Magnetic separators for bulk solids

Industrial de-ironing

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- ATEX post certification

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...WMS installed in complete screening system...
Rotating spiral-magnetic grid

Type WMS

The rotating magnetic grid with revolving spiral-magnetic bars is perfectly suited for the continuous extraction of even the smallest magnetic particles from a product flow.

The rotor, installed in a stainless steel housing, is driven by a shaft-mounted gear motor or an adjustable gear motor. The spiral-magnetic bars, which have an iron core and helically arranged magnets, rotate in protection tubes fixed to the rotor.

The revolving spiral-magnetic bars cause a helical transportation of the magnetic particles around the product flow. The rotating magnetic grid with revolving spiral-magnetic bars is perfectly suited for the continuous separation of iron from bulk materials. They consist of a stationary magnetic body which covers about half of the drum’s circumference. Around this magnetic body revolves a wear-resistant, non-magnetic drum shell with one or more strippers on its circumference. The magnetic body consists of shaped magnet systems made of sintered hard ferrite materials to DIN 14710. These strips are mounted on a fixed axis which can be turned to the desired position and fixed there by means of clamping bearings. The drum shell, made of stainless steel or manganese steel, is connected by its end plates to sealed roller bearings.

A magnetic drum is generally fed from above. The cleaned portion of the product drops off after it has passed about one quarter of the drum’s circumference. While the iron is released and discharged behind the lower edge of the drum.

For processing of dusty materials, the drum is enclosed in a sealed shell metal casing. This casing consists of two parts; namely, a housetoeng discharge casing with a sealed profile steel frame which houses the clamp bearing and peripheral bearings, and a bored-up housing made of sheet steel.

Drum magnets

Permanent magnet drum Type PMT

Magnetic drums are used for continuous separation of iron from bulk materials. They consist of a stationary magnetic body which covers about half of the drum’s circumference. Around this magnetic body revolves a wear-resistant, non-magnetic drum shell with one or more strippers on its circumference. The magnetic body consists of shaped magnet systems made of sintered hard ferrite materials to DIN 14710. These strips are mounted on a fixed axis which can be turned to the desired position and fixed there by means of clamping bearings. The drum shell, made of stainless steel or manganese steel, is connected by its end plates to sealed roller bearings.

A magnetic drum is generally fed from above. The cleaned portion of the product drops off after it has passed about one quarter of the drum’s circumference. While the iron is released and discharged behind the lower edge of the drum.

For processing of dusty materials, the drum is enclosed in a sealed shell metal casing. This casing consists of two parts; namely, a housetoeng discharge casing with a sealed profile steel frame which houses the clamp bearing and peripheral bearings, and a bored-up housing made of sheet steel.

Magnetic grids

Magnetic grids remove fine iron particles and small iron objects from bulk materials in the form of a single layer or in two offset layers. A directing grating above the fine magnets forces the fine ferromagnetic material to flow directly over the surface of the magnets in order to optimize the removal of iron. The magnetic grid is designed in the form of a pull-out drawer with suitable connection flanges for installation in existing chutes or pipes.

Quick cleaning magnetic grids Type MR-4

The pull-out, double-tube magnetic grid is particularly easy to clean. At the necessary intervals, the iron material is extracted through a gap from the product shaft to the iron shaft, where they are dropped. The pull-out mechanism can be actuated manually or by means of an intermittently operating motor drive.

Permanent bar magnets:

• ø 25 Biodynam high-gradient rod with 10,500 gauss at the rod surface
• ø 25 Biodynam hard ferrite rod with 6,500 gauss
• ø 25 Hard ferrite rod with 3,000 gauss
• ø 28 Full-out double-tube design with 6,000 gauss

Magnetic grids for liquids Type MR-L

Special magnetic grading designs with the magnetic rods mounted on a removable cover are available for the removal of iron particles from liquids. The housings are made of rustproof acid-resistant stainless steel and have mounting flanges at both ends.

Vicror products such as chocolate, which set when cooked, are pumped at pressures of up to 10 bar through hardened magnetic grids. These filters have a double-shell housing through which hot water is pumped.

