

Reducing Explosions and Increasing Efficiency

Solutions
instead of
machines



The Customer

Lord & Midgley, part of Morley Waste Traders, is one of the UK's leading metal recycling companies. Their core business is the recycling of scrap metal from a range of sources such as end-of-life vehicles (ELVs) and consumer products, industry, construction and demolition. With 10 sites in the North of England they operate a 3,000-hp shredder, shears, and balers, generating sales of recycled commodities of around 500,000 tons per year.

PROJECT FACTS

Customer: Lord & Midgley is one of the UK's leading metal recycling companies.

Location: UK

Metso Equipment: The customer purchased a Metso Eta[®]Rip 250 Pre-Shredder

Challenge: To Provide L & M with a machine to process baled material at an average throughput of 80 tph and produce uniform feed material for the shredder.

Project Background

Scrap merchants are being asked by local authorities to wherever possible reduce the potential of explosions. Lord & Midgley, being a market leader with proactive thinking for the environment, called Metso Lindemann to provide a solution for this issue.

The Metso Solution

After analyzing the request from the authorities, and the additional customer demand for an energy-saving machine which is able to process baled/logged cars and vans with a minimum throughput of 80 t/hour, Metso suggested a **Metso Eta[®]Rip 250** for the Hull site. This machine is the perfect choice to pre-shred bales and ELVs.

Efficiency through better preparatory work

Pre-shredding supports an optimal shredding operation and avoids peak loadings by feeding the plant with uniformly pre-fragmented material. Thereby, the main shredder can work in the most economical range of energy.

Reduced risks of explosion

Another important benefit of the Metso Eta[®]Rip is the reduction of explosion risks in the shredder caused by gas bottles, petrol tanks or other hazardous elements. Less noise pollution means fewer difficulties with neighbors and supervisory authorities.





Metso's Eta® Rip during installation at Lord & Midgley



Metso Eta® Rip in operation at Lord & Midgley's Hull site

Results

The first challenge for the new machine occurred after installation: On one site, 100 tons of baled cars and vans were stockpiled and ready for a production test. The machine performed perfectly and processed all the material in 1 hour and 5 minutes, thereby achieving a throughput of 92.5 t/hour.

Explosions have been reduced

After a few months in operation, L & M confirmed that the potential for explosions has been reduced by the installation of the Pre-Shredder, and internally and externally all were pleased with the outcome.

Additional benefits

As baled material was removed from the shredder feedstock, the productivity of the shredder increased, and an improved separation of non ferrous materials was also achieved. Furthermore, the wear life of the shredder hammers increased.

"The Metso Eta® Rip was the perfect solution for our requirements. We have been very pleased with the added benefits the Pre-Shredders have brought to our production process."

Antony Whittaker – Director, Lord & Midgley

| Metso Eta® Rip | Size | 210 | 250 |
|-------------------------------------|------|----------|-----------|
| Feeding width | mm | 2100 | 2500 |
| Driving power | | | |
| "Flipper and top rotor (low speed)" | kW | 90 | 132 |
| "Bottom rotor (high speed)" | kW | 250 | 2 x 250 |
| Throughput | | | |
| Miscellaneous scrap, ELV | t/h | up to 40 | up to 110 |
| Bale density < 0.611 t/yd3 | t/h | up to 25 | up to 100 |
| Bale density < 0.764 t/yd3 | t/h | up to 20 | up to 90 |

PROJECT FACTS

- Potential for explosions greatly reduced
- Productivity of the main shredder increased
- Power draw more stable
- Wear on shredder hammers reduced

