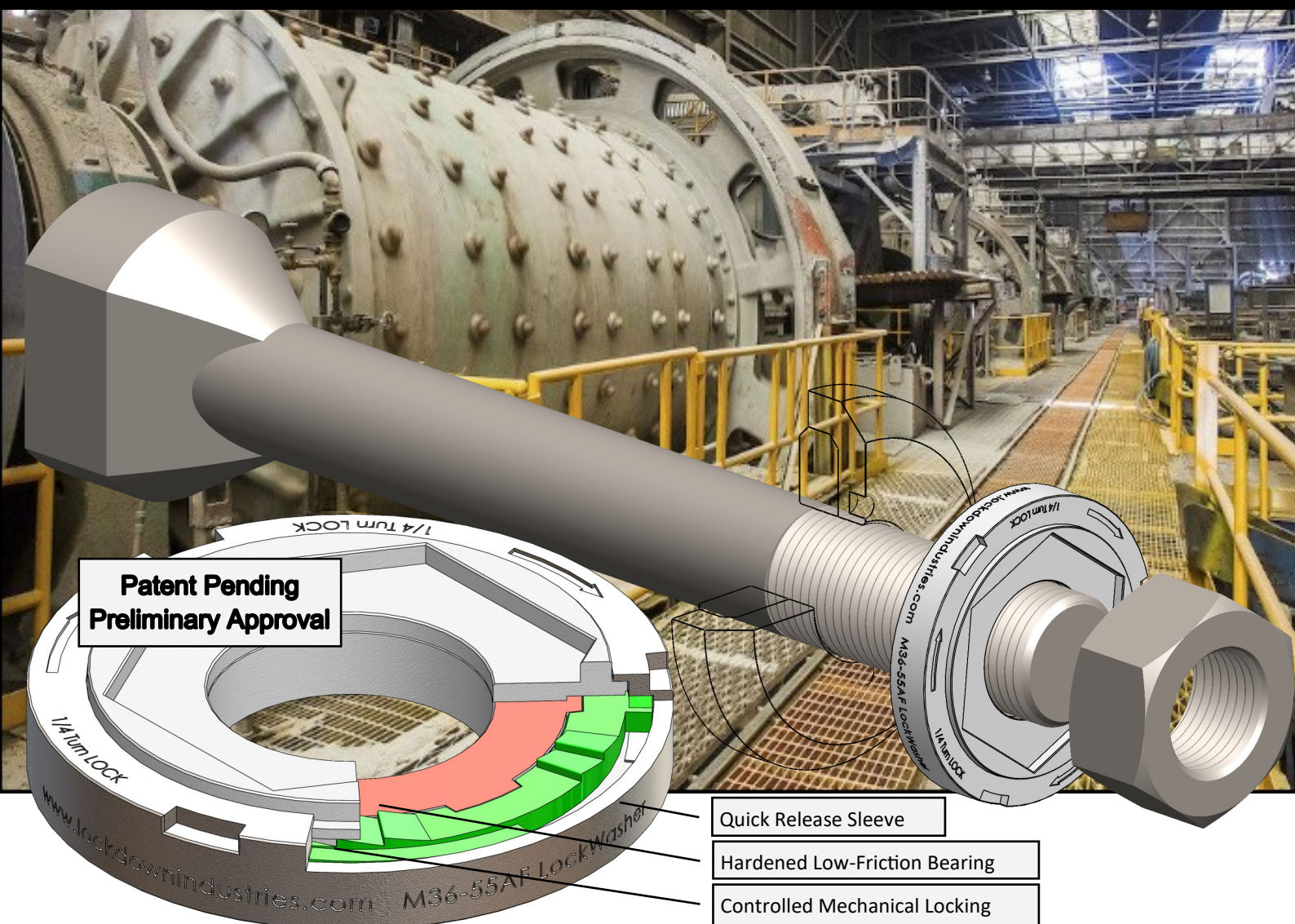


LockDown LockWasher

Grinding Mill Liner Bolting Application



INDUSTRY CHALLENGE

Grinding mills create one of the harshest fastening environments in mining.

