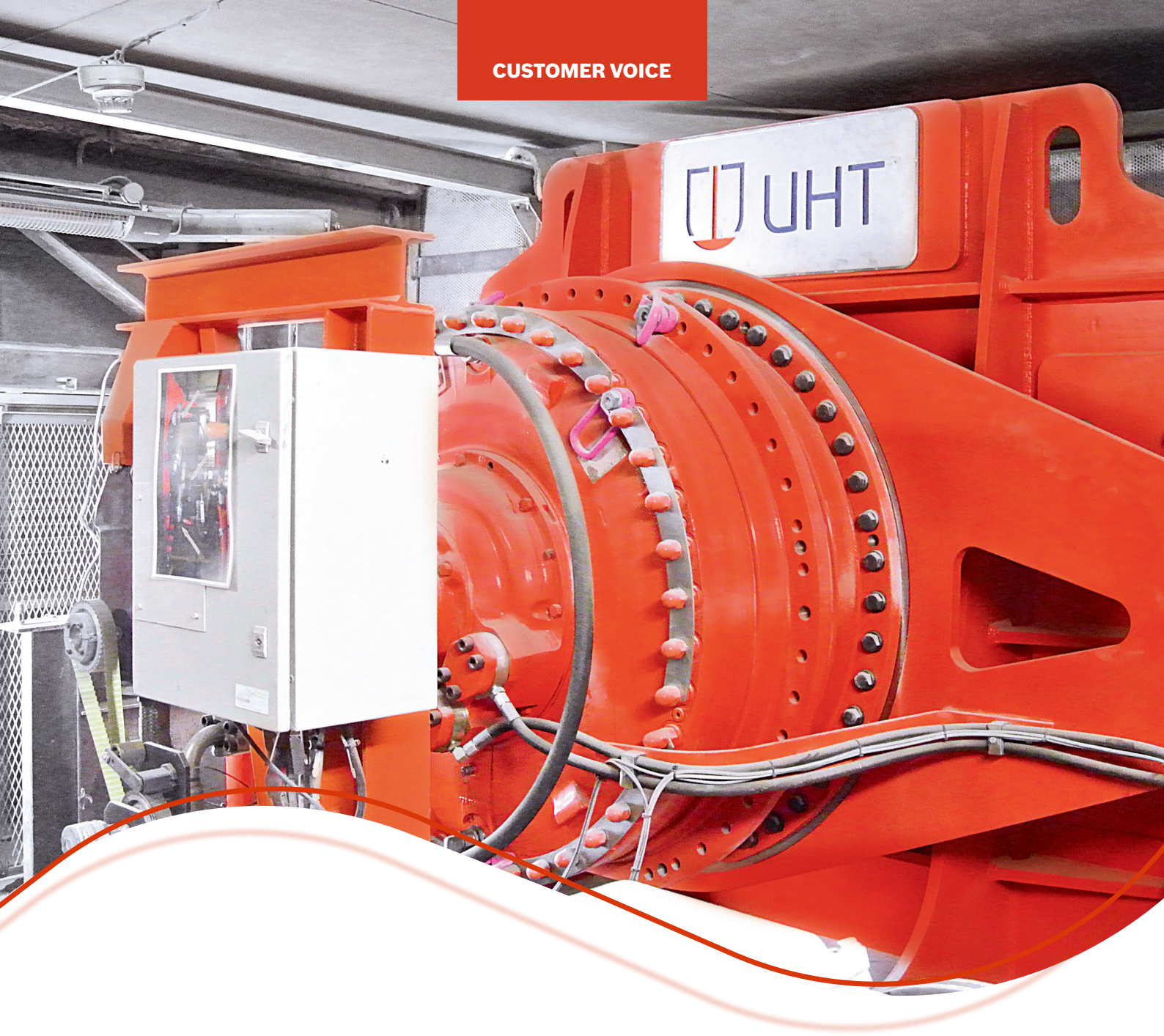
CUSTOMER VOICE



UHT, Uvån Hagfors Teknologi AB

A natural choice for demanding metal processing

HÄGGLUNDS

Hägglunds provide the drive for UHT's converter refining technology

Hägglunds drive with disc brake on the converter.

