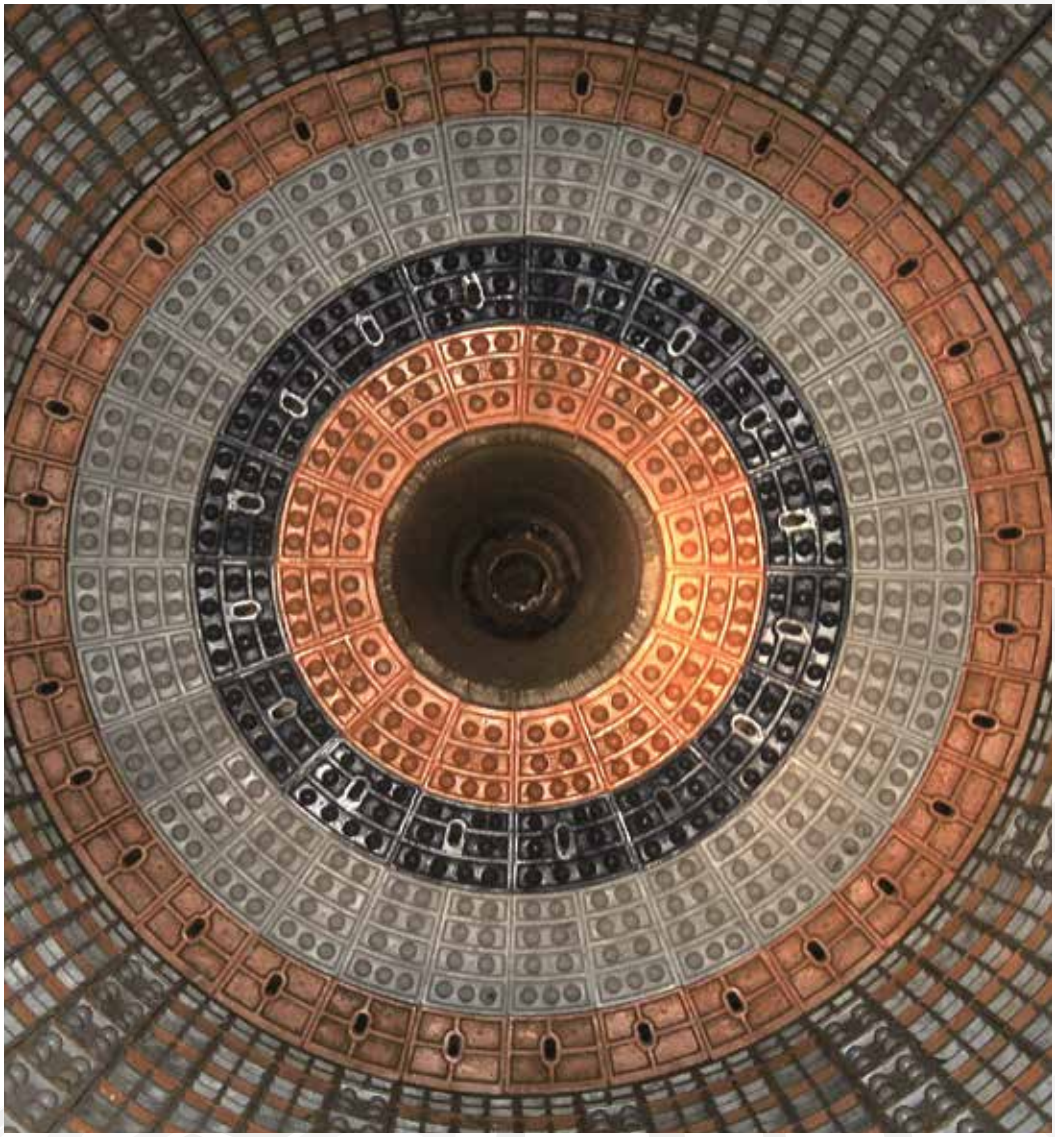
MMPB-85C

Hermes™ Magnetic Mill Liner



ERIEZ®

JINFA
CMMC

Magnetic Mill Liner

THE MAGNETIC MILL LINER

The magnetic mill liner is a wear-resistant alloy-encased magnet. It combines the best qualities of steel and magnetic liners. The magnet holds the metal magnetic liner to the shell and retains ball chips and magnetic minerals to form a solid protection layer which serves as the wear liner.

The ball chips and magnetic minerals are retained continuously and therefore the liner can last for years without any maintenance. The magnetic mill liner with the longest service life has been in service for over 10 years.

