

SURFACE WORLD

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the surface finishing industry

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PhoenixTM
Phoenix Temperature Measurement

...where experience & choice counts!

Thru-process Monitoring Solutions for Paint & Powder Coating Ovens

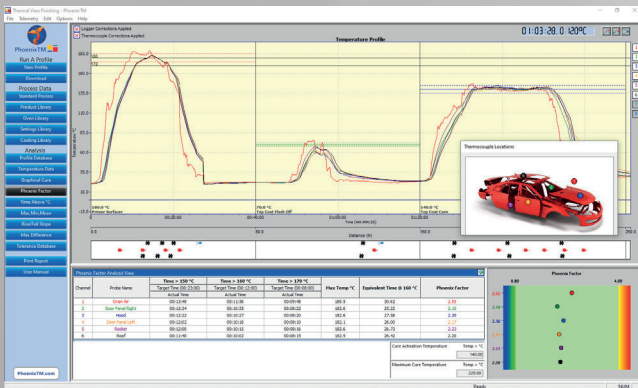
Temperature Profiling Systems



Comprehensive Range

- Data Logger and Thermal Barrier choice (6 to 20 Thermocouples)
- Extensive Thermocouple range
- Real Time RF Telemetry options
- ATEX approved options
- Full UK service and calibration support

Oven Profile and TUS software



Software Packages to Suit

- Thermal View or enhanced Thermal View Finishing software
- Match Analysis Tools to suit.
- CQI-12 Temperature Uniformity Survey solution options

Optic Video Profiling System



Innovative Video Capture Thru the operating oven

- Detect paint runs, chips and defects
- Spot transport problems
- Identify oven damage
- Locate dust and inclusion risk areas

Visit us for more information: www.phoenixtm.com

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Monitor, Control, Improve & Certify....Your Coating Process

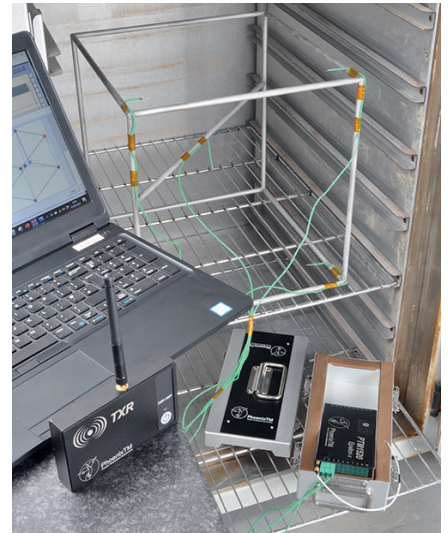
TURN UP THE HEAT ON CQI-12 COMPLIANCE

... the complete Phoenix™ Oven TUS solution

Thru-process temperature profiling is now well established in the coating market to monitor the cure temperature of the coated product as it travels through the cure oven. The information is critical to not only guarantee product quality but also make the process as efficient as possible. With the on-going energy crisis, it most importantly allows operational characteristics of the oven (zone set temperatures / line speeds) to be optimised with confidence and with no risk to the cure quality.

For many working in the automotive market an additional monitoring challenge comes with meeting the demands of the CQI-12 Coating System Assessment (CSA) standard. As part of this standard

there is a requirement to prove the temperature accuracy and uniformity over the working zone of the cure oven by performing a Temperature Uniformity Survey (TUS).





PhoenixTM

Phoenix Temperature Measurement

PhoenixTM can offer systems to allow TUS to be performed on both Batch Box and even conveyorised ovens. For batch oven processes the external standalone PTM4220 data logger can be used with trailing TUS thermocouples without need for thermal protection. Each thermocouple is fixed to the designated location on the TUS frame positioned in the oven cavity. Live data generated during the run can be viewed in real time in the survey software during the TUS run.

For conveyorised oven processes where trailing thermocouples cannot be used the TUS is performed using the thru-process monitoring system. The PTM1210 / PTM1510 Epsilon data logger protected by the thermal barrier is connected to the TUS frame (volumetric or plane method). The system travels through the oven in a continuous fashion with temperature data being sent from the data loggers optional onboard RF Telemetry transmitter. The RF signal travels via the RF antenna exiting the thermal barrier to the RF receiver

connected to the monitoring PC. Alternatively, the TUS data run can be simply downloaded from the data logger post run for full TUS analysis and reporting.

All data loggers supplied by PhoenixTM meet the strict accuracy requirements demanded by the CQI-12 Temperature Uniformity Survey. The onboard cold junction compensation technology ensures that the data logger accuracy is maintained at $\pm 0.3^\circ\text{C}$.

Even if the data logger nominal temperature changes during use, either on the shop floor or inside the thermal barrier, measurement accuracy is protected. This is not the case for all systems so check the manual for effect of changing data logger nominal temperature on the data logger accuracy.

To perform a Temperature Uniformity Survey (TUS) to comply with CQI-12, PhoenixTM have developed a software package (Thermal View Survey) specifically designed to allow efficient

surveying of the oven. At critical TUS temperature levels data logger recorded data can be analysed to check that at all points on the TUS frame (oven working zone) are within a specified tolerance (Target TUS temperature \pm Tolerance) and remain in tolerance for the period of the specified TUS test. Graphical tools and analysis tables allow easy clear data interpretation. Accuracy of data can be maximised through automatic application of both data logger and thermocouple correction factors. All analysis and reporting requirements of the CQI-12 are provided by the software to verify full compliance.

To understand, control, optimise & certify your coating operation why not PhoenixTM your finishing oven today!

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