Blend of Fortron® PPS and PTFE Extends Life of Heat Exchangers, Pipes, Vessels, Pumps, Gas Turbine Components and Other Equipment

Florence, Ky., Sulzbach, Germany, Shanghai, PR China, August 27, 2001 – Bob Curran & Sons Introduces TS-2500, a New Anticorrosion and Antifouling Coating for Harsh Chemical Conditions to 500°F (260°C); Technology Developed in Collaboration with Brookhaven National Laboratory.

Fortron® polyphenylene sulfide (PPS) from Ticona, the technical polymers business of Celanese AG (NYSE: CZ), and a fluoropolymer are used in a new anticorrosion-antifouling coating system from Bob Curran & Sons Corporation, Houston, Texas. The coating, named TS-2500, protects metal surfaces in harsh-chemical environments at temperatures to 500°F (260°C). TS-2500 was designed to extend the life of heat exchangers and metal pipes, vessels, pumps and gas turbine components in the geothermal, chemical, petrochemical, power generation and other industries.

Coating for Multiple Metals
The TS-2500 coating system is formulated for ferrous, nonferrous, Inconel®, and Hastalloy® substrates. It is applied to mild carbon steel and aluminum alloys in two layers: a zinc phosphate primer and a Fortron PPS-polytetrafluoroethylene (PTFE) blend. The PTFE stratifies and migrates to the surface during baking of the coating.

Micron-size carbon fibers and alumina-rich hydraulic mineral fillers can be added to TS-
2500. The carbon fibers enhance thermal conductivity and improve toughness. The mineral fillers improve wear resistance and form a seal, and can repair and retard crack propagation in the coating. This self-healing mechanism occurs in many environments due to the growth of hydraulic mineral hypercrystals.

TS-2500, which is laid down in thicknesses of 4 to 8 mils, has excellent thermal performance (thermal conductivity > 1.0 kcal/hr.m.°C) and withstands environments from pH 1 to 12. Further, the coating allows scale to flake off easily, reduces susceptibility to moisture and corrosive ionic species, and has superior resistance to silica fouling and oxidation.

*Caption:* Blend of Fortron® PPS from Ticona and PTFE used in TS-2500 anticorrosion-antifouling TS-2500 coating from Bob Curran & Sons Corp.

(Click on the photo to download it.)

**Reduces Expenses**

“The coating reduces heat exchanger capital and maintenance costs in a wide range of equipment, such as sour water strippers and reboilers and in systems exposed to difficult fluids like hydrofluoric acid and geothermal brines,” says Ed Curran, president of Bob Curran & Sons Corp.

“We estimate that carbon-steel tubes coated with TS-2500 can reduce capital cost as much as 67 percent versus titanium or stainless steel and as much as 80 percent versus Inconel® and Hastalloy®. Maintenance costs and plant downtime are also reduced significantly because the tubes can be cleaned faster and replaced less often.”

**Brookhaven National Laboratory Collaboration**
Blend of Fortron® PPS and PTFE Extends Life of Heat Exchangers

This coating system was originally developed in collaboration with the U. S. Department of Energy’s (DOE) Brookhaven National Laboratory and National Renewable Energy Laboratories under the DOE Geothermal Materials Program. The technology was transferred to Bob Curran & Sons for further technological refinement and commercialization.

About Bob Curran & Sons Corp.

Bob Curran & Sons Corp. provides tube and pipe coatings to eliminate corrosion and fouling problems in heat exchangers, condensers, tube interiors, waterboxes and circulating water tunnels. The 20-year-old company is headquartered in Hollywood, Fla., and works with companies the world over.

For more information, visit www.bobcurran.com

About Ticona and Celanese

Ticona, the engineering polymers business of Celanese Corporation, produces and markets a broad range of high performance products, and posted net sales of $1,298 million in fiscal 2011. Ticona employs more than 1,500 individuals at production, compounding and research facilities in the USA, Germany, Brazil and China. For more information, please visit www.ticona.com or www.ticona.cn (Chinese language).

Celanese Corporation is a global technology leader in the production of specialty materials and chemical products that are used in most major industries and consumer applications. Our products, essential to everyday living, are manufactured in North America, Europe and Asia. Known for operational excellence, sustainability and premier safety performance, Celanese delivers value to customers around the globe with best-in-class technologies. Based in Dallas, Texas, the company employs approximately 7,600 employees worldwide and had 2011 net sales of $6.8 billion, with approximately 73% generated outside of North America. For more information about Celanese Corporation and its global product offerings, visit www.celanese.com or the company’s blog at www.celaneseblog.com.

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