to it. To fulfill high cleanliness requirements proper demagnetization prior to cleaning is often inevitable.

## Requirements for the demagnetization

- Residual magnetism limits between 2 – 5 A/cm at a measurement distance of 0.5 – 2 mm
- Demagnetize objects in longitudinal direction. The field lines of the coil are aligned with the axis of the longest dimension of the part. This is particularly important for elongated parts.
- Process reliability and reproducible degaussing
- Cycle time

## Maurer Degaussing

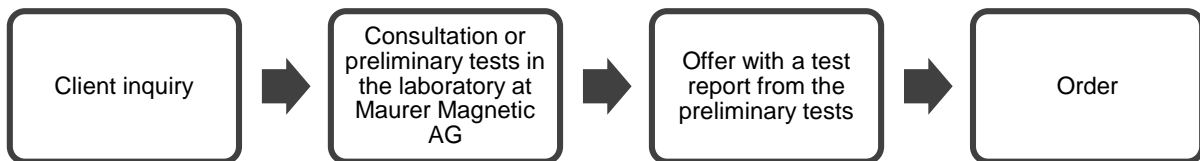
Maurer Magnetic AG has developed and patented its own pulse demagnetization process “Maurer Degaussing”. Cleaning baskets or bulk carriers loaded with parts are demagnetized by the “Maurer Degaussing” process by one single pulse. The SE-Coil modules have been specifically designed for demagnetization prior to cleaning. The active openings of the SE- line are sized to fit standard washing basket sizes and reach a field strength between 40 – 60 kA/m. For parts which require a higher field strength, Maurer Magnetic AG offers customized VE or HLE coil modules. The VE-/HLE

coil modules are designed and manufactured according customers requirements. For parts with lower requirements regarding demagnetization, Maurer Magnetic offers the MaurerClassic+ demagnetizers.

The pulse of the “MaurerDegaussing” process lasts about seven seconds, but can be adjusted if needed. The washing basket must be placed in the center of the coil modules, and the degaussing pulse is triggered by pushing a button or via 24VDC interface.

## Procurement process

Maurer Magnetic AG offers optimally tailored demagnetization solutions for every requirement. To verify the best solution and to guarantee residual magnetism limits after demagnetizing, free preliminary tests and consultation is offered.



## Advantages of the Maurer Degaussing pulse technology

- Process reliable demagnetization with reproducible results
- No re-magnetization of the parts after demagnetization.
- Demagnetization of washing baskets with bulk material in one pulse
- Increasingly positive effect of demagnetization on small ferromagnetic particles (fine cleaning, precision cleaning)
- No outflow zone after the coil required. Washing baskets can be queued directly before or after the demagnetizer.
- Energy efficient process: The maximum current during the degaussing process flows only for a few hundred milliseconds.
- 3-4 times higher field strength compared to conventional demagnetizers.

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