Head Office: 4 Prince of Wales Ave, Unanderra NSW 2526
T +61 2 4272 8180 F +61 2 4272 5927 sales@magnetsalesaust.com.au
www.magnetsalesaust.com.au
ABN 59 171 188 983

MSA
MAGNET SALES AUSTRALIA

YOUR SOURCE FOR FORCE

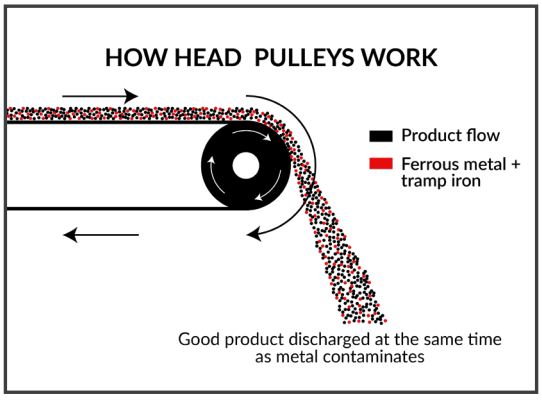
MAGNETIC PULLEYS

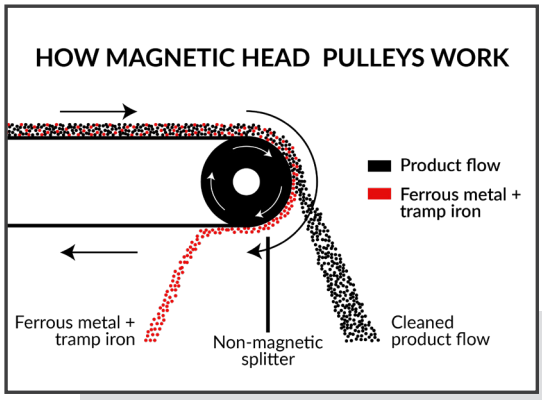
A BACKGROUND ON PULLEYS

A conveyor system typically utilizes several different pulley types and sizes that work together to move the belt around. These pulleys can include head (drive) pulleys, tail (return) pulleys, take-up pulleys, and bend pulleys.

Head Pulleys are situated at the discharge terminus of the conveyor. They are responsible for the force that propels the belt around the conveyor. Head Pulleys are usually mounted in external bearings and driven by an external source.

In some applications, such as mining or recycling, it is in the company's best interest to separate tramp iron and ferrous metal pieces from the underside of the product stream. MSA Magnetic Head Pulleys are a robust, automatic, and efficient solution for moderate belt speeds.





HOW MAGNETIC HEAD PULLEYS WORK

Magnetic Head Pulleys operate much the same as non-magnetic Head Pulleys, except that the metal pieces are discharged separately to the non-magnetic product stream.

As the product stream reaches the conveyor discharge point, ferrous metal is attracted to the pulleys magnetic field and held to the belt. As the belt moves around the pulley, the non-magnetic material is discharged in a normal trajectory, however, the ferrous metal is still held to the belt. When the belt passes out of the magnetic field, the magnetic material drops off into a separate chute or bin to the rest of the product. A non-magnetic splitter may be installed to separate the two discharges. Ferrous metals commonly extracted from the product stream include nails, nuts, bolts, wire, cans, screws, tools, and so on.

ADVANTAGES OF MSA MAGNETIC HEAD PULLEYS

- Improves product purity
- Continuous, automatic separation of magnetic and non-magnetic material.
- Prevents damage to expensive downstream machinery such as shredders, crushers, mills, pulverisers, and grinders.
- Prevents damage to conveyor belts caused by sharp metal pieces – this is especially a risk at discharge points.
- Reduces downtime, maintenance, and repair costs to damaged downstream equipment and conveyor belts
- Reduces amount of product sent to landfill
- Potential savings from avoiding unnecessary landfill
- Low-cost operation – permanent magnet requires no additional power to operate.
- Simple installation.
- High Energy Rare Earth RE80™ Magnets—standard & super high strength deep field options

MAGNETIC PULLEYS

PULLEY LAGGING

MSA can supply complete new Magnetic Head Pulleys or can fit Magnetic Lagging Strips to your existing Pulley.

The addition of Magnetic Lagging Strips to your existing Pulley is not only a cost-effective solution (as opposed to purchasing a complete new Pulley System), but also assists with conveyor belt tracking. The lagging will only cause a small increase in the weight and diameter of the existing pulley.

Old Pulley System

New Magnetic Head Pulleys

INDUSTRY SUITABILITY

- Small mining operations
- Recycling plants
- Resource recovery
- Plastic operation
- Glass cullet recycling
- Quarries
- Wood & timber waste recycling
- Brickworks
- Bulk materials handling & conveying
- Mobile crushers, screens, & shredders
- MRF (Material Recovery Facility) plants
- Municipal solid waste
- Kerbside collection and skip waste recycling
- Foundries
- Tyre & rubber recycling
- Electronics recycling/e-scrap

OVERBELT & SUSPENSION MAGNETS

MSA's Magnetic Head Pulleys can be used in conjunction with our Overbelt & Suspension Magnets for maximum removal of tramp iron and ferrous metals from both the top and bottom of the burden. This is especially recommended in applications where there is a high product burden.

Contact us for more information on Overbelt & Suspension Magnets.

QUALITY AUSSIE-MADE MACHINES

Magnetic Head Pulleys available from MSA are high-quality, durable machines manufactured in Australia. They conform to current engineering standards and best practises, and are designed to provide low maintenance, effective metal separation.

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