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Sojitz Corporation

Sojitz Machinery Undertakes Sale of Small, Fast-response, High-sensitivity Metal Detection Unit

- Detection without missing microscopic metallic foreign bodies -

Sojitz subsidiary machinery trading company Sojitz Machinery Corporation (Head office: Chuo-ku, Tokyo; President and Representative: Satoshi Nagakubo), together with Uchihashi Estec Co., Ltd. (Head Office: Tsurumi-ku, Osaka-shi, Osaka; President & Representative: Hisao Uchihashi), a manufacturer of electric components such as thermal fuses and solder, has developed and commenced the sale of a small, fast-response, high-sensitivity metal detection unit that enables the detection of magnetic metallic foreign bodies during the production process for food and industrial products.

Sojitz Machinery will undertake sales of the 'SU series' metal detection unit, which uses a magnetic sensor MI sensor (*). Production will be carried out on the basis of patent technology owned by Uchihashi Estec.

The MI sensor features the detection of magnetic metallic foreign bodies without being affected by aluminum foil, aluminum metallized wrappers, salinity or moisture, as it responds only to the magnetic field produced by magnetic bodies such as iron and stainless steel. The 'SU series' corresponds to high-speed production lines for things such as nonwoven fabrics, for which to date visual inspections have been performed. The 'SU series' carries multiple sensors within its chassis, and area detection can be performed to determine the location of a magnetic metallic foreign body, by observing which sensor responded to the magnetic field.

The 'SU series' is smaller and lighter in comparison to conventional metal detectors that use metal detection coils, and can therefore be installed in empty spaces around existing lines such as that underneath a conveyor. Metal detection functions can thus be added to existing lines by inputting the output of the 'SU series' to the conveyor controller and so on. The line-up for the product includes two types; the 'SU-60', with a detection width of 60mm, and the 'SU-300', with a detection width of 300mm, thus enabling installations tailored to line width.

The versatile metal detection unit has many uses, such as those for detecting magnetic metallic foreign bodies in aluminum foil packaging materials, paper carton type beverage containers, aluminum cans and glass bottles, plastic film inspection and thin film coating inspection for optical components. Sojitz Machinery and Uchihashi Estec will conduct sales to food manufacturers, pharmaceutical manufacturers and automobile manufacturers.

[SU series]



SU - 60



SU - 300

(*) MI sensor

The 'MI sensor' utilizes the MI Effect (Magneto-Impedance Effect), which is where the impedance (AC resistance) of an extremely fine amorphous wire (magnetic wire) with a high-frequency current passing through changes, in a sensitive manner, under the influence of an external magnetic field. The MI sensor is a small, fast-response, high-sensitivity magnetic sensor.

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