

Metal Detectors as Critical Control Points

HACCP is internationally recognized as the primary means for enhancing food safety in plants. The system is unique as it focuses on preventing problems before they occur, rather than relying on end-product testing.

Metal as a Potential Hazard

During the development of a HACCP system, potential hazards are identified and control measures are implemented at specific points in the manufacturing procedure. The detection and elimination of contaminants is a vital part of the food safety process. Metal represents a major and often unavoidable physical hazard, particularly in plants with moving mechanical parts for manufacturing including mixing, cutting, processing and packaging systems.

If metal contamination is identified as a risk on a production line, then a metal detector must be present to address this risk as the “Critical Control Point” - the step at which the hazard can be prevented. However, the usage of a metal detector alone is not sufficient to satisfy HACCP requirements. It needs to be managed as Critical Control Point according to HACCP principles.

HACCP Compliance Made Automated

Under HACCP guidelines, the results from the metal detector must always be measured within established critical limits and they must be continuously monitored to ensure that the risk of metal contamination is under control. If metal is detected beyond the predefined critical limits, then corrective active needs to be taken. Furthermore, HACCP requires the maintenance of records and reports generated during the monitoring of the Critical Control Point. Finally, the effectiveness of the process needs to be verified periodically.

New technologies are available to assist plant managers with HACCP compliance. In the modern age of integrated computerized information systems, the metal detector application can be tied into a central data management system and the record-keeping process plus reporting can be made automated. The days of hand-written reports and paper records are over! Today, there are metal detection solutions available that are designed to satisfy the numerous requirements of HACCP programs.

CONTACT Communication Software

Fortress Technology, a world leader in the design and manufacture of industrial metal detector systems based in Toronto, Canada, has developed a highly effective Event & Data Logging software solution for HACCP compliance. The revolutionary CONTACT Communication Software automatically records and

reports the performance and event data from Fortress' digital *Phantom* metal detectors. *Phantom* detectors come with the option of CONTACT Communication Software to connect to a PC and make the metal detector a Critical Control Point.

CONTACT software automatically conducts the QA record keeping needed for a HACCP program by collecting event and performance information from the metal detector and storing the information to a database. The system lets you know what, when and where something happened, providing important intelligence to assist in preventative measures procedures.

Event & Data Logging

Two types of information are collected by CONTACT from the metal detector: Data and Events. Data recordings provide historical machine status information, such as system settings and product details. Event logging indicates when there are changes in the system status. Examples of events include detector faults, changes in detector settings, rejects, quality tests, test results, and the unit being turned on/off. Data and Event recordings are always time-stamped, providing ideal documentation for meeting HACCP's record keeping requirements. The information can be stored for long time periods... years if necessary!

CONTACT software utilizes a powerful SQL back-end as the database platform. Because SQL is a universal non-proprietary standard, it is easy to share the data with other software applications and information systems. The robust server-based database provides uninterrupted data collection.

Two versions of the SQL Server are available: a simple-to-install Compact version that's intended for single-user applications, or a Standard version that's more robust and suitable for multiple users. SQL Compact is embedded in CONTACT Software while the Standard version requires the pre-installation of SQL Server Express (or higher).

Reporting

In addition to data storage, an effective documentation system must exist for all metal detection systems, especially within a HACCP program. CONTACT offers flexible report generation "on demand" by selectable production line and time period. Reports include recordings of all detector events, including evidence of system testing. The results can be exported to convenient Excel or PDF formats instantaneously.

Testing

Routine testing procedures are considered to be integral in the metal detection application. In HACCP terms, the Critical Control Point itself needs to be verified

for absolute accuracy. Testing on Fortress' *Phantom* metal detectors can be conducted manually or automatically using the unique AutoTest feature. Automatic testing is a very cost-effective method of ensuring the ongoing accuracy of the metal detector and its reject device. It can execute tests much more frequently, providing earlier warning of potential issues. Using CONTACT, testing of the metal detector and the test results are automatically recorded.

Installation

CONTACT is easy to setup and operate. Simply install the software on a PC on your network and connect the PC to your Fortress Phantom metal detector. There are three ways to connect the PC to the detector: Serial RS-485 / Wired Ethernet / Wireless Ethernet. Multiple detectors can be connected to a single PC running CONTACT. The PC software requirements for running CONTACT are: Windows 2000 / XP / Vista, and Microsoft .NET 2.0 Framework.



PHANTOM metal detectors communicating with a PC running *CONTACT* software, and generating reports

For more information, please contact:

Fortress Technology Inc.
51 Grand Marshall Drive,
Toronto, Ontario
Canada, M1B 5N6
Tel: (416) 754-2898
FAX: (416) 754-2976
Toll Free: (888) 220-8737



sales@fortresstechnology.com
www.fortresstechnology.com