Detecting Unwanted Metal
In Conductive Materials

SO BAG is a French packaging company which manufactures Flexible Intermediate Bulk Containers (FIBC) for a range of industries including food, pharmaceutical, building and chemical. Founded in 2013, the company has been built up by an experienced and passionate team who provide a solutions-based service to its customers, with quality and safety at the heart of everything they do.

Its commitment to high standards led SO BAG to choose a Profile Advantage conveyorised system from METTLER TOLEDO Safeline to inspect its 'bulk bag' products for metal contamination. Made out of ATEX-approved carbon material, the FIBCs provide a challenging application for detecting unwanted metal. The Profile Advantage was the key to helping the company maintain its reputation for consistent quality and safety.

SO BAG's Flexible Intermediate Bulk Containers.

SO BAG

Profile Advantage System

Metal Detection in ATEX Approved Packaging

METTLER TOLEDO

The Profile Advantage metal detection system inspecting SO BAG's FIBC bags for metal contamination.

An FIBC, also known as a 'bulk bag' or 'big bag', is an industrial bag made of flexible fabric that is designed for storing and transporting dry, flowing products such as grains, powdered foods, sand and fertiliser.

FIBCs are most often made of thick woven polyethylene or polypropylene, either coated or uncoated. The bags normally measure around 110cm wide by 100-200cm high, with a capacity of around 1000kg. SO BAG's ATEX Type C compliant FIBC bags are made from conductive fabric with interwoven conductive threads making it a challenging application for conventional metal detector technology.

Protecting the Customer's High Standards

SO BAG produces over 110,000 bags every year, with each one individually hand made to ensure the bags are produced to a high standard. The production process introduces potential metal contamination

risks such as broken needles and misplaced tools.

Nicolas Chevalier, owner of SO BAG explained: "I have been in the packaging industry for over 20 years and when it comes to excellence, I knew the only company I trusted for metal detection was METTLER TOLEDO Safeline." He continued: "We work with our customers to understand their specific requirements and develop bespoke solutions to allow them to meet industry standards. Many of our customers require their FIBCs to be checked for metal contaminants.

The level of sensitivity provided by METTLER TOLEDO Safeline's metal detectors allows us to deliver a consistently high quality product."

Because SO BAG produces bulk bags for food and pharmaceutical manufacturers, ensuring the bags are not contaminated is incredibly important. Products such as grains and powdered food will have already been inspected for metal contaminants in their own production line, so it is essential that they don't then add their product to a potentially contaminated bag.

SO BAG produces over 110,000 bulk bags every year.

Profile Advantage technology effectively cancels out the product signal from the carbon within the bag material.

Every bag is individually handmade to maintain SO BAG's high safety and quality standards.

Detecting Unwanted Metal in Conductive Materials

Using METTLER TOLEDO Safeline's Profile Advantage metal detector with a Series 200 conveyor, the bags are passed through the detector with a 'stop-on-detect' reject mechanism for any contaminated bags.

The Profile Advantage metal detector offers superior performance in detecting metal. It uses a combination of proprietary Multi-Simultaneous Frequency and Product Signal Suppression technology to detect metal contaminants up to 50% smaller than other metal detectors. This high sensitivity to the metal contaminants in SO BAG's conductive FIBCs is essential to maintaining product quality.

As the FIBCs contain carbon, a highly conductive material, a traditional metal detector would detect this within the bags, stopping every single bag which passes through it. However, Profile Advantage technology effectively cancels out the product signal from the carbon within the bag material, only detecting actual metal contamination and eliminating false rejects.

The large aperture size allows the oversized bags to easily flow through the metal detector whilst still maintaining high sensitivity. The 'stop-on-detect' reject system stops production when a contaminated bag is detected so it can be easily removed from the production line and examined. The robust Series 200 conveyor system is fully integrated with the Profile Advantage metal detector and ensures the bags remain on a stable surface whilst being inspected.

Data from the metal detector is captured every day and can be downloaded through the USB Port. SO BAG can then analyse information on detection events and manage the quality of its production line.

Conclusion

By using METTLER TOLEDO Safeline's Profile Advantage metal detection system, SO BAG ensures its excellent standards are maintained and its brand reputation is protected. In addition, it is passing these same reassurances onto its customers.

About The Company

SO BAG is a French packaging company which specialises in applications for the food and pharmaceutical industries.

The company's primary focus is manufacturing FIBCs. However, they work with customers to develop tailored packaging solutions to meet their requirements. Additional services include:
- Management of electrostatic hazards
- Safe packaging labels
- Transport of dangerous goods
- Packaging concept development
- Product issues and optimization
- Filling and emptying assistance

For more information on SO BAG and its products and services, visit www.sobagfrance.com.

▶ **www.mt.com/metaldetection**

About Mettler-Toledo Product Inspection:

The Product Inspection Division of METTLER TOLEDO is a leader in the field of automated inspection technology. Our solutions increase process efficiency for manufacturers while supporting compliance with industry standards and regulations. Our systems also deliver improved product quality which helps to protect the welfare of consumers and reputation of manufacturers.

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X-ray Inspection

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