



**MSHA's Accident Prevention Program
Innovative Products**

**Safety and
Health are
Values!**

**“Non-Sparking, Conveyor
Roller Bearing Isolators”**

Belt conveyor roller bearings are subjected to severe duty service. They are constantly exposed to dust, dirt and moisture. Plastic end caps and rubber contact seals installed to protect the bearings quickly wear and deteriorate, resulting in seized bearings. When a bearing seizes, it throws off sparks, melts and eventually causes the roller to seize. In addition to the fire and smoke hazards, the frictional drag on the belt creates a large amount of electrical energy consumption, worn or torn belts and downtime.



Bearings are typically designed to last 20 years or more, but very seldom do, mostly because they are not adequately protected. Bearing isolators made of bearing bronze, brass, other non-sparking metal or sintered materials last much longer than those of rubber or plastic and can act as emergency sleeve bearings for a short time. The main bearing meltdown is therefore delayed until temperature rise is detected. The use of a temperature gun during examination exponentially increases the detection of failing bearings. There are isolator replacements available for the plastic protectors that can be installed by mine maintenance personnel with a press or a soft hammer.

This product is not intended to be used in place of proper maintenance and clean-up.

For information on manufacturers that are known to MSHA to have such products available, contact MSHA's Approval and Certification Center at 304-547-0400 or e-mail zzMSHA-InnovativeProducts@dol.gov.

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