

# SUSPENSION MAGNETS

# Introduction

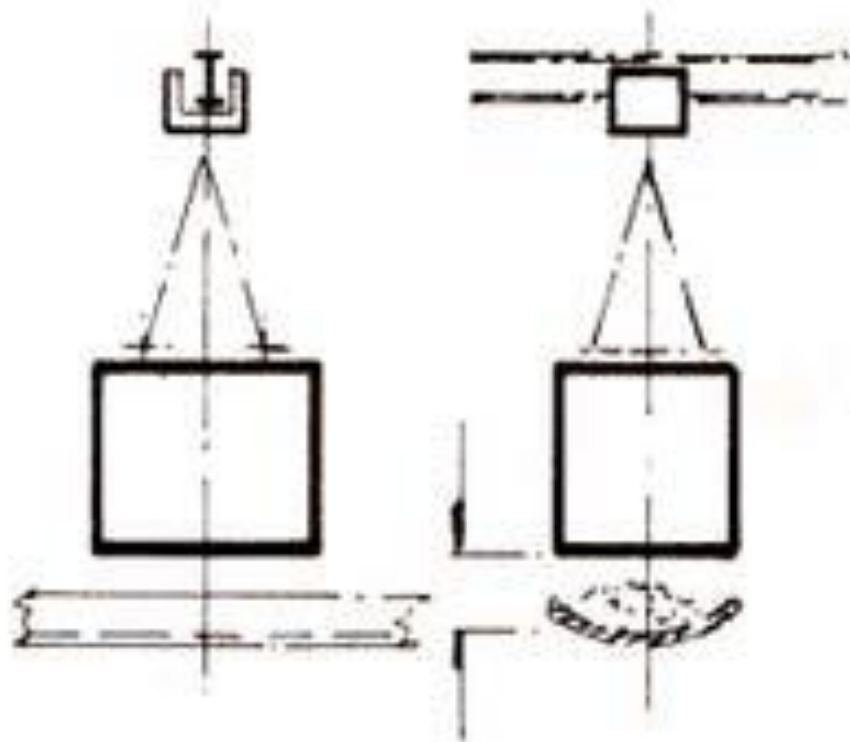
Suspension magnets are permanent magnets which remove iron from wood chips before they are burnt or reused. Suspended magnets have the capability to remove various impurities like iron parts such as nuts and bolts from coal, coke, ore and other minerals, at extremely high belt speeds, large working distances and high burden depth. As per requirement the magnetic force can be generated either by permanent magnets or by electromagnetic coils.

Suspension magnets are specifically designed for the extraction of occasional tramp iron from a product stream being conveyed by a conveyor belt or vibratory feeder. The magnet is suspended above a conveyor with sling chains setting the magnet face at the correct angle for optimum extraction. An electro suspension magnet can be repositioned away from the conveyor and de-energised for cleaning. A Permanent Suspension Magnet can be suspended from a travelling trolley so that it can be moved away from the conveyor to be manually cleaned.

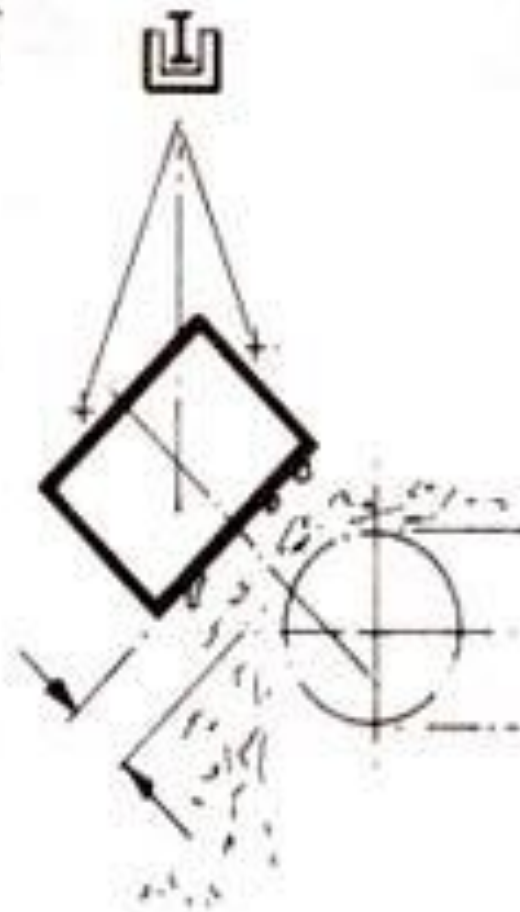
# Operation

- ⦿ Suspension magnets are mounted above a conventional belt conveyor.
- ⦿ Iron materials are removed from the conveyed material by the suspension magnets.
- ⦿ The pure suspension magnets are used where the amount of iron involved is small, while self-cleaning suspended magnets are better suited to higher concentrations of iron components.
- ⦿ Self cleaning suspended magnets are useful where the concentration of iron components are higher.

