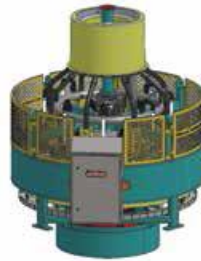


Reading – Magnetic Separators



Equipment Range

The Reading range of magnetic separators includes:

- wet high intensity;
- induced roll, semi-lift induced roll and rare earth roll;
- rare earth drum; and
- low intensity and medium intensity magnetic separators.

Wet High Intensity Magnetic Separator (WHIMS)

Extensively used throughout the mineral sands industry. WHIMS also accommodate the separation of iron ore and other metalliferous ores.

Three standard separators are available incorporating 4, 16 and 24 poles with multiple rotor separation matrix widths where a higher magnetic field gradient is required to remove weakly magnetic particles from non-magnetic concentrates.

Nominal capacities range from 6-25 tonnes per hour. A wider rotor separation matrix of 2.5 x 120 millimetres in a 16 pole unit is available for upgrading iron ore fines and other higher capacity metalliferous applications up to nominal throughputs of 50 tonnes per hour. 48 Pole WHIMS are available for high capacity applications up to 160tps per machine.



Applications

Recovery of ilmenite, garnet, chromite and monazite into the magnetic, and rutile, leucoxene, and zircon into the non-magnetics fractions from mineral sands suites.

- Recovery of iron ore fines, including specular hematite, itabirite, taconite and limonite
- Magnetic gangue removal from cassiterite, tungsten ores, glass sands and a variety of industrial products

Induced Roll Magnetic Separators (IRMS)

The IRMS separator range includes two start twin-pass configurations in 133 or 160 millimetre roll diameter, 760 or 1000 millimetre roll width and nominal capacities of up to 12 tonnes per hour. IRMS units are also available as Semi-Lift and Laboratory Scale Machines.

Applications

- Removal of ilmenite from rutile concentrates
- Final magnetic cleaning of zircon
- Differentiation of ilmenite to produce feedstock for synthetic rutile production
- Removal of iron contamination from glass sand and iron minerals from industrial products
- The semi-lift roll has been designed to retreat middlings and non-magnetic products from induced roll and crossbelt magnetic separators in the mineral sands industry



Reading – Magnetic Separators

Rare Earth Drum Magnetic Separators (RED)

Incorporating recent advances in magnet technology, RED machines utilise high quality rare earth alloy permanent magnets. Combined with innovative engineering the magnets achieve effective dry separation of paramagnetic minerals at high throughput rates.

Rare Earth Roll Separator Configurations (RERS)

Non-magnetic retreat configurations are available in machines with 100 and 150 millimetre roll diameters and 300, 1,000 and 1,500 millimetre roll widths. These are single start with one or two re-treat stages and various magnet/pole ratios.

Rare Earth Drum Separator Configurations (REDS)

Non-magnetic, middlings and magnetic retreat configurations are available in machines with 400 and 600 millimetre drum diameters and 300, 1,000 and 1,500 millimetre drum widths. These are single start with one or two re-treat stages and an optional low intensity drum scalper for removal of highly magnetically susceptible minerals.

Applications

- Production of ilmenite concentrate based on TiO_2/Fe_2O_3 ratios
- Upgrading staurolite and garnet into magnetics and production of zircon into non-magnetics
- Production of silica / glass sands
- Rejection of magnetic impurities from precious gem stone concentrates
- Reduction of iron bearing contaminates from granular feed stocks
- Recycling, food processing, pharmaceutical and abrasive industries

Low and Medium Intensity Magnetic Separators (LIMS and MIMS)

Reading low and medium intensity wet and dry drum magnetic separators can be used for the removal of more highly susceptible magnetic particles in dense medium and other processing circuits.

