



Thermal News June 2011

closing the loop on thermal solutions

Design and Manufacturing World Class Temperature Sensor Assemblies

Durex Industries started designing and manufacturing Thermocouples and Resistance Temperature Detectors (RTD's) temperature sensors in 1980. Over the next 31 years, sensor assemblies became one of our company's core competencies.

What is the definition of core competency for a temperature sensor company?

It is easy to say that a product, technology or service is a core competency, but what does this really mean for a temperature sensor making this claim?

For this issue of Durex Thermal News, we interviewed industry professionals to understand what engineers valued and prioritized when selecting Durex as their temperature sensor supplier.

Durex RTD and Thermocouple Sensor Assemblies

"Creative Engineered Designs" was most often noted as a reason for working with Durex. When being presented with a thermal, mechanical, material or other performance criteria, engineers valued Durex because we designed solutions that met not only the product specifications, but also met their prototype delivery and production cost objectives.

By design, Durex's business model is to be vertically integrated with in-house capabilities to not only design, but also to manufacture and validate unique assemblies without dependence on outside sources. The value of Durex's in house CNC machining, coating, forming, validation, and other manufacturing capabilities is flexibility in design options and the fastest prototype capability in our industry.

Durex engineers can assess an application's environment, parameters of measurement, and degrees of required control accuracy in a manner that is not found with most sensor companies.

This translates into a supplier who understands the customer's technology and business, and has excellent solutions available without long lead-times.



Durex Industries Commercial Foodservice Equipment Application:

A foodservice equipment OEM had a contract to supply floor mount fryers to a global restaurant chain. Since consistency of meals at all restaurant locations is critical, the restaurant chain had tight specifications for the cooking processes. Repeatable temperature sensor accuracy and location is absolutely critical for achieving food consistency in New York, Paris, Tokyo and all geographic locations.

Durex's engineering team worked closely with the OEM to design a RTD sensor assembly that would provide fast temperature response with precision accuracy. To assure that the sensors are consistent with the restaurant chain's defined parameters, Durex's quality validation tests included x-ray, coordinate measurement, and thermal response procedures. All design and manufacturing tests are documented under Durex's ISO 9001:2008 processes. Today, thousands of Durex sensors are working to help provide the signature meals offered by the restaurant chain.





**Durex Industries
Experienced Sensor
Manufacturing Team**

Lean Manufacturing Processes and Flexibility for small and large manufacturing work orders is the second reason for selecting Durex and will dovetail into the third reason: Price and Delivery.

Durex knows that to be the best it is necessary to invest in people, manufacturing processes and equipment. Being the best means achieving consistent results by delivering sensor assemblies that meet specification, on schedule and at a competitive price. Durex's long-time sensor product manager recently said, "Management is willing to invest in equipment and technology. I don't think I've ever been turned down for equipment that we need to enhance our capabilities."

In 2009, at the height of the recession, Durex's management team made a significant strategic decision for the long-term health of the company. While many competitors were cutting key personnel, process improvement and internal capabilities, Durex decided to invest in the robustness of our product lines and vertical integration capabilities. Durex reduced costs through lean activities and by developing processes to manufacture more of the sensor assembly components in house. Even during the recession, Durex was able to grow business by providing solutions that our customers value.

Price and Delivery is the attribute that engineers rated as their third priority. In reality and to be a sustainable supplier, competitive price and delivery are the result of Creative Engineered Designs and Lean Manufacturing Processes and Flexibility. Durex's manufacturing engineers participate in the product

design process and assure that the sensor assembly is designed for ease of manufacturing.

**Durex Industries
RTD Sensor Assemblies**

Which Temperature Sensor Element -RTD, Thermocouple, Thermistor, Semiconductor, or other is best for an application? This is a critical decision for equipment designers. For every type of sensor element, there are applications where it might be the best choice. For example, if the application required the highest degree of accuracy, an RTD would probably be the best element choice, or if the application, was for a very high temperature a Type R thermocouple might be the best choice. In all applications, Durex's engineering team works with our customer's engineers to understand their application requirements, so that we can not only help with the sensor element selection, but also design the sensor assembly for optimum performance and manufacturability.

Contact Durex Industries for all your heater, sensor and control requirements.

**For more information, visit our website!
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