- The Hermes™ magnetic mill liner is made of a steel alloy casing and magnets. The alloy and high grade magnet material are carefully chosen for the best metal magnetic liner characteristics.
- The magnetic mill liner is used to line both the shell and the mill heads.
- Upgraded alloy with a higher hardness and a wear resistance for longer life.

The choice of mill linings in comminution circuits is critical as it affects grinding efficiency, overall cost, and product quality. As a consequence, a variety of liners have been developed over the years in an effort to increase wear resistance, improve grinding efficiency, and reduce energy consumption.

A magnet holds the liner to the drum.

The ball chips are attracted to the liner and form a protective layer.

UNIQUE DESIGN AND TAILOR-MADE

We can design the magnetic mill liner to suit your ball mills. The typical piece of the magnetic liner is about 11.81 inches (300 mm) long and weighs 37.48 lbs (17 kg) and can be easily moved by hand, making installation much easier and safer than conventional heavier liners.

STRATEGIC ALLIANCE

Eriez, which is best known for 70+ years of magnetic separation, formed a strategic alliance in 2005 with JinFa Industrial Trading, a subsidary of China Metallurgical Mining Corporation, which has decades of experience with magnetic mill liners.

Eriez-JinFa provide engineering services to cover a wide range of functions, assistance, and support, including:

1. Selecting the type of Magnetic Mill Liner suitable for a customer's application.
2. Designing the Magnetic Mill Liner to fit specific features and options of a customer's ball mill.
3. Providing in-plant installation assistance.

PROVEN PERFORMANCE

The magnetic mill liner has been in use for years, and has been installed in over 600 applications throughout the mining industry worldwide. The thickness of the magnetic liner with the protection layer is less than that of a conventional liner, resulting in a greater working volume.

The magnetic mill liner creates a wave form that is generated by the magnetic force and provides optimal attrition by lifting the material being ground. The higher attrition results in less abrasion and impact, which promotes a higher charge pressure.

Grinding ball chips and other debris discharged from a ball mill can cause extreme wear to downstream processing equipment. These ball chips and debris can circulate in the milling circuit and can cause excessive damage to pumps, cyclones and piping.

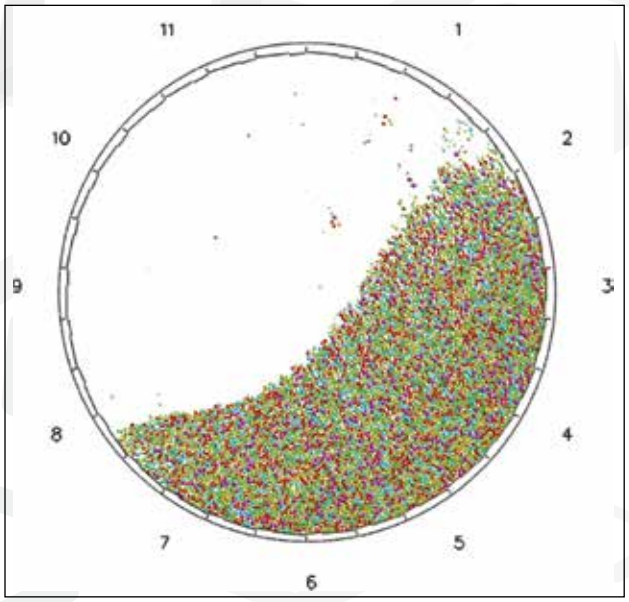
The magnetic mill liner will adsorb the ball chips and debris to its surface and prevent its discharge from the mill while the solid protection layer is formed. The smaller sized ball chips are sorted out and separated from the primary ball charge. These ball chips and other debris work as the liner and no excess energy is required.

INSTALLATIONS SHOW THAT MAGNETIC MILL LINERS:

- Are safe and easy to install
- Drastically reduce maintenance costs
- Increase mill availability
- Prevent back washing of mill shell
- Can lower medium consumption
- Can reduce noise levels
- Can reduce/eliminate mill leakage
- Can improve the working environment

APPLICATIONS OF MAGNETIC MILL LINERS

- Secondary ball mills
- Regrind ball mills



A typical MML DEM simulation for a 16.5'X37.5' mill

A typical MML installation for a 16.5'X37.5' mill

Each MML is designed based on mill operation parameters, milling circuit, and DEM simulation. The DEM simulation optimizes the best liner profile for customer to achieve the best milling performance while keeping the MML lasting longer.

WORLD AUTHORITY IN SEPARATION TECHNOLOGIES

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