DATAPAQ®

A Fluke Company

Enhanced features for temperature profiling software

Insight V7.30

DATAPAQ®, the leading provider of temperature measurement and analysis systems for all types of industrial heating processes, introduces version 7.30 of its Insight software. Responding to customer feedback, the new release adds many new features and enhancements that make the profiling of thermal processes easier and more efficient. Data analysis and reporting tools are designed not only to allow routine standard process validation but allow accurate process optimization to improve process productivity and efficiency.

To enhance the already valuable RF capability of many Datapaq systems the new version of Insight now supports the real-time export of data via OPC ("Open Platform Communications", previously referred to as "OLE for Process Control"). OPC is an open-source interoperability standard for industrial automation, allowing communication between an industrial data source (the OPC server) and a software application (the OPC client), such that data can be passed from the server to the client. This option provides customers with the ability to use live process data to potentially trigger/manage processes or actions associated with their specific operations.

Temperature profile of a wicket oven including the contour plot showing the temperature distribution over the metal wicket sheet at any point in the process. Note that the image clearly shows that the middle top of the sheet is significantly cooler than the rest of the sheet.

Prediction file showing that increasing the temperature by +6 °C (+43 °F) in zone 3 and 4 theoretically would result in the lethality value (decimal reductions) exceeding the target of 3 needed to prove HACCP compliance.

The Datapaq WicketPaq system is a valuable profiling solution used in the monitoring of wicket ovens used in the manufacture of three piece metal cans. To enhance the analysis and reporting capability of this application, Datapaq has added a new thermal contour plot feature. The contour plot allows the user to see the thermal distribution over the working area of the wicket sheet. This allows identification of hot and cold spots and an understanding of the heat migration patterns across the sheet as it travels through the oven. For one major can manufacturer, this tool successfully confirmed that the top middle area of the sheet was insufficiently heated to cure lacquer correctly to specification.

Process optimization especially for new products or processes is often a lengthy and tedious process. Process parameter selection such as oven set-point temperature and line speed is often done on a trial and error basis. The parameters are often changed sequentially and the Datapaq system is run to determine the success or failure of process parameter combinations. To remove the need for guess-work in the process parameter selection, Datapaq has introduced a simple process optimization tool into Oven Insight™ Software. This tool will reduce the number of Datapaq runs needed to validate optimal process parameters, making the oven setup process far more efficient and cost-effective while reducing production start-up times. The optimization tool theoretically predicts the effect profile changes would have on the overall performance of the process.

The Process optimization tool in Food Insight works using the concept of the invaluable Lethality calculation (Fo/Pu) as a process performance indicator. The optimization tool allows the user to calculate the effect on the performance indicator for a profile graph with changes in either profile temperature or the actual process duration (eg. line speed). Without any need for repeat trials, the user could estimate, for example, what effect there would be if the product temperature were reduced by 5 °C

Automotive paint profile showing complete oven zone/mimic set-up including not only the target zone set-point temperatures but the reported "actual" temperature readings recorded when the profile was run.

(41 °F) in the hold zone of the oven? Would that temperature decrease still give a safe lethality value while improving the fuel efficiency and potentially, product yield (reduced weight loss)? Alternatively, could the line speed be increased by 10 % improving productivity while maintaining a safe product?

For most automotive paint operations, as part of oven profiling standard work, operators are required to report on the Datapaq profile report – not only the oven zone target temperature set-points, but the actual temperature set-points at the time the profile was run. This is currently done Freehand and added to the notes section of the profile. In the new Insight V7.3, such reporting is now enhanced, allowing the actual readings to be reported directly in the oven parameter table against the profile trace and target set-points.

Release Highlights

- OPC support – real time export of data in an industry standard format
- Food lethality calculation Fo enhancements (multiple simultaneous calculations)
- Food process optimization tool (lethality calculation)
- Oven process optimization tool (Datapaq value calculation)
- Oven Insight contour plot (3 piece can wicket oven profiling tool)
- Oven Insight – enhanced oven set-point reporting (target & actual)
- Furnace TUS software analysis and reporting enhancements

Summary of Enhancements

All full Insight products

- OPC support – real-time export of data in an industry standard format
- Prompt for oven, recipe and product on downloads
- Merge by time of day
- Help for logger communications failures

Insight Oven Professional

- Process optimization
- Contour plot
- Zone set temperatures (single set point and actual temperatures)

Insight Oven Basic

- Real-time alerts (rising or falling to a temperature)

Insight Reflow

- Time above peak minus X

Insight Food

- Process optimization
- Multiple lethality parameters
- D-value precision increase
- Customization

The Worldwide Leader in Temperature Profiling

Europe and Asia
DATAPAQ Limited
Lothbury House Cambridge Technopark
Newmarket Road, Cambridge
CB5 8PB, UK
Tel: +44 1223 652 400
Fax: +44 1223 652 401
E-mail: sales@datapaq.co.uk

North and South America
DATAPAQ Inc.
3 Corporate Dr.
Unit 1
Derry, NH 03038, USA
Tel: +1 603 537 2680
Fax: +1 603 537 2685
E-mail: sales@datapaq.com

A Fluke Company

www.datapaq.com

©2014 Datapaq (Insight7.30 flyer) 3/2014
Datapaq, the Datapaq logo are registered trademarks of Datapaq.
Specifications subject to change without notice.