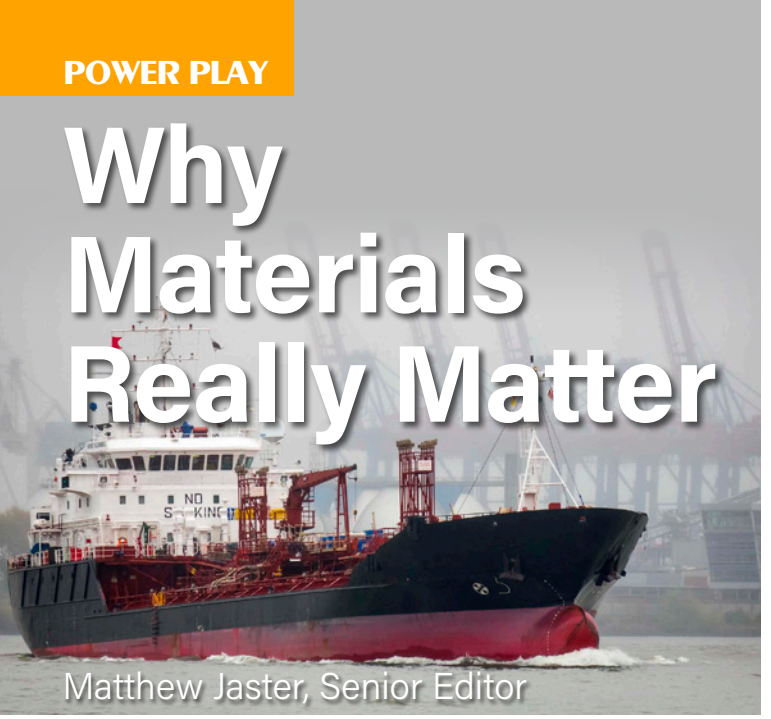
Why Materials Really Matter



Matthew Jaster, Senior Editor

Material plays a crucial role in manufacturing. Vesconite Bearings is a perfect example of this as the company provides bearings and bushings for a versatile application range where the components must survive in the most extreme environments.

The company's flagship bearing material—Hilube—is designed for difficult operating environments where regular maintenance is impractical. Hitemp 160 has also received key industry certifications that attest to its safety and compliance in sensitive applications, presenting a robust alternative to traditional bearing materials. Some recent examples:

Marine Application

Vesconite Bearings has supplied one of its largest stern tube bushings to date for installation on a Singapore-flagged oil and chemical tanker. The order adds to a legacy of over one thousand stern tube and rudder bearings supplied by Vesconite Bearings for Southeast Asian cargo vessels over the past 28 years.

The bearings, manufactured from Vesconite Hilube, a long-life, no-swell bearing material, were supplied as stock material and machined to final dimensions at a shipyard in Shanghai, China, when the 149-metre-long vessel entered dry dock in March 2025.

"This delivery continues our longstanding commitment to the Southeast Asian marine sector, where Vesconite Bearings has been supplying bushings and bearings for tankers, container vessels, and bulk carriers for over 36 years," says Wian Venter, managing director of Vesconite Bearings SEA, a newly created regional branch of Vesconite Bearings.

Hydroelectric Application

Vesconite Bearings installed its Vesconite Hilube hydroelectric components at the Lake Creek Hydroelectric Plant, which was officially commissioned in Troy, MT.

According to Canyon Hydro, which performed the plant's retrofit for owner and operator Northern Lights, the plant's startup was smooth, and everything worked well. The project marks an important collaboration for Vesconite Bearings, as the installation involved a range of advanced, no-swell, self-lubricating bearings designed for hydroelectric applications.

Lake Creek Dam is small relative to other hydroelectric dams in the region, but it remains important since it provides about 10 percent of Northern Lights' power. The Vesconite Hilube high-performance parts are integral to the plant's operation and efficiency, helping to ensure smooth and reliable generation of power. The grease-free Vesconite Hilube components provide an environmentally friendly solution that ensures there are no oil or grease spills in this run-of-river application.

"Our self-lubricating, no-swell Vesconite Hilube components are designed to enhance the longevity and reliability of equipment, and the Lake Creek installation demonstrates their effectiveness in real-world applications," said Vesconite Bearings Application Engineer Louis Gouws.

Food and Beverage Application

Hitemp 160 line shaft bearings have demonstrated reliability in a high-temperature vegetable oil pump application.

This is according to a European pump manufacturer, which used these bearings in centrifugal vertical pumps that transport vegetable oil at 110°C. These pumps, installed in food production facilities in Belgium and the Netherlands, are critical to the manufacturing process of frying potato chips.

The client tested the pump for over a year and reported no complaints, further validating the material's durability and reliability in real-world conditions. The long-term successful operation of the bearings in this demanding environment reinforces their suitability for applications requiring high performance under extreme conditions.

"Our customers' real-world experiences continue to demonstrate the exceptional resilience of Hitemp 160 in high-temperature environments," says Vesconite Bearings application engineer Tristen Wintershoven. "Its ability to maintain its structural integrity at high temperatures makes it an excellent choice for challenging industrial applications."

Beyond its high-temperature performance, Hitemp 160 has also received key industry certifications that attest to its safety and compliance in sensitive applications. The Water Regulations Advisory Scheme (WRAS) has approved it for use in drinking water systems up to 65°C. Additionally, the French National Metrology and Testing Laboratory (LNE) has certified the material for food contact applications.

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