- If suspended magnets are aligned longitudinally then more reliable discharged can be achieved.
- In some cases this can be achieved with the use of even smaller magnets.
- A larger magnet is required if the suspension is arranged transversely.



Horizontal Installation



Installation above head pulley

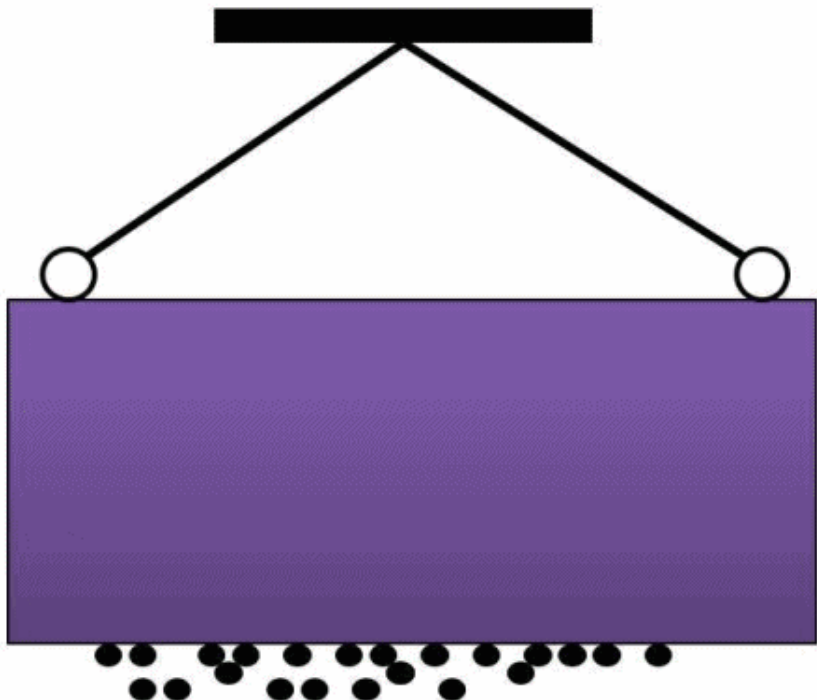
WORKING OF SUSPENSION MAGNET

# Industrial Uses

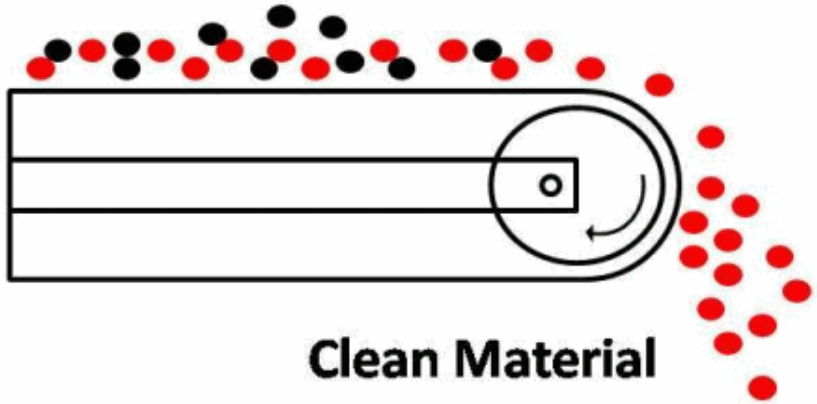
- ⦿ Reliable Tramp Iron Removal from Fast-Moving Conveyors in Processing Industries for:
- ⦿ Purification of Product or Ingredient for Higher-Quality End Products (e.g., foundry sand, glass cullet, grain, food products and chemicals)
- ⦿ Protection of Processing Equipment (e.g., crushers, pulverizers, conveyor belts and screens)

- Reclamation of Ferrous or Non-Ferrous Material (e.g., open hearth and blast furnace slag, incinerators and garbage plants)
- Salvage of Valuable Items (e.g., tools, cutter bits and machinery parts)





