Volume I July 2008

# FLUOROTHERM POLYMERS INC

#### "A UNIVERSE OF POSSIBILITIES"

## **FLUOROTHERM** ™

Fluorotherm manufactures Corrosion resistant and Ultrapure PTFE, TFE, FEP, PFA, MFA Immersion and Shell & Tube Heat Exchangers, tubing, and custom fabricated fluoropolymer products.

#### Letter From Fluorotherm

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, including tubing manufacturing, 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:

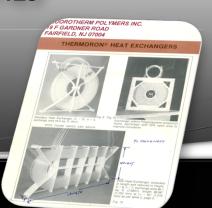
- Expanded tubing line to cover a broad range of sizes in PTFE, FEP, PFA, ETFE and PVDF
- Immersion Coil Heat Exchangers in high temperature usage PVDF frames and either FEP or PFA tubing
- Custom fabricated tube products with flared, flanged, and custom shapes

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.

Graciously,

Prabhat Shukla

Prabhat Shukla, President



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## **New Production Capabilities**

Fluorotherm's New Facility

Fluorotherm's customer relationships have seeded our growth and led us to invest in a larger production floor space in Parsippany, New Jersey.

Fluorotherm now has a new facility with trained personnel to support increased production with a wider capability than before. The new production capability will facilitate our quick turnaround at competitive cost to our customers.

Prabhat Shukla, the company's president, commented on the move as, "a step for Fluorotherm in the right direction, and a signal that our customer satisfaction and appreciation has been leading the company's growth and brand name."

Fluorotherm's new location is:

333 New Road

Parsippany, NJ 07054

USA



Fluorotherm's New Factory





Fluorotherm's New Increased Shell & Tube Heat Exchanger

# Increased Capacity Shell & Tube Exchanger

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.

Contact Fluorotherm to find out whether our products are suited to your application.

# New Immersion Coil Heat Exchangers

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.

PVDV frame heat exchangers, now in place for two years at selected customer sites, are superior in performance to Polypropylene frame in cases where the tank or bath temperatures exceed 150° F, and can operate up to temperatures of 210° F. PTFE frame temperatures are recommended for





Fluorotherm's New Immersion Coil Heat Exchangers

#### **Faster Lead Times**

Fluorotherm now offers faster lead times for non-stock
Fluoropolymer tubing and custom sized tubing. Higher stock levels of stocking for standard tubing sizes means faster deliveries to you. Changes installed recently will allow for rapid response on price and availability, accompanied by faster deliveries.

# **APFO Free Tubing**

Fluorotherm now offers APFO free Fluoropolymer tubing in FEP, PFA and in PTFE in the near future. You may be aware APFO has come under scrutiny recently; as a result some applications may have a specific need for this type of tubing.

Fluorotherm's APFO free tubing

# Fluorotherm FAQs

#### **General FAQs**

What is the difference between Teflon and FEP or PFA?

Teflon® is DuPont's trademark for its family of fluoropolymer resins which includes PTFE, FEP and PFA. The name is sometimes erroneously used to denote PTFE only. There are other brand names for these fluoropolymers (see <a href="mailto:our">our</a>
<a href="mailto:Properties page">Properties page</a>, for example). In addition to PTFE, FEP and PFA there are other fluoropolymers such as THV, PVDF, ETFE, ECTFE and CTFE.

#### Do these materials perform differently?

These materials, although members of the same family, have slightly different thermal and mechanical properties. PTFE and PFA have a slightly higher upper use temperature than FEP. FEP and PFA are clear (PTFE is translucent), and have better mechanical properties than PTFE. For a detailed listing of the properties of these resins, please click on the Technical Data bar on the home page.

#### **Tubing FAQs**

What tubing materials are available from Fluorotherm? At present, we produce PTFE, FEP, PFA, PVDF, and ETFE tubing.

What is the pressure rating on a specific size of tubing?

The pressure rating is a calculated value, using basic mechanical engineering formulas and the tensile or hoop strength. The pressure rating is dependent upon temperature of use. As with any tubing, the pressure rating falls with rising temperature. The smaller the tube size, the higher the pressure capability.

### Suggestions or Comments?

If you would like to comment on the Fluorotherm Newsletter and/or write a review about a Fluorotherm product please e-mail <a href="mailto:sales@fluorotherm.com">sales@fluorotherm.com</a>



### **Customer Reviews**

"Fluorotherm has exceeded our expectations with the wonderful, wonderful job you have done. The quality of your (PTFE tubing) product has pleasantly surprised everybody here. We look forward to doing business with Fluorotherm." - JH, Rhode Island.

"Your (PTFE/FEP tube) heat exchangers last very long. That's why we don't buy enough of them" -DS, Michigan.

"I have one less thing to worry about after Fluorotherm (FEP tubing) Heat Exchangers replaced our old tank(s) heating system. We are saving money. I will be happy to recommend your products" - GB, Pennsylvania.

"The (PFA tube coil) heat exchangers are working perfect. Your equipment and our workmanship made the replacement of (graphite block exchangers) a success. The (bath) temperature is the highest it has ever been." - RR, Pennsylvania

"I am very pleased with your product (PFA tubing heat exchanger) performance. We are going to replace the existing units with your coil heat exchangers as they come due" - RH, South Carolina