Swedish innovator UHT (Uvån Hagfors Teknologi AB) is a global supplier of metallurgical processes for steel, ferroalloys and stainless steel manufacturing. Much of its business lies in converter refining, where the company's equipment and process control take advantage of Hägglunds direct drive systems from Bosch Rexroth.

Swedish innovation in metals technology is a proud tradition continued at UHT. UHT supplies not only equipment, but also groundbreaking know-how and sophisticated process control systems for metal granulation and converter refining.

Converter refining involves blowing oxygen and inert gases through molten metal, which induces chemical reactions that remove carbon and impurities. The process is used both in ferroalloy and stainless steel production It occurs in a specialized converter vessel, which is rotated during charging, sampling procedures and tapping.

UHT sells two different converter refining processes: AOD using argon and a proprietary CLU®, which replaces much of the costly argon with steam. No matter which is used, UHT's converters are supplied with Hägglunds direct drive systems from Bosch Rexroth.

DOING AWAY WITH VIBRATION

"We discovered Hägglunds drives in the late 1990s, and after developing the concept for the specific requirements of converter refining operations we soon decided to make them an integral part of our deliveries," says Joakim Lundström, project manager at UHT. Up to then, the company had only specified drives, which had always been of the electromechanical type.

"When you blow gas into molten materials, it creates a lot of vibration and very high torque," Lundström explains. "That vibration put a lot of stress on the electromechanical drives, due to the gaps between the large gear teeth. In a hydraulic system you don't have teeth or gaps, and the oil within the system acts as a damper to minimize the vibrations."

LESS WEAR AND MAINTENANCE

Lundström points out the direct correlation between vibration stress and drive system maintenance. "Because the converter is turned to the same positions during refining, you get wear in specific areas of the gearwheel," he says. "It creates a big, difficult maintenance job where you have to remove the gears and reposition them to even it out. That job is eliminated with a hydraulic system."

"Bosch Rexroth has for a long time been our natural choice when it comes to hydraulic systems"

Likewise, a hydraulic drive prevents wear on the converter itself. "Because a Hägglunds drive absorbs the vibrations, it reduces strain on both the converter and the concrete foundation that supports it," says Lundström.

PERFORMANCE SECURED

As for performance, Lundström says that Hägglunds drives give UHT converters a competitive edge. "The drives provide full torque from zero,

“With a Hägglunds drive, the converter always turns to the right position and it’s very, very exact”

which is very important,” he says. “It means our converters can tilt more quickly and accurately than the competition’s, because they have full power from the very first second. That’s a clear advantage for customers who want to shorten their process times and minimize metal carry over during refining.”

Moreover, the drives can provide power at all times. For emergency power during an electrical failure, a diesel motor can be added to run the hydraulic pumps. “The emergency power option prevents a standstill, which would cause the material in the converter to solidify quickly,” Lundström says. “Even if the power fails, you can still rotate and tilt the converter.”

PERFECT RESPONSE TO ADVANCED CONTROL

In addition, the hydraulic drive technology brings out the best in UHT’s main selling point: its steel management system.

“UTCAS, our steel management system, is the real star of our offering, for customers who want to upgrade or enhance their processes” says Lundström. “It makes all the calculations, stays a step ahead and controls exactly when to change gas mix and add material. The system is the optimal choice for the production of stainless steel and ferroalloys.”

“When UTCAS is combined with excellent equipment, it really shortens the customer’s process time – and that’s where hydraulic drive systems come in,” he continues. “Hägglunds motors run smoothly and evenly, and they react directly to whatever commands they’re given. With a Hägglunds drive, the converter always turns to the right position and it’s very, very exact. Conventional drives can’t offer the same accuracy.”

ONLY ADVANTAGES WITH BOSCH REXROTH

“Bosch Rexroth has for a long time been our natural choice when it comes to hydraulic systems”, Lundström continues.

“As for Hägglunds drives specifically, we started working with them before they became part of Bosch Rexroth,” he notes. “We had a close relationship with the Hägglunds people in Mellansel, Sweden, and the great thing is that we still have that relationship. No matter how big Bosch Rexroth is, they always support us, they’re easy to get in contact with and they’re very, very flexible.”

Lundström concludes, “Hägglunds as a part of Bosch Rexroth has only had advantages for UHT.” ●