VFDs Improve Process Control and Reduce Energy Costs

According to the American Iron and Steel Institute, energy costs account for 20% of the cost of producing steel. So, by reducing energy consumption, steel plants can increase profitability.

By allowing precise control of motor speed, variable frequency drives (VFDs) not only reduce energy costs by 30% or more, they improve process control, reduce waste/spoilage, and help improve product quality.

But VFDs Can Damage Motor Bearings and Shut Down Processes...

But, VFDs can damage motors. They induce voltages on the shafts of the motor they control — voltages that can discharge through motor bearings, causing fluting and catastrophic motor failure.

And the Cost of Downtime is Staggering

Steelmaking is a continuous process, so a problem in one part of a production process or even a single piece of equipment can idle an entire plant. And the cost of such shutdowns can be staggering — from $200,000 to $600,000 per day or more, depending on the production capacity of the plant.

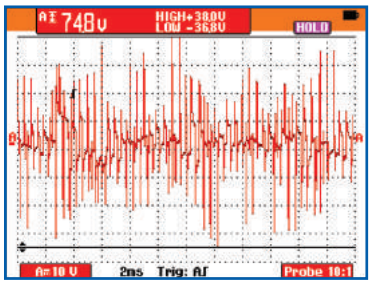
Protect VFD-Driven Motors From Bearing Damage With AEGIS® Shaft Grounding Rings

By diverting damaging bearing currents safely to ground, AEGIS® Shaft Grounding Rings ensure the reliable, long-term operation of VFD-driven steel mill motors and systems.

So, to prevent VFD-induced bearing damage and costly, unnecessary downtime and repairs, specify/install AEGIS Shaft Grounding Rings on all AC and DC motors. Designed to withstand the harsh conditions of steel mills, they can be installed on:

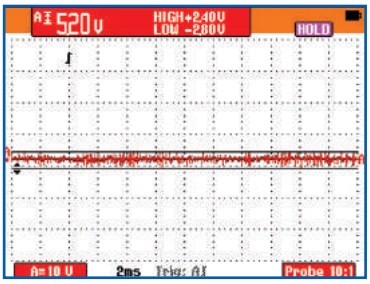
- New motors before they are put into service
- In-service motors when they are refurbished or repaired
- Spare motors when they are purchased or before they are put into service

Unlike other shaft grounding products, AEGIS® Rings do not require routine maintenance or adjustment. They provide effective protection for the L10 life of the motor bearings.



Without AEGIS® Ring : 74.8 V peak-peak

With AEGIS® Ring: 5.20 V peak-peak



Applications:

Cranes

- Ship-to-shore cranes
- Scrap metal cranes
- Ladle cranes
- Teeming cranes
- Changing cranes
- Tundish cranes
- Slab or billet cranes
- Coil and plate handling cranes

Conveyors

- Iron ore
- Coal

Mills (Cold-Rolling/ Non-Ferrous)

- Foil mills
- Skin-pass mills
- Two-stand mills
- Tandem mills
- Breakdown mills
- Reversing cold mills
- Two-stand reversing mills

Mills (Hot-Rolling)

- Rod and bar mills
- Wire rod mills
- Section mills
- Tube mills
- Conventional hot strip mills
- Compact mills (based on thin in-line production)
- Steckel mills
- Plate mills

Auxiliary Processes

- Blast furnace blower
- Induced draft/ forced draft fan
- Descaling pumps

Metal Forming

- Extrusion
- Forgings (open-die, closed-die, and rolled-ring)

AEGIS® Rings are available through:

