

CUSTOMER VOICE



Lindemann Germany GmbH

# Häggglunds drives boost efficiency and safety for Lindemann's pre-shredders

HÄGGLUNDS 

## Where brute forces rule safely

**Lindemann relies on low-maintenance Hägglunds direct drives from Bosch Rexroth for its EtaRip pre-shredder, thus increasing efficiency and safety at scrap yards.**

Scraping vehicles and metal waste involves extreme forces and this poses risks: Some objects can damage the systems through deflagration or cause increased noise pollution. So-called pre-shredders minimize these risks by breaking up the material beforehand and thus enabling optimum use of the downstream hammer mill.

Lindemann Germany GmbH, a manufacturer of high-quality systems and machines for the scrap metal processing industry, has come up with an ideal solution: The two rotors inside the LINDEMANN EtaRip tear the material apart slowly instead of crushing it at high speed. The translational movements of the axes are performed by up to four Hägglunds rotary motors which stand out from the dark blue of the machine in their original red color. Lindemann thus visually emphasizes the high power and durability of the new high-performance core.

### **ROBUST, LOW-MAINTENANCE HYDRO MOTORS**

Bosch Rexroth and Lindemann have worked together for many years. In addition to Hägglunds radial piston units, the mechanical

engineering company founded in 1913 with headquarters in Düsseldorf and 20 international sites also uses hydraulic pumps from Bosch Rexroth, for example in its own power units or to drive scrap shears and scrap presses. “Bosch Rexroth helps to ensure that our machines are robust and reliable and require little maintenance,” said Krischan Wolters, Head of Product Management and Product Development at Lindemann. However, the global service that Bosch Rexroth offers is equally important. The fact that Lindemann is equipping the latest generation of EtaRip pre-shredders with Hägglunds radial piston units is a conscious decision in favor of a low-wear direct drive without gears.

### **DIRECT DRIVES – HIGH TORQUE AND LOW WEAR**

With the Hägglunds Quantum QMX 840 motors as the new main drive, the LINDEMANN EtaRip 210 and EtaRip 250 have a power output of 405 and 632 kW respectively. With this high performance level, Lindemann ensures a stable load cycle and high machine availability. The two directly driven shredding rotors run at different

speeds of up to 16 rpm. This way, the material fed in is separated relatively gently and with a remarkable throughput of 110 t/h or more.

### **RE-ASSESSED DECISION IN FAVOR OF HÄGGLUNDS**

In an effort to continuously improve customers’ recycling processes, Lindemann regularly puts its drive concepts to the test. This was the case with the new LINDEMANN EtaRip too: “With the pre-shredder, we wanted to develop a reliable machine concept with high performance including power reserves, so we evaluated various drive concepts,” said Wolters. “In the end, the overall costs together with the minimal maintenance requirements clearly spoke in favor of the Hägglunds direct drive. Over decades, we’ve become known for building particularly low-maintenance, durable machines. Technologically, the robust, low-maintenance motors contribute to this reputation.”

Frank Hartmann, the person responsible for the strategic purchasing of hydraulic components at Lindemann, agrees and acknowledges not only Bosch Rexroth’s high product quality but also its great professionalism. “The high quality and durability of the hydro motors, combined with the company’s consulting expertise, delivery reliability and short response times in the event of technical and commercial questions, form a coherent overall package.”

### **MINIMAL OPERATING AND MAINTENANCE COSTS**

The specific advantages of the hydro motors include their resistance to impact loads and their extremely high breakaway torque. An automatic reversing function can also be easily achieved with the hydraulic direct drive. Load-free start-up without current peaks helps to ensure low operating costs. “Many recycling

Durable, low-maintenance machinery for scrapyards: Apart from oil checks, the low-wear Hägglunds direct drive requires no maintenance.





For 110 years, Lindemann has been designing, developing and producing highly robust machines and systems as well as Rexroth original spare parts for the scrap and metal processing industry. With 20 locations worldwide, the company covers the entire metal recycling value chain and thus meets the requirements of the EU's "Fit for 55" climate protection package.

applications benefit from the ability to precisely regulate and automatically adjust the torque via the rotor speed," explained Silvester Nowakowski, who is helping to oversee the project at Bosch Rexroth. "For example, the force applied can be adjusted according to the particular material."

The fact that the solution does not require a frequency converter for infinitely variable control of the rotor speed also reduces costs. Without a gearbox and clutch, there are no losses due to friction, play or wear, which is why the drive solution requires no maintenance apart from oil checks.

#### **QUIET, COMPACT, AND RELIABLE**

The compact and lightweight radial piston motors are easy to install and take up little space. They are quiet and reliable. According to Wolters, customer feedback too has been positive. "The combination of technology, engineering and global Rexroth service meets our high standards in terms of quality, performance and throughput. The new EtaRip pre-shredder with Hägglunds direct drive is one of the lowest-maintenance machines in the Lindemann portfolio and has been very well received by the market." ●