#### Volume II

### FLUOROTHER

# FLUOROTHERM POLMERS INC

FEP

**PVDF** 

ETFE

**CTFE** 

**ECTFE** 

### A Letter from Fluorotherm

PFA



#### **To Our Valued Customers:**

Fluorotherm started out as a specialty manufacturer of fluoropolymer products in 1992, under the aegis of Norton Performance Plastics, now St. Gobain Performance Polymers. That was 16 years ago!

With a strong R&D background in fluoropolymers, gained by our key people during their employment with DuPont; we have continued to progress toward a wider product range to serve a broad range of applications in diverse markets.

Now, not only have we moved to expand our operations here in the US and overseas, but are responding to customer demand more than ever. Our newest products include:

- Expanded tubing line to cover a broad range of sizes in PTFE, FEP, PFA, ETFE and PVDF
- Immersion Coil Heat Exchangers in high temperature usage PVDF frames and either FEP or PFA tubing
- Custom fabricated tube products with flared, flanged, and custom shapes

We hope that you will join us in helping Fluorotherm pave a successful path for the future. We are grateful to all of our customers for their continued support.





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### Fluorotherm's New Production Facility

In early 2008, Fluorotherm relocated to new, larger premises in order to accommodate increased product inventory and new production equipment. This relocation also provided us with a new climate controlled clean area to perform product fabrication and assemblies for high purity applications.

Fluorotherm embarked on a production capacity expansion in the US and overseas manufacturing facilities in PTFE, FEP, and PFA tubing. In addition, our tubing inventory was rationalized to deliver rapid turnaround times for our standard tubing products. We benefited from higher productivity by holding the line on unit labor costs. This has resulted in enhancing the competitiveness of our product offerings. Fluorotherm's new location is:



Front View of Fluorotherm's New Production Facility in Parsippany, New Jersey

333 New Road, Building #1

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### New Membership and Communication: The Society of the Plastics Industry and Fluorotherm's Wordpress Blog





Fluorotherm has successfully pioneered into the area of blogging! Not only will our news be provided on our blog, but you will have the opportunity to add comments and questions to be answered by Fluorotherm engineers. Fluorotherm's new weblog can be viewed at:

http://fluorothermfluoropolymers.wordpress.com/

### SPI

Fluorotherm was also accepted into the Society of the Plastics Industry, a premiere industry trade group. Fluorotherm is now a member with voting privileges under the Fluoropolymers Division of SPI. SPI's website can be accessed at:

### www.plasticsindustry.org

SPI's Fluoropolymers Division's website can be accessed at:

www.fluoropolymers.org

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## **New Products:** Tubing, Heat Exchangers, and Teflon Fabrications

We introduced several new corrosion resistant heat exchangers with PVDF and FEP, PFA conductive tubing. Improvement to PTFE frame heat exchangers designs led to longer service life and more cost effective solutions. Many of these solutions resulted in faster tank heating to higher temperatures particularly in the presence of aggressive chemicals (such as mineral acids). The broad industry base and wide choice of materials in our heat exchangers drew the attention of customers looking to replace their existing modes of heating and cooling.

Our fabricated products segment; most of which are based on FEP, PTFE or PFA tubing received a high level of customer interest. Innovative solutions to field problems resulted from our capability to provide custom tubing geometries with attachments or inserts provided to perform specific functions. Some of these fabrication techniques require bending, forming, shaping, flanging or flaring and sealing operations.

### **Heat Exchangers**

#### Immersion

Fluorotherm announces a new addition of PVDF frame Immersion Heat Exchanger Coils to our family of Immersion Coil products. This addition significantly broadens the performance range of our line of products, currently consisting of low temperature Polypropylene frame (to 150° F) and high temperature, premium PTFE frames. Of course, the standard tubing coils of the heat exchangers still consist of either FEP (to steam pressures of 2 bar / 30 psig) or PFA tubing (4 bar or 60 psig). Higher steam pressure tubing is also available with custom sized Fluoropolymer heat exchanger tubing.

#### Shell and Tube

Fluorotherm has successfully developed and installed a multiple Fluoropolymer Coil Shell and Tube Heat Exchanger with significant increases in the heat transfer surface area from 12 sq.ft (1.1 sq.mt) to 55 sq.ft (5.1 sq.mt). Tubing is available in FEP, PFA, High Purity PFA and PTFE materials. Popular shell side materials are PVC and CPVC, although Stainless steel is also available for special high temperature shell side fluid applications.

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### **FLUOROTHERM**™

#### (Continued)

#### Tubing

- Fluorotherm now offers APFO free Fluoropolymer tubing in FEP, PFA and in PTFE in the near future.
- Fluorothem introduced thermally conductive H2 fluoropolymer tubing in FEP, PFA for enhanced heat transfer in corrosive environments. This tubing is chemically inert, providing an excellent replacement for steel or copper tubes, non-stick and inhibits the deposition of particulates, which settle on metal tubing surfaces. This feature, in addition to being cost effective; makes it a material of choice over high alloys such as Hastelloy or Tantalum. H2 tubing demonstrates electrostatic dissipation properties and is also used as in solutions to discharge electrical buildup. The electrical surface resistivity of 10E-6 to 10E-8 ohm/sq is about half that of virgin polymers.

#### **Fabricated Products**

- Fluorotherm introduces corrosion resistant load bearing metal rods; with complete encapsulation in PTFE, FEP, PFA. These rods may be used to support work in a corrosive environment such as a plating or coating bath, as carrier to transport work in a chemically agressive environment and in numerous other uses.
- Specialty coils and fabricated products provided by Fluorotherm cover a wide range of uses; including, DI water spray; paint applications, aggressive fluid transfers from one location to another (such as tank transfers). Due to an infinite number of configurations and geometries and special requirements; these products are made to order based on customer specifications.

### TUBING & HEAT EXCHANGERS



Specialty Coils and Tubing



New Immersion Heat Exchanger with H2 Tubing

**TEFLON FABRICATIONS** 



New Teflon Coated, Load-Bearing Rods