fdpp
FOOD & DRINK PROCESSING & PACKAGING
Issue 60 2025

IMPACT CAT Lift Trucks

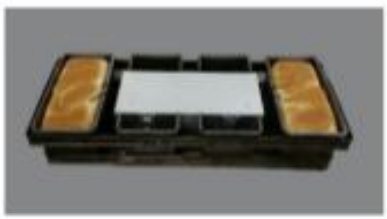
ELECTRIC EVOLUTION:

TACKLING THE REAL-WORLD CHALLENGES OF FLEET TRANSITION

PhoenixTM 'Thru-process' Bread Bake Oven Temperature Monitoring Solution

They say that "the proof of the pudding is in the eating" but when it comes to industrial bread baking that's a little too late. To get the best out of your bread or bakery product significant understanding and control of the baking process / oven is essential to get form, shape, texture and colour you desire. As part of any Food processors HACCP program validation of the bake processes is a critical and significant task taking time, effort, and resources. PhoenixTM have developed a thru-process temperature monitoring technology specifically for this task. The multi-channel data logger with up to 10 thermocouples (Type K or T) travels through the oven protected by a thermal barrier to suit the bake regime (Temperature and Time) and challenges of the product transfer. The data logger is designed for food processing and has a IP67 case protecting from moisture and will operate accurately between -40 °C to 80 °C, inside the barrier, with high performance cold junction compensation.

For bread loaves the thermal barrier is designed to fit inside a modified bread tin strap (image shown right). Monitoring conveyorised mesh belt ovens either product core temperature can be measured alternatively a fixed arm assembly can be fitted to the thermal barrier to locate thermocouple across the belt width. Ambient temperatures can be measured accurately and reproducibly allowing efficient oven mapping and identification of 'Hot' and 'Cold' spots within the oven.



The temperature profile stored in the data logger can be reviewed, analysed and reported in custom designed PhoenixTM Thermal View Food Software.

A comprehensive suite of analysis tools converts the raw profile temperature data into useful process information. Analysis of key process criteria such as yeast kill time to guarantee height of bake, starch gelatinisation time to control bread crumb structure and arrival time to control final bake and colour formation can be performed using the data analysis tools. Analysis tools also include the ability to calculate Fo/Pu values for the process against target micro-organisms.

The information gathered, further to process validation, can be used to allow informed process problem solving and optimisation to maximise product quality, yield, process productivity and efficiency.

Contact PhoenixTM to help Find, Fix and Forget your Bread Cook Problems!

www.phoenixtm.com

Efficient HACCP Cook & Chill CCP Validation

PhoenixTM
Phoenix Temperature Measurement

Where experience counts !

Thru-process temperature monitoring solutions for all your cook applications

PhoenixTM Technology

- Accurate IP67 data logger (Type K or T)
- 10 Measurement Points for full oven mapping
- Thermal barrier options to suit cook regime
- Comprehensive thermocouple range
- Standard miniature thermocouple plugs
- Calibrated thermocouple options
- Food trays and thermocouple jig options
- Full lethality (Fo/Pu) and reporting
- Real Time RF Telemetry options
- Local efficient calibration and service support

Phoenix Temperature Measurement
25 Earith Business Park, Meadow Drove, Earith, Cambridgeshire PE28 3QF, UK
T: 01353 223100 E: sales@phoenixtm.com
www.phoenixtm.com