

MillSafe® Worn Liner Removal With RME INSIDEOUT™ Technology



Bradken's MillSafe Worn Liner Removal with RME INSIDEOUT™ Technology removes worn liners from the mill shell wall directly to provide a safer and more efficient liner removal process.

Worn Liner Removal System:

Bradken® have customised grinding mill liners in collaboration with Russell Mineral Equipment (RME) to offer a range of innovative Worn Liner Removal tools to suit your grinding mill. The system allows the removal of all liner types directly from the mill shell wall using uniquely designed tools matched to suit the worn liner profile at the end of liner life.

The Worn Liner Removal Tools remove people from the hazardous task of chaining up the worn liners once they have fallen from the mill shell wall. This previous method placed mill reline crew in confined spaces, on uneven surfaces, near mobile equipment, and beneath suspended liners that can shift unexpectedly.

In addition, this removal method prevents worn liners from falling and damaging the newly installed liners below, and improves reline efficiency

Before



Conventional Liner Removal:

Mill Relining Machine (MRM) operator and crew working in hazardous zones inside the mill removing 'knocked-in' liners using chain and slings.

After



Semi-Automated Liner Removal:

Bradken's MillSafe Worn Liner Removal with RME INSIDEOUT™ Technology enables liners to be removed directly from mill wall without personnel required inside the mill.

MillSafe Worn Liner Removal System Main Features:



Unique Design

Bradken liner design and worn profiles are taken from our Vision Wear Reporting (VWR) wear data for tool accuracy and for positive engagement.



Productivity

Reduces mill operation downtime.

Eliminates one complete step in the reline process.

Efficiently removes the liners from the mill shell.



Safety

Removes people away from known hazardous zones inside the mill during the liner removal process.

Reduces exposure to confined space.



Benefits

Improves safety outcomes.

Prevents the worn liners from falling onto the new liners already installed.

MillSafe Worn Liner Removal with RME INSIDEOUT™ Technology

RME INSIDEOUT™ Technology tools are certified lifting devices that attach to your MRM grapple and are engineered to match Bradken worn liner profiles.

- **Bradken Feed End and Shell liners** are removed using the RUSSELL Forks Tool, which interfaces with the worn liner profiles matched to VWR wear data and customised bolting system.
- **Bradken Grates** are removed using the RUSSELL Grate Tool, to align within the grate slot and worn liner profiles.
- **Bradken Pulp Lifters** are removed using the hydraulic RUSSELL Pulp Lifter Gripper Tool, which attaches to the pulp lifter vane and is customised to suit either straight radial or Vortex pulp lifters.

Tools are supplied on a tool tray carousel that enters the mill via the MRM liner cart, minimising changeover time. Both the tools and tray are supplied by RME.

Bradken Shell Liner



Bradken Super Grate



Bradken Pulp Lifter



Our Innovation. Your Advantage.

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