SM-216A

Installation, Operation and Maintenance Instructions

Easy To Clean Rota Grate

ERIEZ MAGNETICS HEADQUARTERS: 2200 ASBURY ROAD, P.O. BOX 10608, ERIE, PA 16514-0608 U.S.A.
WORLD AUTHORITY IN ADVANCED TECHNOLOGY FOR MAGNETIC, VIBRATORY and METAL DETECTION APPLICATIONS

Introduction

This manual details the proper steps for installing, operating and maintaining the Eriez Easy To Clean Rota Grate.

Careful attention to these requirements will assure the most efficient and dependable performance of this equipment.

If there are any questions or comments about the manual, please call the factory at 814/835-6000 for Rota Grate assistance.

⚠ CAUTION - STRONG MAGNET

This equipment incorporates one or more exceptionally powerful magnetic circuits. Steel and iron tools and other objects may be attracted suddenly and strongly to the magnetic elements, creating the risk of serious pinch-type injuries. Keep all mild steel and iron tools and equipment well away from the magentic elements at all times. Avoid situations in which hands, fingers, or other body parts could become trapped between a steel or iron object and the magnetic elements.

Personnel using heart pacemakers should not service or operate this equipment. Such personnel should remain at least 3 feet (1 meter) from the magnetic elements at all times.

Description

The Eriez Easy To Clean Rota Grate is designed to remove ferrous (iron containing) contamination from your product.

The Rota Grate consists of a "squirrel–cage" arrangement of 1-inch (25 mm) diameter stainless steel tubes held in place by two stainless steel end plates. Each tube contains an assembly of powerful magnets which, under normal conditions, will retain their magnetic strength indefinitely.

The end plate on one side of the squirrel cage is slotted to allow removal of the magnet tubes. A ring holds the tubes in position during operation. See the Cleaning section for instructions.

Installation

The housing is designed to be flange mounted to ductwork, chutes or adaptors. Electrical connections are specified by the customer. A lockout box is required for operator safety when cleaning magnets.

Operation

The Eriez Rota Grate is designed for materials that do not flow easily and that tend to bridge across stationary grate magnets. The rotating magnetic assembly prevents material from packing and restricting product flow.

Once power is installed to the motor, the magnet unit rotates to collect ferrous contamination. Standard rotation speed is 16 RPM.

Regular cleaning of the tube magnets is required when rings of ferrous material build up. Keeping the magnets clean will maintain separation efficiency. Periodic observation of the tubes will help determine the appropriate duration for a cleaning cycle.

Tube Magnet Cleaning

WARNING - This product housing contains moving parts. Turn off and lock out electrical power supply before opening door for cleaning.

Tube magnet cleaning is accomplished by removing one magnet at a time and wiping the ferrous material off with a clean cloth. Compressed air may also be used in some cases to blow the bulk of the material off.

To remove a magnet tube, rotate the squirrel cage until the gap in the ring at the clamp area is in a convenient position for access to the clamp. About 15 pounds (65N) of force is required to back – turn the motor. Release the safety catch and open the over-center clamp. The ring will open about 1/4-inch (6 mm) more and will be free to rotate to each tube magnet. Center the gap in the ring on the slot in the end plate (see Figure 1).

Tube Magnet Cleaning (cont.)

WARNING - Finger pinch possible. Tube magnets are very strong and will attract to each other, any iron, steel railing, or beams in the cleaning area.

Grab the tube magnet firmly on both ends and lift the ring end out of the slot. The peg in the other end will then come out of the opposite end plate.

Wipe tube magnet with a clean cloth until all metal is removed, and return to position.

Rotate the clamp ring to the next tube magnet and repeat. Continue rotating the reel and ring until all magnets are clean.

The necessary frequency of cleaning will be determined by the amount of ferrous contamination in the material being processed. The unit should be cleaned often to prevent an excessive accumulation of ferrous contamination on the magnetic tubes. Ferrous buildup will reduce the magnetic separation efficiency of the unit.

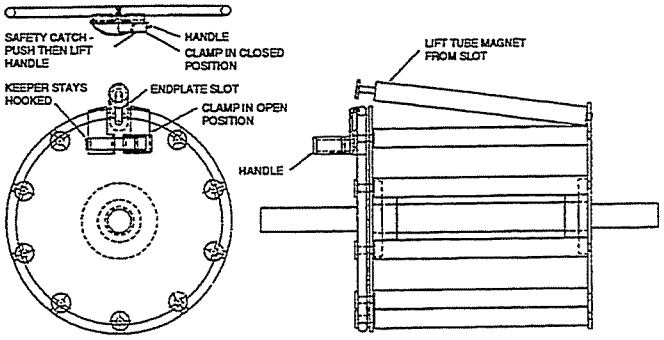

FIGURE 1

Maintenance

Maintain gear box oil level according to manufacturer's literature enclosed with this product.

Grease shaft bearing, located opposite the motor, on a monthly schedule.

NOTE: Although the magnet tubes are not considered a wear item, periodic examination is necessary especially with highly abrasive products. If a magnet tube should wear through, repair at our facility is necessary.

Repair and Alteration

Alteration or disassembly of the tube magnet will disturb a carefully engineered magnetic circuit which could only be restored by returning the unit to our factory for rebuilding and recharging.

Repair, alteration or disassembly of this magnetic equipment in the field without written authorization and instructions by Eriez Manufacturing Company nullifies the responsibility and guarantee of the manufacturer.

World Authority in Advanced Technology for Magnetic, Vibratory and Metal Detection Applications

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