



How Industrial Metal Detectors Improve Manufacturing Quality Control

Companies can use industrial metal detectors to locate any metal contaminants in their products prior to sale. Consistent quality control is vital in modern production environments due to the importance of product protection, adherence to safety requirements and overall productivity levels.

An industrial metal detector is a way to implement automated checking that can locate ferrous, non-ferrous and stainless-steel contaminants during the manufacturing process. Thus, the company will benefit from enhanced quality control and safety of production.

J-PAK
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Detect Contaminants During Production

Metallic fragments can be introduced to products by means of contamination with the raw materials, wear of machinery and equipment, maintenance activities or the production process itself. It is important to find out these contaminants before the process of packaging in order to preserve product quality. Detection equipment can recognise three types of contaminants:

- Ferrous metals (iron and steel)
- Non-ferrous metals (aluminium and copper)
- Stainless steel

It is especially useful for the manufacturing of food products, such as bakery products, meat, dairy, cereals, rice, grain, fruits, vegetables and confectionery.

Enhance Product Quality and Consistency

Incorporation of quality control within the production process leads to better efficiency compared to performing inspections only at the end. With [industrial metal detector](#) systems, a quality control station will be established whereby products will be monitored throughout the production line.

Choose a System Suited to the Production Line

For each product, there are different detection setups. Proper selection of equipment depending on the product properties, production process, and the package used enhances the inspection process. Popular setups include:

- **Conveyor systems:** Suitable for bread, meat, cereals, and packaged products.
- **Pipeline systems:** Used for liquid and semi-liquid products like sauce, dairy products, and beverages.

- **Gravity systems:** Involves free-falling dry products such as powder, grains, and granules.

Support Quality Documentation

In addition to the above advantages, modern industrial metal detection systems may also assist in improving quality management. Some of these systems allow gathering detailed data, conducting automatic tests and diagnostics, thus allowing operators to check the performance of equipment and implement consistent inspection procedures.

Conclusion

The industrial metal detector is an essential part of quality control, as it allows detecting ferrous, non-ferrous, and stainless-steel contaminants during the production process. The modern metal detection technology not only ensures safety but also allows implementing automated rejection and data gathering, flexible installations and many other useful features. [J PAK Pty Ltd](#) has industrial metal detector solutions for all production areas.

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