Premature liner bolt nut loosening can result in:

- Expensive retorquing
- Maintenance intervention
- Reduced mill availability

Contributing factors include:

- Impact loading
- Vibration
- Settlement
- Wear
- Fastener fatigue

OBJECTIVE & BENEFITS

The objective is simple:

- Delay retorquing
- Improve reliability
- Increase mill uptime

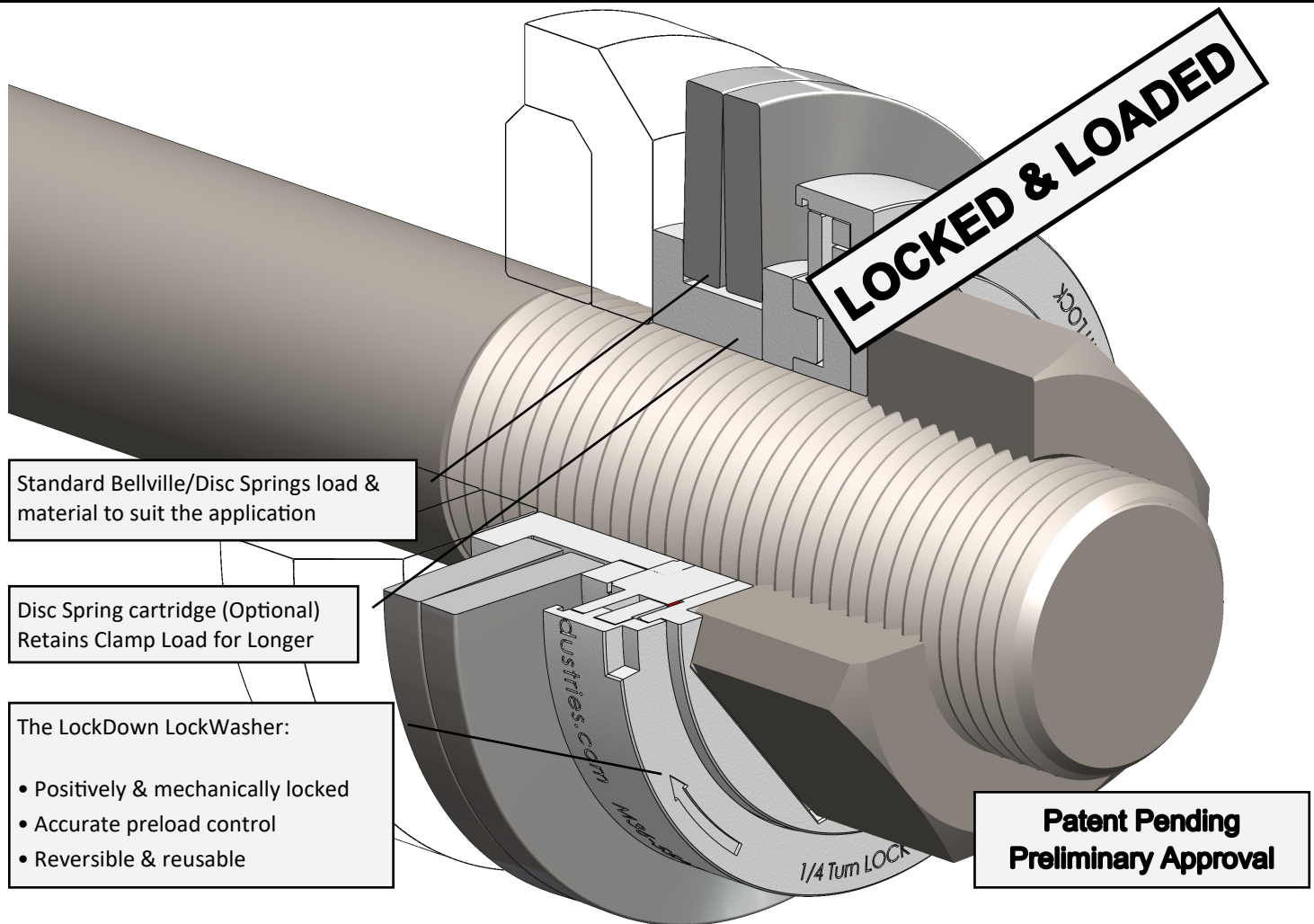
By mechanically locking against unintentional loosening while improving clamp load retention.

Key benefits include:

- Improved fastener security
- Reduced maintenance intervention
- Improved clamp load efficiency
- Reduced risk of premature loosening
- Improved serviceability during maintenance

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LOCKDOWN LOCKWASHER SYSTEM

The LockDown LockWasher system was developed to:

- Mechanically prevent unintentional rotational loosening
- Provide low-cost mechanical fastener locking
- Improve clamp load efficiency and long-term retention
- Reduce torque-induced fastener stress through a low-friction bearing interface
- Assist intentional loosening during maintenance

The LockWasher design can also easily integrate with Disc Springs to introduce additional joint compliance and clamp load retention where required.

Practical field trials can now be explored to help reduce maintenance intervention, improve reliability and increase grinding mill availability.

Contact us with your required bolt size and application details for prompt evaluation and pricing.