



## High-Performance Vectran Fiber Slings Lift Nuclear Power Turbines to Boost Energy Efficiency

FORT MILL, S.C., Nov. 6, 2008 – As nuclear power plants seek to boost energy efficiency, operators are increasingly using synthetic slings containing high-tech Vectran® fibers to lift heavy turbines for safety, productivity and performance benefits.

Super-strong [Vectran](#) fiber is regularly used in slings for these heavy lifting jobs to hoist nuclear turbines weighing up to 250 tons, or the equivalent of 150 pick-up trucks, for maintenance and replacement with more advanced power-generating units.

The fiber-based slings provide a number of benefits to operators over traditional wire rope slings that can weigh 90 percent more, including increased worker safety, cost savings and improved productivity.

### Synthetic Sling Pioneers

[Slingmax Rigging Solutions](#), a world-leading provider of advanced rigging products, pioneered synthetic slings for nuclear turbine lifts in the mid-1980s.

“Nuclear turbine lifts have to be done with surgical precision,” said Dennis St. Germain, CEO of SlingMax, manufacturer of Twin-Path® slings with K-Spec® cores. “Our slings enable power plant operators to do their jobs safer and with less down time.”

Shutting down a nuclear power plant for maintenance can cost millions of dollars because the companies have to buy power from alternative sources during the outage.

Savings of \$1 million per day are common when using Twin-Path® slings with K-Spec® cores over steel rigging slings because nuclear plants can get back in service quicker, St. Germain said.

Among the other benefits of synthetic slings are less exposure for workers to radioactive elements because of the quicker installation; easier storage and transportation; less heavy equipment required in the lift; and easier inspection for damage due to a fiber-optic system.

### Safer Work Places

Synthetic slings have changed the way employees at many power plants work by providing greater reliability, easier use and improved safety. Rigging crews using the slings are better protected against the possibility of job hazards such as being pinched between equipment or knocked over by a heavy wire sling, and a single worker can carry a sling on his own versus needing a crane to move it.

The performance of a sling also is critical to protect the power plant equipment that is not quickly replaceable if damaged. The abrasion-resistant covers around the slings help to protect against damage to the machinery.

Twin-Path® slings with K-Spec® cores were featured this month on the National Geographic series, [World's Toughest Fixes](#), in a segment where PPL workers successfully replaced a rotor at the Susquehanna Nuclear Power Plant in Pennsylvania that powers a million homes.

**Vectran Fiber at the Core**

Vectran's high strength, low elongation, abrasion resistance and essentially no creep are among the features that make it sought for tough lifting applications, according to Robert Knudsen, manager of sales and marketing for Kuraray America, Inc.'s Vectran division.

"Vectran fiber's unique properties makes it ideally suited for extreme lifting jobs like those in nuclear power plants," he said. "From helping generate more efficient nuclear power to being used to tether floating wind turbines and in outer space applications, Vectran meets the performance requirements for the most challenging applications."

**About Kuraray America, Inc.'s Vectran Division**

Based in Fort Mill, S.C., the Vectran division of Kuraray America, Inc. produces Vectran® fiber, the world's only multifilament polyester-polyarylate yarn melt spun from liquid crystal polymer (LCP). Vectran fiber is used in a wide range of applications where strength, durability and dimensional stability are critical to performance and safety. For more information, please visit [www.vectranfiber.com](http://www.vectranfiber.com).

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