



Cabot Nanogel(R) Aerogel Ushers in a New Era of Nanotechnology Insulation for the Oil and Gas Industry

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Four New Products Target Pipe-in-Pipe and LNG Applications On Display at Booth # 8904 at OTC.06, Houston, TX

BOSTON and HOUSTON, May 1 /PRNewswire-FirstCall/ -- Cabot Aerogel, a business unit of Cabot Corporation (NYSE: CBT), today announced its entry to the oil and gas insulation market with the launch of four new Nanogel(R) aerogel products that deliver superior insulation performance for oil and gas applications. The four new advanced nanoporous Nanogel aerogel products will be on display at the Offshore Technology Conference (OTC) in Houston, TX from May 1 to May 4, Booth # P8904, in the Pavilion section of the OTC.06 trade show.

(Logo: <http://www.newscom.com/cgi-bin/prnh/20000323/CABOTLOGO>)

The use of Cabot's Nanogel aerogel technology enables significant advancements in pipeline and LNG ship design due to the combination of Nanogel aerogel's ultra-low conductivity and its unique mechanical properties. Additionally, the wide temperature stability range of Nanogel makes it an ideal solution for both high temperature and cryogenic applications.

The four new products use Nanogel aerogel, Cabot's branded aerogel in different forms and are marketed under the names Expansion Pack(TM), Compression Pack(TM), Particle Pack(TM), and Thermal Wrap(TM). These patented and patent-pending products with conductivities ranging from 0.009 to 0.022 mW/m-K (0.005-0.013 BTU/hr-ft-F) enable significant advances for oil and gas operators. For example, with U-values in the range of 0.5 to 1.0 W/m²K for 8"x12" pipe-in-pipe configurations, operators have increased flexibility to install longer tieback lines and new options that can reduce costs associated with field development. Additionally, with an operating temperature range from -200 degrees C to 250 degrees C (-330 degrees F -480 degrees F), Nanogel systems can be used where many competing insulations cannot, such as in high- pressure, high-temperature pipelines and in LNG systems. In the LNG industry, Nanogel has been used as a key component in subsea LNG pipeline design and also to increase capacity and/or reduce boiloff in the design of LNG ships and storage vessels.

The Expansion Pack(TM) system is an efficient and effective way of packing Nanogel in tight annular spaces such as those in pipe-in-pipe systems. Unlike other high-efficiency insulation products on the market today, the Expansion Pack tightly packs the full annular space with Nanogel, providing high-performance insulation without air gaps. Moreover, this product creates a mechanical bond that transfers both axial and radial load between inner and outer pipes allowing for the reduction and potential for elimination of heat-bridging centralizers. This combination of superb thermal performance and mechanical strength gives engineers new options for improving pipeline design, particularly for systems with large temperature differences between inner and outer pipes.

The Compression Pack(TM) system offers operators the option to precisely "dial in" required U-values by varying the thickness of Nanogel in a given system using the same efficient and effective method of packing Nanogel particles as the Expansion Pack system. The Compression Pack also allows fully independent movement of inner and outer pipes making it an ideal choice for operators who want to avoid mechanical bonding in their system.

The Particle Pack(TM) system leverages Cabot's proprietary particle filling techniques to fill annular spaces of any size or dimension. Cabot has been using this technology to fill spaces as narrow as a few millimeters with Nanogel aerogel in the building and construction market. In particulate form Nanogel flows like water and with proper vibration techniques can be densely packed for long life, high performance use without settling or shifting without any residual air gaps. The Particle Pack system offers maximum flexibility to operators looking to insulate standard or irregular geometries with great efficiency. It is an excellent and economical choice for insulating pipelines systems, and LNG ships and vessels.

The Thermal Wrap(TM) is Cabot's Nanogel aerogel blanket. The Thermal Wrap is easy to handle, and is delivered in rolls that support rapid installation using existing pipe coating infrastructure. It comes in variable widths and is compressible and conformable yet strong and resilient.

"By developing multiple products for use in the oil and gas market we are able to take our technology and customize it to meet the specific needs of our customers. For example, one customer is looking for pipe insulation that can become an integral mechanical part of the pipeline structure while another is looking for an easy substitute for perlite, an existing but inferior particulate insulation product," says Ravijit Paintal, General Manager Cabot Aerogel.

Cabot is working with multiple industry partners, who are developing individual proprietary pipeline or other system based on Cabot's Nanogel technology. Several major oil and gas production companies are also considering Nanogel for high-pressure, high-temperature pipelines, cryogenic systems and long-distance subsea tiebacks.

What is Nanogel(R) aerogel?

Sometimes called "frozen smoke," aerogels are the lightest and best insulating solids in the world. Nanogel, Cabot's branded aerogel is a hydrophobic aerogel produced as particles each of which consists largely of air (approx. 95%) trapped in nano-sized pores that severely inhibit heat transfer through the material.

Cabot's grades of Nanogel particles are opacified to reduce heat transfer via radiation, opaque, or translucent and all particles have extremely high surface area (approx. 750 m²/g).

Although aerogels were first invented 75 years ago, Cabot was the first, and remains the only company to commercialize a manufacturing process that due to its patented production techniques enables the company to make aerogel under ambient conditions. This process bypasses the high-cost

traditional method of super-critical drying allowing Cabot to manufacture Nanogel in a safe and continuous manner.

"One of the benefits of Nanogel aerogel is Cabot's ability to continuously produce aerogel without supercritical drying. We believe this does and will continue to give us a cost advantage over other aerogel suppliers," says Nirmalya Maity, Director of R&D for Cabot Aerogel.

About Cabot Aerogel

Cabot Aerogel is a division of the Cabot Corporation solely focused on marketing, manufacturing and sales of Cabot's Nanogel aerogel. Cabot produces Nanogel in a state-of-the-art manufacturing facility located near Frankfurt, Germany, which began commercial production in 2003.

About Cabot Corporation

Cabot Corporation is a global specialty chemicals and materials company headquartered in Boston, Massachusetts, USA. Cabot's major products are carbon black, fumed silica, inkjet colorants, capacitor materials, aerogels, and cesium formate drilling fluids. The website address is: <http://www.cabot-corp.com>.

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