



STEINERT MT

Magnetic Drum

> Shredders, Municipal Scrap, WEEE, Incinerator Ash, Steel Mill Slag, Mining, Aggregate, Wood Processing

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STEINERT Magnetic Drums MT excel at magnetic removal in all applications. They have no dead spots and work with larger operating gaps. They yield a clean ferrous product and clean bulk materials. They protect processing equipment from damage by tramp iron.

STEINERT offers both electromagnetic (E), permanent magnet (P) cores and combinations. Even permanent High Gauss drums are available... Trademarks of STEINERT Magnets are increased efficiency, durability, and long operating life since over 125 years.

Magnetic Drums are a good idea whenever the production is high. STEINERT robust core adjustment arm only hints of the huge magnetic core inside. Applications such as pre-separation of ferrous before Eddy-Current separators and recovery of slightly magnetic material found in minerals or electronic scrap take advantage of the drum design. Removal of tramp iron from coal, WTE-slag or glass is also done easily. STEINERT axial pole (Q) electromagnetic drums out perform all other drums on the market. STEINERT drums give years of trouble free service.



Working Principles

In general two ways of operating are in use, independent if permanent or electro: overfed and underfed! Bulk material is distributed evenly with a feed system onto a rotating overfed magnetic drum. Any magnetic piece is attracted to the drum shell and is carried to the point where the magnetic core ends. The non-magnetic particles have fallen off before this point. With material and drum going in the same direction, the flow is easy to handle and ferrous losses are small. Even when the material is large, small or mixed, the size of the particles usually determines the diameter of the drum.

The underfed magnetic drum shell is rotating opposite to the material's travel, along with the alternating internal poles, it produce agitation and cleaning. Positioned above the discharge and in line with the material flow, the drum draws up the ferrous material and carries it over the drum until the core ends and it



is released. A larger working gap is possible with a larger drum diameter. For high performance separation STEINERT offers the unique “Hybrid-drum” with extra strong electro magnetic coils for high distance picking and cleaning and a permanent pole for the discharge.

There is a difference between radial pole magnetic drums (S) and axial pole magnetic drums (Q): Radial poles (S) are arranged in a semicircle around the shaft. The field is constant in the drum’s direction of travel. Axial poles (Q) are arranged parallel to the axis and the shaft.



The field is constant the entire width, but alternates in the drum’s direction of travel, recommended for a clean magnetic product. Benefits: The first axial pole is stronger than the others to draw up the ferrous items, then the other poles flip and clean the material. This means the knuckles are not missed and the drum edges are fully utilized. Better than traditional side plate mounted bearings, STEINERT uses larger shafts and drum bearings with independent housings.

These provide increased durability under severe conditions and excellent maintenance accessibility. STEINERT has designed stronger drum shells, side plates, torque arms and wear covers to compliment the increased capability of these severe duty drums. The magnetic core in all STEINERT magnetic drums is adjustable, making it possible to choose the exact pick up point of the magnetic material.

This assures clean material. Instead of the traditional iron core, STEINERT’s electromagnets use a combination of cast steel cores and highly compact and heat resistant coils of aluminium strip ANOFOL, also a STEINERT product.

By dissipating heat faster, STEINERT drums remain stronger longer during extended operation periods. Instead of ordinary magnets, STEINERT Permanent Magnetic Drums can also be made of neodymium iron boron magnets when very strong magnetic fields are required.



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