Pillow block on Ball Mill

Make: **SKF**
Model: **SNL 3164, 300mm shaft**
Industry: **Aluminum Smelting**

Challenge

In an aluminum plant, ball mills crush and grind aluminum dross (ash or slag), a byproduct of the aluminum smelting and recycling processes, to recover valuable metallic aluminum from this waste material.

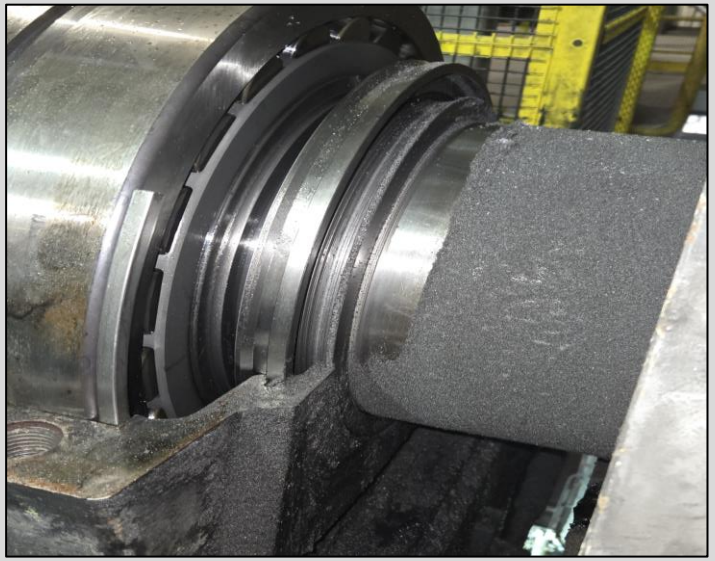
On a ball mill in eastern Canada, aluminum dross was leaking into the pillow blocks driving the large 300mm shaft, causing bearing failure and shaft damage. These issues lead to high maintenance costs, interruption in production due to equipment downtime and safety risk.

Solution

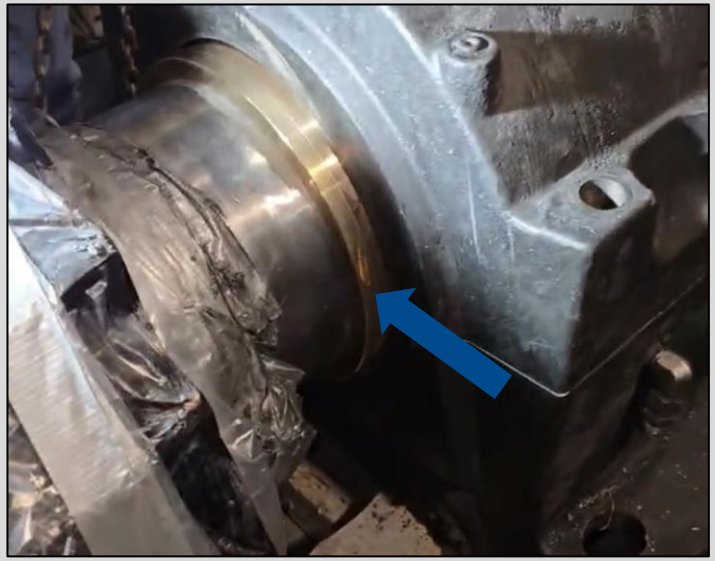
A split Inpro/Seal® bearing isolator was installed on the pillow block nearest the leaking aluminum dross to eliminate powder ingress into the bearing housing.

Result

Shaft damage and premature bearing failure was eliminated. Because the Pillow block does not need to constantly be removed from failure, downtime and maintenance costs have significantly decreased. Due to the success of this seal, equipment maintenance can now be planned and scheduled, and the customer is currently looking to upgrade all other ball mill pillow blocks.



Before: Aluminum slag entering the pillow block bearing housing via a faulty taconite seal



After: Split Inpro/Seal pillow block bearing isolator installed

Pillow block application

Inpro/Seal pillow block bearing isolator