

Sealless Side Channel Pump Ensures Zero Emissions When Handling Tightly Regulated Refrigerants

Challenge

Processing fluoro-based refrigerants requires pump technology that eliminates emissions of gases that deplete the ozone layer of the Earth's atmosphere. To comply with stringent global regulations, Koura sought an expert partner with a proven record of handling liquefied gases and liquids at or close to their vapor pressure.

Solution

Flowserve provided Koura with a SIHI® CEHB sealless magnetic drive side channel pump, which reliably and efficiently handles liquids with as much as 50% entrained vapor. Superior leak protection and zero emissions result from the sealless magnetic coupling design, ensuring compliance with environmental standards.

Superior vapor handling and environmental compliance

Koura has developed and formulated various new refrigerant products that meet current regulations. It markets its R134A products and has maintained its position as an industry leader in this highly specialized market segment. Koura prides itself on being a company that promotes products that enhance peoples' everyday lives. It needed a partner with a similar corporate positioning to assist in its manufacturing process.

Koura chose the SIHI CEHB sealless magnetic coupling side channel pump from Flowserve. Thanks to its gas-handling and self-priming capabilities, as well as the low NPSH required, side channel pump technology presents the best solution for handling refrigerants and avoiding emissions of fluoridated gases into the atmosphere. It also can be fitted with a large range of accessories to monitor the pump and increase its lifecycle, including vibration monitoring for preventive maintenance (see sidebar), temperature control of the magnetic coupling, and detection of liquid to prevent dry running. All are standard options that afford customers the confidence and ability to be sure they have a robust, safe and environmentally sound process.



CEHB sealless magnetically coupled side channel pump installed in Koura's filling plant. Pump is equipped with level controller and a Detect sensor for vibration monitoring.



For more information about the SIHI magnetic coupling side channel pump, please go to:

<https://www.flowserve.com/en/products/products-catalog/pumps/side-channel>

About Koura

Koura is a worldwide leader in the development, manufacture and supply of fluoro-based products that play a fundamental role in enhancing everyday lives. Koura products are used in applications ranging from construction and air conditioning to keeping food fresh and in the treatment of respiratory conditions. Koura is the largest producer of fluorspar in the world, accounting for more than 20% of the global supply, as well as approximately 20% of the global hydrofluoric acid supply.

Scalable IoT monitoring and control

The CEHB pump for Koura was equipped with a Detect sensor to collect full-spectrum vibration data every 30 seconds. Part of the RedRaven platform from Flowserve, the Detect sensor is a cost-effective and easy-to-install vibration monitoring solution specifically for rotating equipment.

All SIHI magnetic coupling side channel pumps are RedRaven ready. RedRaven is the internet of things (IoT) solution from Flowserve that enables remote monitoring and predictive analytics for flow motion equipment and systems. RedRaven gives you the scalable abilities to monitor and predict equipment failures, take preventive actions, and avoid unnecessary disruptions.

For more information on RedRaven, contact your Flowserve representative or visit www.flowserve.com/en/innovation/iot.

Proven flow control expertise

Through projects like this, Flowserve demonstrates its leadership in critical energy transition initiatives. We leverage our 225 years of flow control experience and a comprehensive portfolio of product and service solutions so our customers can diversify their energy mix, decarbonize their operations, and digitize their plant processes. As a partner, Flowserve enables companies to enhance operational efficiency and supports their energy transition goals.

Read Flowserve's approach to [energy transition](#).



Flowserve Corporation
5215 North O'Connor Blvd.
Suite 700
Irving, Texas 75039-5421 USA
Telephone: +1-937-890-5839

flowserve.com

PUSS000283-00 (EN/A4) July 2022

Flowserve Corporation has established industry leadership in the design and manufacture of its products. When properly selected, this Flowserve product is designed to perform its intended function safely during its useful life. However, the purchaser or user of Flowserve products should be aware that Flowserve products might be used in numerous applications under a wide variety of industrial service conditions. Although Flowserve can provide general guidelines, it cannot provide specific data and warnings for all possible applications. The purchaser/user must therefore assume the ultimate responsibility for the proper sizing and selection, installation, operation, and maintenance of Flowserve products. The purchaser/user should read and understand the Installation Instructions included with the product, and train its employees and contractors in the safe use of Flowserve products in connection with the specific application.

While the information and specifications contained in this literature are believed to be accurate, they are supplied for informative purposes only and should not be considered certified or as a guarantee of satisfactory results by reliance thereon. Nothing contained herein is to be construed as a warranty or guarantee, express or implied, regarding any matter with respect to this product. Because Flowserve is continually improving and upgrading its product design, the specifications, dimensions and information contained herein are subject to change without notice. Should any question arise concerning these provisions, the purchaser/user should contact Flowserve Corporation at any one of its worldwide operations or offices.

©2022 Flowserve Corporation. All rights reserved. This document contains registered and unregistered trademarks of Flowserve Corporation. Other company, product, or service names may be trademarks or service marks of their respective companies.