

Maurer Magnetic AG (company of shareholders) invests in spite of the crisis

At the end of September 2009, the Maurer Magnetic Company, a family enterprise, was able to inaugurate their extension building in Grüningen. The latest field of technology of the enterprise, the demagnetizing technology, has thus found a new home.

This summer, the Maurer Magnetic Company has been able to complete the extension building for this new field of demagnetizing technology. More than four million Swiss francs have been invested by the enterprise into this new building, which has been constructed according to minimal energy consumption standards. The extension building was duly inaugurated at the end of September 2009. As a consequence, the Maurer Magnetic Company, the new market leader of the degaussing technology, is well equipped for the future.

Mr. Albert Maurer, the company owner, confidently states: "we understand magnetism and we are specialists in the field of demagnetizing. There is nothing which is impossible." The new technology of changing field demagnetizing now enables the enterprise also to demagnetize layer, plug and bulk materials in large scale manufacture. This is more efficient and less time-consuming than traditional technologies, which were based on the processing of individual parts.

In order to demagnetize physically correctly, four conditions must be fulfilled:

- A high magnetic field
- The number of pulsations
- The precision of the amplitude characteristic, phasing out to zero
- An appropriate frequency

"Traditional technologies have been characterized by always one of the components not properly functioning", Mr. Maurer explains. "Often, the magnetic field, that is to say the power, was insufficient. In order to achieve optimal demagnetizing, however, all the components must favorably combine." The technology employed by the Maurer Magnetic Company has achieved demagnetizing to such an extent that no re-magnetization of the relevant parts occurs.

Two examples, from industrial application and railway technology respectively, illustrate the employment of this demagnetizing technology:

"A leading Swiss manufacturer commissioned us to demagnetize stainless inoxidation springs, which were difficult to demagnetize, up to a limiting value of $<2A/cm$ ", Maurer states. Preliminary tests with a crate full of bulk material did not only reach the required limiting values without any problem, but also revealed a further decisive advantage of productivity. "The customer bought one of our devices and now processes a large amount of their spring production in our demagnetizing device before the cleaning. They have recognized the fact that the cleaning process has become much more efficient and faster, when the materials are previously demagnetized", Mr. Maurer explains.

The removal of magnetism from steel parts, however, also finds application in other fields. Electromagnetic rail brakes of locomotives and rail coaches, for example, which are employed in cases of rapid stops and emergency braking, magnetize the relevant rail sections and cause the formation of a magnetic pole on the rail screws. These magnetic poles inadvertently influence the sensors of the railway compositions when these are overrun, which causes signal interference of the train control and, at certain travelling speeds, triggers an emergency brake.

This new technology has been developed together with the ETH in the course of the last years. With the many new patents, which have been granted from all over the world, the Maurer Magnetic Company has become one of the most innovative enterprises in the field of demagnetizing. The systems are produced in Switzerland and mounted in Grüningen.

For more information see www.maurermagnetic.ch

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