Advantages compared to ordinary magnetic grid construction:

• Continuous transportation of the magnetic particles out of the material flow.
• Separation function always ensured by the use of a single-magnetic grid.
• Injection of even the smallest magnetic particles.
• No carryover into the bulk material, by catching clusters of magnetic particles in the product flow.
• Larger contact surface area for the particles to magnetise on the bars, due to the rotating movement.
• Magnetic particles on the bars will be held and transported out of the material flow.
• The spinning rotor acts as a descaler and cleans the housing.
• Dust-tight housing in a small and compact construction.
• No jamming when taking out from the protection tube.
• The required space for the removal of the bars is not necessary.
• No production stops for manual cleaning of the magnetic bars.
• Functional testing by electronic monitoring of the rotation.
Rotating spiral-magnetic grid Type WMS

The revolving spiral-magnetic grid with revolving spiral-magnetic bars is perfectly suited for the continuous rejection of even the smallest magnetic particles from a product flow.

The rotor, installed in a stainless steel housing, is driven by a shaft-mounted gear motor or an adjustable gear motor. The spiral-magnetic bars, which have an iron core and helically arranged magnets, rotate in protection tubes fixed to the rotor.

The revolving spiral-magnetic bars cause a helical transportation of the magnetic particles around the protection tubes and out of the product flow. The revolving spiral-magnetic bars is perfectly suited for the continuous rejection of even the smallest magnetic particles from a product flow.

Advantages compared to ordinary magnetic grid construction:

• Continuous transportation of the magnetic particles out of the material flow.
• Separation function always ensured by the use of a single-magnetic grid.
• Injection of even the smallest magnetic particles.
• No camming into the bulk material, by catching clusters of magnetic particles in the product flow.
• Larger contact surface area for the particles to magnetize on the bars, due to the rotating movement.
• Magnetic particles on the bars will be held and transported out of the material flow.
• The spinning rotor avoids bridging in the material flow.
• No jamming when taking out from the protection tube.
• Dust-tight housing in a small and compact construction.
• No jamming when taking out from the protection tube.
• The required space for the removal of the bars is not necessary.
• No production stops for manual cleaning of the magnetic bars.
• Functional testing by electronic monitoring of the rotation.

Drum magnets

Permanent magnet drum Type PMT

Magnetic drums are used for continuous separation of iron from bulk materials. They contain a stationary magnetic body, which covers about half of the drum's circumference. Around this magnetic body revolves a wear-resistant, non-magnetic drum shell with one or more strippers on its circumference. The magnetic body consists of strip-shaped magnet systems made of sintered hard ferrite materials to DIN 14710. These strips are mounted on a fixed axis which can be turned to the desired position and fixed there by means of clamping bearings. The drum shell, made of stainless steel or manganese steel, is connected by its end plates to sealed roller bearings.

A magnetic drum is generally fed from above. The cleaned portion of the product drops off after it has passed about one quarter of the drum's circumference. This is best achieved with the aid of a vibrating conveyor. For optimum performance, the bulk materials should be deposited evenly over the entire length of the drum. This is best achieved with the aid of a vibrating conveyor which feeds the bulk material tangentially onto the drum surface.

Magnetic roller Type MM

Magnetic rollers are magnetic over their entire circumference. They are installed as tensioning or drive drums at the discharge end of conveyor belts. Unwanted iron in the product being conveyed is held against the belt by the magnet, preventing it from being discharged. When the belt moves out of the magnetic field, the iron drops off.

Dust-protected magnetic drum

For processing of dusty materials, the drum is enclosed in a sealed sheet metal casing. This casing consists of two parts, namely a house-shaped discharge casing with a sealed profile steel frame which houses the clamp bearing and part of the drum's bearing, and a bored upper housing made of sheet metal.

Quick closing magnetic grids Type MR-6

The pull-out, double-tube magnetic grid is particularly easy to clean. At the necessary intervals, the iron magnets are slipped through a gap from the product shaft to the iron shaft, where they are dropped. The pull-out mechanism can be activated manually or by means of an intermittently operating motor drive.

