

Media Release

Industrial shredder costs significantly reduced with less wear and energy usage

An Italian industrial automation control systems supplier has significantly cut energy costs in the use of an industrial shredder by introducing variable frequency drive (VFD) technology into the process.

High electrical absorption was being created on start-up by an existing Star/Delta starter. This, combined with a lack of motor speed control, were creating high energy costs and wear on the blades of the shredder.

Gas Automazioni s.r.l. (GAS s.r.l.) and Omer Ecology s.r.l., Italian leader OEM in shredders manufacturing, who are now working together in partnership with the new company Alpen Engineering s.r.l., decided to change the existing main line fed Star/Delta starter with Inverterk Drives high-performance [Optidrive P2](#) VFD.

“The motor control was a particular issue as this meant the speed of the cutting blades couldn’t be adjusted to match the type of material being shredded. This resulted in wear and damage to the blades. As a result, they needed to be regularly repaired or replaced,” said Stiven Gheller of GAS s.r.l. “This was impacting on the overall efficiency of the plant.”

GAS s.r.l worked with Inverterk Drives Italia and introduced an Optidrive P2, size 8, IP20 drive as part of the motor control method. The P2 is designed for demanding and high-performance applications, such as industrial shredders that require high torque at start-up.

The P2 is capable of up to 200% torque from zero speed which provides accurate speed control under all load conditions. The drive used was a three-phase, 250kW, 350HP, 450Amps VFD to control a 160kW, 300Amps motor.

“Straight away we were able to accurately control the speed of the motor, resulting in reduced energy use. We shredded a range of materials and there was immediately much less wear or damage,” added Manuel Meneghelli, Area Manager at Inverterk Drives Italia.

“Just as importantly, the previous high absorption resulting from Star/Delta starter was reduced, cutting energy costs for the plant.”

Enrico Rebuffi, Sales Director of Inverterk Drives Italia, said the Optidrive P2 was an obvious choice for the application. “The P2 is very easy to use, making its integration into existing systems quite straightforward. With the demands of the shredder, it was also the most suited Optidrive for the application, and the results have clearly spoken for themselves.”



The Optidrive P2 is available in IP20, IP55 and IP66 / NEMA 4X enclosures and single and three-phase input of between 200v to 600v, 0.75kW to 250kW and 1HP to 350HP. It supports all motor types, including IM, PM, BLDC and SynRM.

Its built-in EMC filter and integral brake transistor also saves cost and time for installation.

More details can be found at www.inverterdrives.com.

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For more media information, contact:

Owain Betts, PR, Media and Communications

t: +44 (0)1938 558 253

m: +44 (0)7787 437 052

e: Owain.Betts@inverter.co.uk

w: www.inverterdrives.com

Notes to the Editor

Inverter Drives

Inverter Drives Ltd is dedicated to the design and manufacturing of electronic variable frequency drives for controlling electric motors. Established in 1998 it has grown year-on-year and is now one of the world's leading innovators in VFD technology.

In November 2019 it was acquired by Sumitomo Heavy Industries Ltd (SHI), a leading global manufacturer and distributor of power transmission and control equipment. Inverter's UK headquarters, located at Welshpool, Powys, UK, houses specialist facilities for research and development, manufacturing and global marketing.

All operations, including research and development, are accredited to the exacting customer focused ISO 9001 quality standard whilst its Environmental Management System is accredited to the ISO 14001 quality standard.

In 2019 a new 5,500 sq metre global manufacturing and distribution facility was opened at the headquarters, allowing production of up to 400,000 VFDs a year. Inverter's products are sold globally by a network of specialist distributors in over 80 different countries.

Inverter Drives unique and innovative Optidrive range is designed for ease of use and meets with recognised international design standards for CE (Europe), UL (USA) and CTick (Australia). More details can be found by visiting www.inverterdrives.com.