**Major Applications – Innovator Manufacturing, Inc.**

Innovator manufacturing Inc. - of London, Ontario produces a line of portable tub grinders, tumble grinders and trommel screeners for use by the waste industry. They are used to process compost, municipal, construction, demolition or yard waste as well as land clearing debris. The machines are up to 53 feet long and weigh up to 79,000 lb.

The tumble grinders use a 10 or 12 foot diameter inclined tumble drum rotating at up to 13 rpm to prescreen material prior to grinding. Small material not requiring grinding plus contaminants such as dirt or rocks fall through the openings in the drum and onto a skimmer conveyor. Larger material falls to the bottom of the tub where it is ground by a patented rotor assembly. Large replaceable hammers grind the material while tolerating rocks, bits of steel or other foreign material. In this manner, large bulky objects with lots of contamination such as stumps can be efficiently ground.

The 8 rollers that support the rotating tub assemblies were recently converted from SAE 660 bronze to Zincaloy bearings with the goal of increasing bearing service life. Test results obtained on machines showed that Zincaloy bearings outperform bronze by providing 3 times the service life. Innovator is very pleased with this dramatic increase in bearing life and has specified Zincaloy as an OEM material in this application and on the new trommel screener. Zincaloy bearings are being considered to replace bronze in other areas of the machine, specifically in the conveyors.

**Other Zinc Success Stories:**

- **Finning Ltd.** of Vancouver, B.C. has specified ZA-12 for the thumb attachment bearing used on Caterpillar excavators.

- **Mac Donald Industries** of Portland, Oregon is pleased with the longer life of ZA-12 bushings used to refit Komatsu/Dresser excavators.

- **Oregon Tractor and Equipment Co.** has realized ZA-12 resisted pounding-out better than 660 bronze for bushings on booms and sticks - and pins also wear less than with hardened steel. That's why Oregon Tractor has specified ZA-12 for bearings in their excavator equipment.

- **Lee Mar Manufacturing** in Parksville, B.C. uses ZA-12 bearing and cylinder glands in rebuilding excavators and lob loaders. Hitachi excavators have been totally refitted with ZA-12 on all pivot points and cylinders.

- **Arthur A. Voice Construction Co.** in Edmonton, Alberta has replaced 660 bronze and hardened steel with ZA-12 for bushings in their front-end loaders, gradalls and Cat scrapers. Not only did they achieve greater bushing life, but they experienced less pin wear plus the housings were not pounded out of round which occurred with hardened steel bushings. ZA-12 saves both time and money because of less frequent and shorter downtimes.

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For Information Call 1-845-427-2151
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