



Thermal News November 2011

closing the loop on thermal solutions

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www.durexindustries.com

Durex is Working Harder than Ever to Earn Your Business and Your Trust

Durex continues to build our internal capabilities to better position us to help customers win, especially with the reduction in services they are experiencing by other thermal vendors. Durex is also expanding our product portfolio with the launch of Durex's advanced ceramic heater product line – the high performance alternative to traditional heating technologies. We are also proud to announce 3rd party certified hazardous location enclosures for our process heater line. Finally, we are expanding our cable heater production and clean room capabilities to support requirements of analytical instrument, medical, semiconductor, and other customers that have special cleanliness and packaging requirements.

Changes in the Heater, Sensor and Temperature Control Industry

Many Original Equipment Manufacturers (OEMs) are experiencing elimination of support services, longer delivery schedules and vanishing design support from their current heating, sensing and control suppliers. Some of the changes are having adverse effects on their customers' businesses. These OEMs are questioning their business relationships with current vendors. Durex can help!

New Advanced Ceramic Heaters

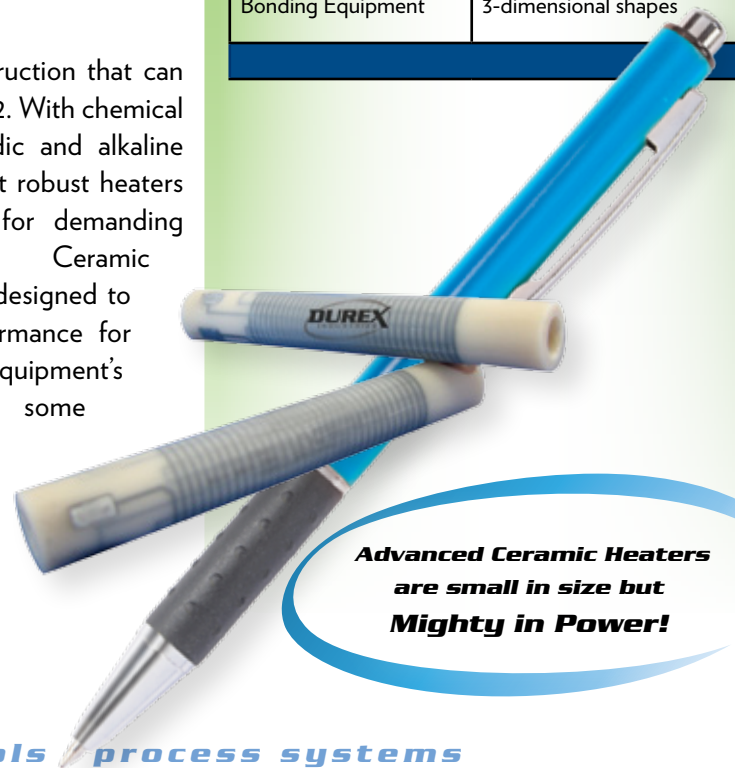
Challenging thermal applications requiring combinations of high temperature, watt density, ramp, speed chemical resistance and other attributes cannot usually be solved with traditional metal or polyimide heater technologies. For these challenging applications, Durex advanced ceramic heaters are an excellent solution.

Durex's ceramic heater technology is available in either Aluminum Nitride (AlN) or Alumina (Al₂O₃). Ceramic heaters can operate in atmospheric and vacuum environments up to 1652°F (900°C). With its excellent thermal efficiency, AlN heaters can be designed

with a multi-layer construction that can deliver up to 2000 W/in². With chemical resistance to most acidic and alkaline solutions, these compact robust heaters are an ideal solution for demanding thermal applications. Ceramic heaters can be custom designed to optimize thermal performance for the instrumentation or equipment's applications. Here are some applications (*chart above right*) where ceramic heaters may be a superior thermal solution.

Custom Designed Ceramic Heaters Applications

Thermal Application	Durex AlN Ceramic Heater Performance Attributes
Analytical Instrumentation – Gas Chromatographs and Mass Spectrometers	Chemical inertness, cylindrical capabilities, high temperature and fast ramp rates
Medical Device & Clinical Diagnostic Instrumentation	Fast temperature ramp rates, small size, and high electrical dielectric
Laser, Optics, Imaging and Sensing Instrumentation	Light weight, low heater profile, and fast temperature response
Solder Reflow and Semiconductor Die Bonding Equipment	High watt density, ultra-pure material, and 3-dimensional shapes



Advanced Ceramic Heaters are small in size but Mighty in Power!

Certified Electrical Enclosures Available on Durex Process Heaters

Electric heaters are often used in processing plants where potentially explosive atmospheres may be present. This requires the heaters to employ electrical enclosures designed to serve in those hazardous areas. Durex Industries has long offered electrical enclosures for these environments. However, third party certification of electrical enclosure designs is often required by customers.

Therefore, Durex submitted our electrical terminal enclosures for third party testing to assure safety and high integrity solutions to our clients.

Testing and certification has been completed. Durex electrical enclosures passed with flying colors. We now offer a full range of standard as well as third



party certified NEMA 4 (Type 4), NEMA 7 (Type 7) and NEMA 4/7 (Type 4/7) enclosures on our immersion and circulation heater product lines. CSA has awarded Durex certifications for the following hazardous location areas applicable in Canada (Canadian Electrical Code Part I, Section 18) and the United States (National Electric Code Articles 500 to 504):

Class 1, Div. 1, Gas Groups B, C & D
Hazardous gases normally present, necessitating explosion resistant enclosures.

Class 2, Div. 2, Gas Groups B, C & D
Hazardous gases abnormally present, necessitating increased protection enclosures or explosion resistant enclosures, depending on the application.

If you are interested in receiving more information on our certified enclosures or our product line in general, please contact Mark Shershen at extension 694.

Durex Expands Clean Room Capabilities

To better support Durex's growing business in the Mineral Insulated Cable product line as well as the semiconductor product line, Durex industries has recently expanded its clean room capabilities. This additional clean room area located next to the MI Cable fabrication area will have a Class 1000 rating. It was constructed to allow for easy expansion of the room size as the business grows. The additional 300 ft² (28m²) clean room space will not only serve our cable department, but also serve as overflow for our other departments as needed. Durex's existing semiconductor business clean room also carries a Class 1000 rating, as well as a Class 100 rating capability.



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

For more information, visit our website! www.durexindustries.com

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