

## Manufacturing for optimal OPEX

View-Pipe is constantly optimising its offering to allow customers and among other developments has recently introduced a new method of identifying foreign bodies by monitoring contaminants during pre distribution of packages.

The condition monitoring system is already improving the operating regimes of different zones. All these zones manufacturing units where View-Pipe has installed a 30,000 litre milk production vessel and a 30,000 litre vessel with double wall vessel. The new equipment has been fully integrated into the plant existing control system.

According to View-Pipe, there are two key areas to improve during food production: structural problems and production and assembly, equipment production related issues. Advanced automation systems can also be used to detect existing processes automatically using information obtained on sensors and modules. View-Pipe's multi-CPD has continuously monitored production operations and communicated the necessary CPD requirements such as frequency, temperature, time, flow and concentration of existing ingredients.

View-Pipe has developed a structural method for reducing energy in plant OPEX, which includes all the necessary steps of treatment design including design qualification, installation qualification, operational qualification and fully performance qualification. Typically, typical design of the original piece of equipment is also used. The idea is to ensure everything that will ever come in contact with food – from components right down to connections, with air – is built for sterility, using approved materials, according to the Process hygiene food safety & equipment safety. View-Pipe

## Traceability

In Brazil, the Bureau Food Corporation has installed in the past generation traceability solution from View-Pipe in order to improve production efficiency and add brand value for its ready-to-eat, UHT milk brand. Each View-Pipe section of the milk is designed with a unique code that



Food Radar Systems' Look 100 in-pipe detection system can detect low density foreign bodies such as pit fragments, plastic, rubber, hard plastic, soft plastic, silicone and wood

## Detects even wood, plastic, bone and product lumps

H J Heinz is one of the first global companies to benefit from the latest in in-pipe, foreign body detection, for emulsions and pumpable products. Food Radar Systems AB's Look100 is a patented system that uses microwaves to detect metal, stone, glass, wood, plastic, bone, extraneous vegetable matter and even insects and lumps of product itself.

"We find this technology very interesting for helping to eliminate low density foreign matter in particular plastics thereby further ensuring the quality of the product we deliver to our consumers," said Michael Philp, European process improvement manager of HJ Heinz, which has invested in multiple Look 100 systems to ensure the safety of its baby food production.

Designed to be easy to retrofit into existing pipework, the Look 100 consists of four individual parts: an operator panel, a sensor unit, a rejecter unit, and a buffer pipe. However, the entire system takes up only one metre of pipe length.

The sensor unit consists of a sensor head and the MTRX – a specially developed industrialised vector network analyser. The MTRX is controlled by the system's computer and generates a microwave signal, which is then fed to the sensor

head, a 2.5 inch, acid resistant stainless steel pipe, where the microwave signals are received and transmitted. The system measures the dielectric properties of the food flow and, if an object differs from the norm, it is detected and rejected. Effectively, the received microwave signal is digitised in the MTRX and the measurement data is sent to the computer for processing. If an object is detected, the flow speed of the object is calculated and the computer sends this information back to the MTRX, which controls the exact timing of signals to the pneumatic rejection unit, which subsequently rejects the contaminant.

The buffer pipe located in between the sensor unit and the rejection unit is optimised in length to ensure that the calculations can be performed in time and that the rejection unit is allowed enough time to open. The speed of any foreign body is measured and the eject signal is then precisely controlled to ensure the successful ejection of the contaminant whether it is travelling in the centre or towards the outer edge of the product flow. A maximum of about 2 litres of product is lost during the ejection process. All events are logged, and any deviance from pre-set norms triggers a fault alarm.

enables consumers to access real time information regarding the origin, processing and packaging of the product contained in the actual can.

Working with View-Pipe, Bureau and its customers can track foods from the materials through to the final manufactured product.