Permanent bar magnets:
• ø 28 Pull-out double-tube design with 6,000 gauss
• ø 25 Hard ferrite rod with 1,600 gauss
• ø 25 Neodymium high-gradient rod with 10,500 gauss at the rod surface

Magnetic grids for liquids Type MR-L

Special magnetic grading modules with the magnetic rods mounted on a removable cover are available for the removal of iron particles from liquids. The housings are made of rustproof and acid-resistant stainless steel and have mounting flanges at both ends.

Vicevas products such as chocolate, which set when cooked, are pumped at pressures of up to 10 bar through twisted-magnetic filters. These filters have a double-shell housing through which hot water is pumped.

Magnetic grids separate bulk solids

Drum magnets

Rotating spiral-magnetic grid

Advantages compared to ordinary magnetic grid construction:

• Continuous transportation of the magnetic particles out of the material flow.
• Separation function always ensured by the use of a single-magnetic grid.
• Injection of even the smallest magnetic particles.
• No camming into the bulk material, by catching clusters of magnetic particles in the product flow.
• Larger contact surface area for the particles to magnetize on the bars, due to the rotating movement.
• Magnetic particles on the bars will be held and transported out of the material flow.
• The spinning rotor avoids bridging in the material flow.
• No jamming when taking out from the protection tube.
• Dust-tight housing in a small and compact construction.
• No jamming when taking out from the protection tube.
• The required space for the removal of the bars is not necessary.
• No production stops for manual cleaning of the magnetic bars.
• Functional testing by electronic monitoring of the rotation.

Drum magnets

Permanent magnet drum Type PMT

Magnetic drums are used for continuous separation of iron from bulk materials. They contain a stationary magnetic body, which covers about half of the drum's circumference. Around this magnetic body revolves a wear-resistant, non-magnetic drum shell with one or more strippers on its circumference. The magnetic body consists of strip-shaped magnet systems made of sintered hard ferrite materials to DIN 14710. These strips are mounted on a fixed axis which can be turned to the desired position and fixed there by means of clamping bearings. The drum shell, made of stainless steel or manganese steel, is connected by its end plates to sealed roller bearings.

A magnetic drum is generally fed from above. The cleaned portion of the product drops off after it has passed about one quarter of the drum's circumference. This is best achieved with the aid of a vibrating conveyor. For optimum performance, the bulk materials should be deposited evenly over the entire length of the drum. This is best achieved with the aid of a vibrating conveyor which feeds the bulk material tangentially onto the drum surface.

Magnetic roller Type MM

Magnetic rollers are magnetic over their entire circumference. They are installed as tensioning or drive drums at the discharge end of conveyor belts. Unwanted iron in the product being conveyed is held against the belt by the magnet, preventing it from being discharged. When the belt moves out of the magnetic field, the iron drops off.

Dust-protected magnetic drum

For processing of dusty materials, the drum is enclosed in a sealed sheet metal casing. This casing consists of two parts, namely a house-shaped discharge casing with a sealed profile steel frame which houses the clamp bearing and part of the drum's bearing, and a bored upper housing made of sheet metal.

Quick closing magnetic grids Type MR-6

The pull-out, double-tube magnetic grid is particularly easy to clean. At the necessary intervals, the iron magnets are slipped through a gap from the product shaft to the iron shaft, where they are dropped. The pull-out mechanism can be activated manually or by means of an intermittently operating motor drive.

Permanent bar magnets:
• ø 28 Pull-out double-tube design with 6,000 gauss
• ø 25 Hard ferrite rod with 1,600 gauss
• ø 25 Neodymium high-gradient rod with 10,500 gauss at the rod surface

Magnetic grids for liquids Type MR-L

Special magnetic grading modules with the magnetic rods mounted on a removable cover are available for the removal of iron particles from liquids. The housings are made of rustproof and acid-resistant stainless steel and have mounting flanges at both ends.

Vicevas products such as chocolate, which set when cooked, are pumped at pressures of up to 10 bar through twisted-magnetic filters. These filters have a double-shell housing through which hot water is pumped.
Magnetic separators for bulk solids
Industrial de-ironing

Rotating spiral-magnetic grid Type WMS

The rotating magnetic grid with revolving spiral-magnetic bars is perfectly suited for the continuous rejection of even the smallest magnetic particles from a product flow.

The rotor, installed in a stainless steel housing, is driven by a shaft-mounted gear motor or an adjustable gear motor. The spiral-magnetic bars, which have an iron core and helically arranged magnets, rotate in protection tubes fixed to the rotor. The revolving spiral-magnetic bars cause a helical transportation of the magnetic particles around the protection tubes and out of the product flow. This ensures a gentle and qualitative separation of the magnetic particles from a product flow.

Advantages compared to ordinary magnetic grid construction:

- Continuous transportation of the magnetic particles out of the material flow.
- Separation function always ensured by the use of a single-magnetic grid.
- Injection of even the smallest magnetic particles.
- No jamming into the bulk material, by catching clusters of magnetic particles in the product flow.
- Larger contact surface area for the particles to magnetize on the bars, due to the rotating movement.
- Magnetic particles on the bars will be held and transported out of the material flow.
- The spinning rotor avoids bridging in the material flow.
- Dust-tight housing in a small and compact construction.
- No jamming when taking out from the protection tube.
- The required space for the removal of the bars is not necessary.
- No production stop for manual cleaning of the magnetic bars.
- Functional testing by electronic monitoring of the rotation.

Magnetic drums are used for continuous separation of iron from bulk materials. They contain a stationary magnetic body, which covers about half of the drum's circumference. Around this magnetic body revolves a wear-resistant, non-magnetic drum shell with one or more stripper strips on its circumference. The magnetic body consists of strip-shaped magnet systems made of sintered hard ferrite materials to DIN 14710. These strips are mounted on a fixed axis which can be turned to the desired position and fixed by means of clamping bearings. The drum shell, made of stainless steel or manganese steel, is connected by its end plates to sealed roller bearings. A magnetic drum is generally fed from above. The cleaned portion of the product drops off after it has passed about one quarter of the drum’s circumference. This is best achieved with the aid of a vibrating conveyor which feeds the bulk materials to flow directly over the surface of the magnetic drum with one or more strippers on its circumference.

For processing of dusty materials, the drum is enclosed in a sealed sheet-metal casing. This casing consists of two parts, namely, a house-shaped discharge casing with a sealed profiled steel frame which houses the clamp bearings and a directed bending of the drum, and a boxed upper housing made of sheet steel.

Magnetic drum PMT with vibratory conveyor API

For optimum performance, the bulk materials should be deposited evenly over the entire length of the drum. This is best achieved with the aid of a vibratory conveyor which feeds the bulk materials tangentially onto the drum surface.

Magnetic roller Type MW

Magnetic rollers are magnetic over their entire circumference. They are installed as toothed or drive drums at the discharge end of conveyor belts. Unwanted iron in the product being conveyed is held against the belt by the magnet, preventing it from being discharged. When the belt moves out of the magnetic field, the iron drops off.

Magnetic grids Types MR

The pull-out, double-tube magnetic grid is particularly easy to clean. At the necessary intervals, the iron particles are pulled through a gap from the product shaft to the iron shaft, where they are dropped. The pull-out mechanism can be actuated manually or by means of an intermittently operating motor drive.

Permanent bar magnets:

- ø 25 Nickleynium high-gradient rod with 10,500 gauss at the rod surface
- ø 25 Nickleynium rod with 6,500 gauss
- ø 25 Hard ferite rod with 1,600 gauss
- ø 28 Full-out double-tube design with 6,000 gauss

Magnetic grids for liquids Type MR-L

Special magnetic grating designs with the magnetic rods mounted on a removable cover are available for the removal of iron particles from liquids. The housings are made of surfproof and acid-resistant stainless steel and have mounting flanges at both ends.

Vacuum products such as chocolate, which set when cooked, are pumped at pressures of up to 10 bar through twisted-magnetic rods. These filters have a double-shell housing through which hot water is pumped.
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WMS installed in complete screening system
PMT with vibratory conveyor Type AFU
(casing is disassembled and stands on the ground)
Automatic cleaning magnetic grid MR

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WMS installed in complete screening system
PMT with vibratory conveyor Type AFU (casing is disassembled and stands on the ground)
Automatic cleaning magnetic grid bar

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