← Iron Particles

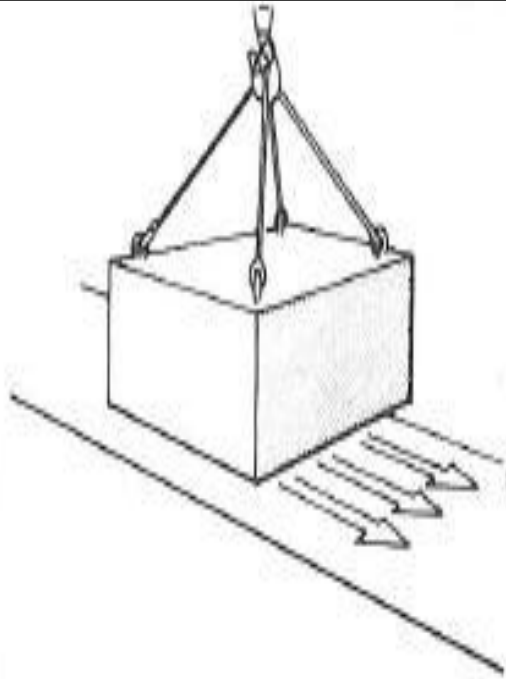


Clean Material

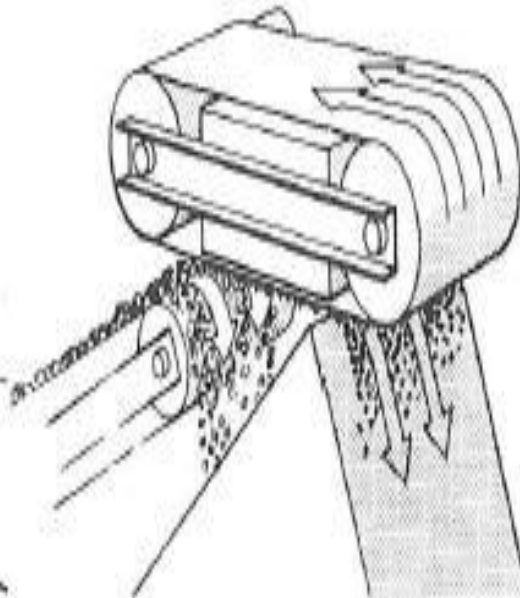
# Applications

- ⦿ Removal of ferrous in mining operations.
- ⦿ Separation of ferrous contamination in quarries.
- ⦿ Magnetic extraction of ferrous particles in wood processing.
- ⦿ Protecting crushing & grinding machinery.
- ⦿ Sugar
- ⦿ Coal

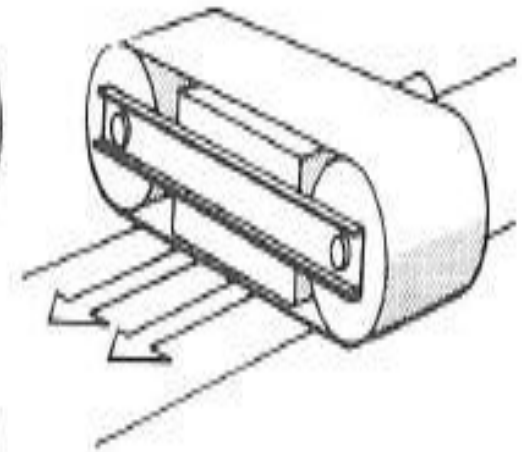
- ⦿ Minerals
- ⦿ Cereals
- ⦿ Coffee
- ⦿ Glass
- ⦿ Culet



Manual Cleaning



In-Line Self-Cleaning



Transverse Self-Cleaning

# Advantages

- No need of power supply
- No breakdown
- No maintenance
- Non-combustible coolant.
- Internal expansion tank.
- Insulated copper/Aluminium coils.
- Heavy duty impact plate.
- Stainless steel angled cleats.



# Features

- Deep, powerful magnetic field maximizes ferrous recovery
- Available in widths from 16" to 90"
- Easy to install, without modifying existing lines
- In-line and cross-belt separators allow automatic discharge of collected tramp iron into suitable receptacles
- Rugged, 100% duty cycle design and construction
- Low maintenance, easy installation and operation
- Operates in hazardous environments
- High efficiency means energy cost savings

# CONTACT

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