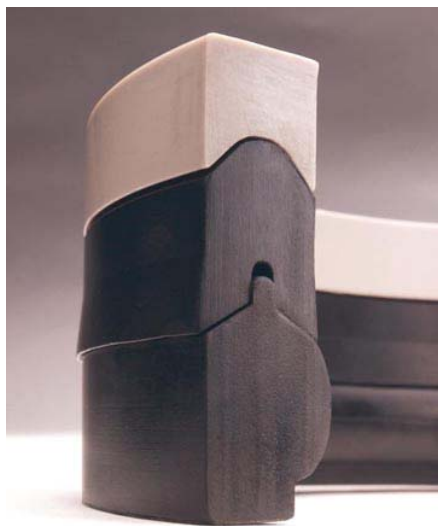




## Press information



### **VICTREX<sup>®</sup> PEEK<sup>™</sup> POLYMER RING HELPS EXTEND LIFE OF WELL SERVICE PLUNGER PACKING**

West Conshohocken, PA -- When CDI Seals of Humble, Texas wanted to increase the life of its well service plunger packing sets, it replaced one of the bronze rings in the assembly with VICTREX<sup>®</sup> PEEK<sup>™</sup> polymer, a high performance thermoplastic. According to Bill Heathcott, vice president of market development at CDI Seals, "By replacing the bronze female adapter ring with a PEEK<sup>™</sup> polymer ring, the life of the packing set has more than doubled. And, because of the polymer's superior chemical resistance, the packing can be used in all well service packing applications without the need to change materials for different environments."

Plunger packing is a multi-material stacking assembly of sealing rings made with PTFE, bronze, rubber, steel and PEEK<sup>™</sup> polymer. The packing is used in positive displacement pumps which run at pressures up to 15,000 psi. "At high pressures, the softer materials, such as PTFE and rubber, want to extrude or squeeze by the ring behind it due to the pressure," explains Heathcott. "So, the PEEK<sup>™</sup> polymer ring serves as a backup. Historically the ring has been made of brass or bronze but bronze doesn't have the elongation of PEEK<sup>™</sup> polymer. Not only does PEEK<sup>™</sup> polymer have the strength to replace bronze, it also has more elongation so that as wear occurs it



continues to move out under pressure and close that extrusion gap. In effect, the PEEK™ polymer ring acts as an anti-extrusion device in the packing."

In oil well applications, positive displacement pumps are used for fracturing and acidizing oil wells. This requires pumping a variety of fluids including water, acids and drilling fluids into the wells. "Pumping fluids into the well opens up the geological structure so that more oil will flow," explains Heathcott. "PEEK™ polymer works well in all the media, and can withstand the harshest chemical environments."

Another advantage of using PEEK™ polymer is that CDI Seals is able to machine the ring to a much closer fit than with the metal rings. "The gap between the ID of the ring and the outside of the plunger is where extrusion can occur," explains Heathcott. "The fact that we can now close that gap means we are able to prevent extrusion."

"While all the materials in the packing set work together, we believe that we could not have achieved the substantial increase in service life without PEEK™ polymer," says Heathcott. "In tests, the other assembly components did not work nearly as well without the PEEK™ polymer ring. PEEK™ polymer is critical in ensuring the packing set performs well."

Based on the success of the well service plunger packing, CDI Seals has created a family of similar plunger packing sets for use in a range of industrial and petrochemical applications. CDI Seals designs and manufactures high performance seals and sealing concepts. It currently supplies the oil field, industrial/hydraulic, chemical process, food process and semiconductor industries. For more information, contact CDI Seals at (281) 446-6662 or visit their website at [www.cdiseals.com](http://www.cdiseals.com).

VICTREX USA Inc., a division of Victrex plc, is the sole manufacturer and supplier of PEEK™ polymer worldwide. For more information on the properties and performance advantages of VICTREX® PEEK™ polymer, please call (800) VICTREX or visit the Victrex website at [www.victrex.com](http://www.victrex.com).

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#### **About Victrex**

Victrex plc is the leading manufacturer of high performance materials, including VICTREX® PEEK™ polymer, VICOTE® Coatings and APTIV™ film. These materials are used in a variety of markets and offer an exceptional combination of properties to help processors and end users reach new levels of cost savings, quality, and performance.

The company is headquartered in the UK. Invivio®, Victrex's biomaterials business, provides access to specialized products and services for medical device manufacturers. Victrex Japan, Inc. is a wholly-owned subsidiary of Victrex plc. For more information visit <http://www.victrex.com> or [www.victrex.mobi](http://www.victrex.mobi).

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