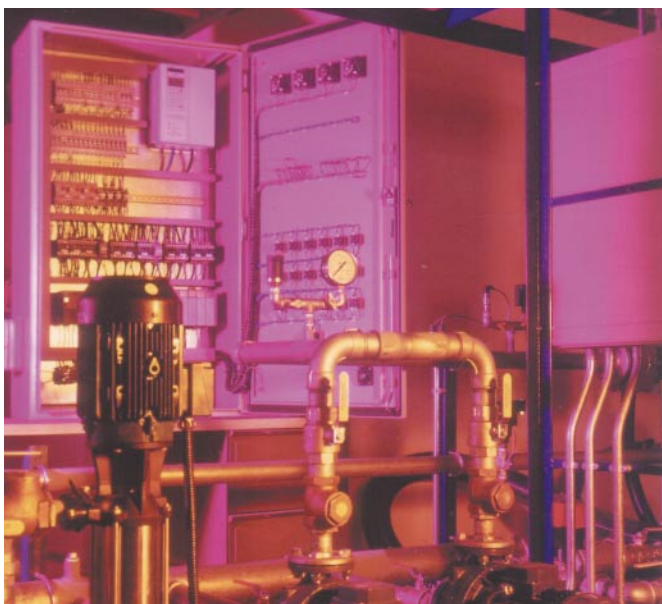


Industry: Recycling /// Metal Processing

Products Used: Drives

New system offers improved dust control

A new dust suppression system using a Mitsubishi Electric Freqrol inverter has been used in the Metal recycling industry. A problem faced is the danger of explosion as cars may be fed into the shredder with petrol still in the tank. The new drive based system injects water into the shredder mill so controlling the dust and by creating steam, reduces the risk of explosion.



On the new system designed and built by recycling equipment specialist K A Wing, a Mitsubishi Freqrol A140E 7.5kW inverter drives 2 pumps which deliver water into the shredder via a unique injection system. The amount of water injected is precisely matched to the activity of the shredder's 3.7MW drive. K A Wing specified the Freqrol inverter with PI control as an internal option, so that the inverter automatically maintains water pressure by varying the pumping effort to match demand.

Jeremy Watson of K A Wing chose the Mitsubishi Inverters for their ease of use and the on site service offered by Mitsubishi Electric distributor Pneumatic Lines Ltd. "We got a lot of help with the set up of the original system both from Pneumatic Lines and from Mitsubishi themselves. The parameter unit option makes the Inverter very easy to set up, and now by using Mitsubishi's parameter copier we can set up a drive in around 3 minutes."

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The parameter unit option makes the Inverter very easy to set up...I can set up a drive in around 3 minutes

Jeremy Watson
K A King

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The K A Wing system is designed as an economical solution to dust problems in all types of recycling. The Mitsubishi Freqrol inverter has a self learning Automatic Energy Optimising System (EOS) which continuously tunes output to match the connected load and so reduces the amount of power consumed by the motor to the minimum needed. Mayer Parry Recycling Ltd who use the K A Wing system on their metal shredder report considerable energy savings over their previous system with a 95% improvement in dust control. Explosions have also been reduced from 2 or 3 a week to just 2 or 3 a month.

Application story first released March 1998 by Mitsubishi Electric UK