Excel Premium Components

Gyratory Style Crushers

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**UltraNut™**

**Jack Bolt Tensioning Locking Nut**

This specially designed head locking nut ensures precise, uniform preload and eliminates the need for a torch ring. Our engineering group has created a solution that makes liner changes faster, easier and safer. This design offers protection of the threads on the locking nut.

- Faster, safer, cost-effective
- Uniform preload
- Rebuildable with Excel replacement components
- AR400 sleeve protects locking nut from wear
- Silicone seal protects nut threads from dust
- Eliminates “slug wrench” installation & removal
- Safer than cutting the torch ring
- Easier assembly and disassembly
- Quicker mantle changes

**Custom Spider Bushings**

- Modified lubrication arrangement
- For use with oil opposed to grease
- Promotes oil circulation

**Custom Threaded Mainshaft Sleeve**

- Threaded sleeve removes the threads from mainshaft
- No more risk of damaging the mainshaft while removing the inner head nut
- Custom outer nut with complimentary protection ring seals above the threads

**Custom Throw Eccentric Bushing**

- Modified bore offset and angle to achieve desired machine throw
- Allows more control over power draw
- Maximizes hourly production
Porosities Pushed to the ID then Machined Down

Excel Gears and Pinions
Excel Uses the Latest Technology
From straight bevel teeth to spiral bevel teeth, Excel offers direct replacement gearing that exceeds OEM quality, starting with the highest quality steel forgings. Our gear “gasher” mill at the beginning of the process and the gear checking center at the end of the process help ensure that Excel delivers high quality gears and pinions efficiently and consistently.

It’s All About the Contact Pattern
The contact pattern is the single most important factor to control when manufacturing crusher gears. Without good tooth-to-tooth contact, the load transfer can point-load the tooth face and result in premature or uneven wear or tooth breakage. Poor contact also creates excessive noise. The load must be distributed properly on the tooth face, and Excel rigorously assures this condition is met through contact-testing with our master gears.

Correct Contact
Incorrect Contact

Master Gears and Bluing Process
We ensure field performance and wear life when it comes to gear manufacturing by retaining a high quality set of “master gears” to be used in the production process. Each gear or pinion made is contact-tested against the master and must meet the precise specifications of the gear’s contact criteria. Simply put, the benefit to our customer is consistency.

Higher Tensile Strength
Metallurgical Consistency Yields High-Strength Components
In order to maximize tensile strength, Excel certifies our crusher bronze to the top end of the CDA specification for tin. Tougher bushings mean less down-time and fewer replacement cycles. Tin is the most expensive ingredient in the metallurgy of crusher bronze alloys.

Uniform Lead Dispersion
Unique Chilling Process Stops Migration
Our foundry utilizes a unique chilling process that assures even dispersion of lead throughout the casting. Standard foundry molding techniques allow uneven, non-directional cooling that can cause lead migration. Even dispersion of lead provides consistent lubricity and heat dissipation which increase bushing life and reduce unexpected failures.

Optimum Concentricity
Simultaneous “4-Axis” Turning Ensures Concentricity
Extensive investment in our equipment, our people, and our process gives Excel many unique capabilities, including a special “pinch turning” method in the machining of our crusher bushings which simultaneously cuts the OD and ID. Using this technology guarantees absolute concentricity.

Porosity-Free/Uniform Grain Structure
Centrifugal Casting Technique Ensures Alloy Integrity
The purity of our raw materials, coupled with controlled, directional solidification during the casting process creates a tighter, denser grain structure in our alloys while eliminating 99.9% of the gas pockets that produce porosity. The integrity of Excel’s grain structure ensure strong, long lasting replacement parts.