

MAGNETIC SEPARATORS

and their role in ensuring the safety of food

by Wu Wenbin, Henan University of Technology, China

Magnetic separators use a magnet's physical characteristics to absorb all the iron impurities, as well as weak magnetic substances, on the surfaces of materials to meet the high-quality food standards we have today. This ensures that food is much cleaner, safer and of higher purity.

In many cases, the application of magnetic separators has also played a very good role in protecting machinery and equipment, food in the processing of production and the wear of machinery. Small bits of metal can appear, in the form of fine powders, and some small components of machinery might fall and mix in the food material, which will cause damage to the entire machine.

This can cause an even worse effect on the whole production line, such as jamming, shutdown and overhaul of the machines. The application of magnetic separators will greatly reduce the likelihood of similar events, reducing the cost of maintenance, and improving the quality and safety of materials.

At present, all over the world, producers pay higher attention to food safety, incorporating batch of magnetic separator into their flour factories, grain processing plants and other food factories. Sun Magnetic Sys-Tech Co, Ltd is one of the best.

As we at Milling & Grain have met Sun Magnetic Sys-Tech many times at international exhibitions, Sun Magnetic Sys-Tech are gradually becoming recognised by the market more and more. We were also very curious about this company, and so we visited Sun Magnetic Sys-Tech as the last stop of our 2017 Chinese enterprises visits.

Visiting Sun Magnetic Sys-Tech

Sun Magnetic Sys-Tech is a company dedicated to the production of high-quality magnetic separators. Founded in 2001, the office is located in Beijing, the capital of China, mainly responsible for the sales of products. Their factory is located in Hebei province, China, mainly responsible for the research and development of magnetic separators, assembling and maintenance. The production base covers an area of 10,000m², whilst the plant covers an area of 5,000m².

With good quality products and unique design, Sun Magnetic Sys-Tech magnetic separators are widely used by well-known flourmills in the domestic market, such as Wilmar, COFCO, Wudeli Flour Group, Guchuan, Jinshahe Flour, Buhler in Wuxi and GBS. After getting a good domestic market share, Sun Magnetic Sys-Tech is now actively expanding overseas markets. From the year of 2015, Sun Magnetic Sys-Tech have continued to participate in many professional international exhibitions each year, such as IAOM, GEAPS, IDMA, Victam and so on, to let



magnetic separators be known and accepted by foreign customers.

When visiting Sun Magnetic Sys-tech's factory, we learned that, in terms of the magnetic separator itself, the application effects and cleaning methods are its two most basic elements. By virtue of outstanding performance in these two aspects, Sun Magnetic Sys-Tech are more and more recognised by domestic and foreign markets.

Magnetic separators

The application effect mainly refers to the ability of separating the iron impurities from the material. Sun Magnetic Sys-Tech magnetic separators are made of strong performance rare earth magnets (NdFeB), basing on a complete set of instruments for measuring magnetic performance. This ensures that the inside magnet, under normal use, (temperatures not exceeding 80 °C) will never lose its power. It is also ensured that the surface gauss value can reach 13,000GS and no "0" magnetic field.

By virtue of more than 20 years of accumulated professional knowledge, experience and the unique magnetic circuit structure design in the field of magnetic application, Sun Magnetic Sys-Tech magnetic separators use reasonable magnets cost-effectively to release their maximum magnetic energy to catch the iron impurities.

The cleaning method mainly refers to the process of removing iron impurities absorbed on the surfaces of magnetic separators. Compared to the traditional way of cleaning, with a clumsy hand sliding from one side to the other side, Sun Magnetic Sys-Tech magnetic separator's cleaning method is much easier. Sun Magnetic Sys-Tech's magnetic separators are easy-cleaning and automatic self-cleaning, which is more convenient for the operator and improves work efficiency.

In particular, the unique discrete design of the cylinders' magnetic separator structure, different from the traditional "bullet", makes the cleaning easier, with its removal plate and tooling rack. Meanwhile, the unique discrete design structure makes magnetic fields distribute evenly, meaning the separating effect will be better.

The discrete structure has also got a national invention patent. The automatic cleaning separator, including the drum magnetic separator, magnetic belt dirt sorter and suspended magnetic belt separator operate easily, never losing power under normal application, boasting deep magnetic penetration and low maintenance costs. A diversity of models are available to meet customers' specific requirements for different products.

For the future expansion of the international market, the General Manager of Sun Magnetic Sys-Tech, Mr Sun, said that Sun Magnetic Sys-Tech will continue to attend the international exhibitions to let customers see their confidence in their products. Meanwhile, the company is also actively looking for appropriate foreign agents to better the service.

Good quality service and products are the key to open the door, and perfect service is the cornerstone. We at Milling & grain earnestly hope Sun Magnetic Sys-Tech will continue to expand in the international market. Good products need to be known, and this visit was unforgettable.

