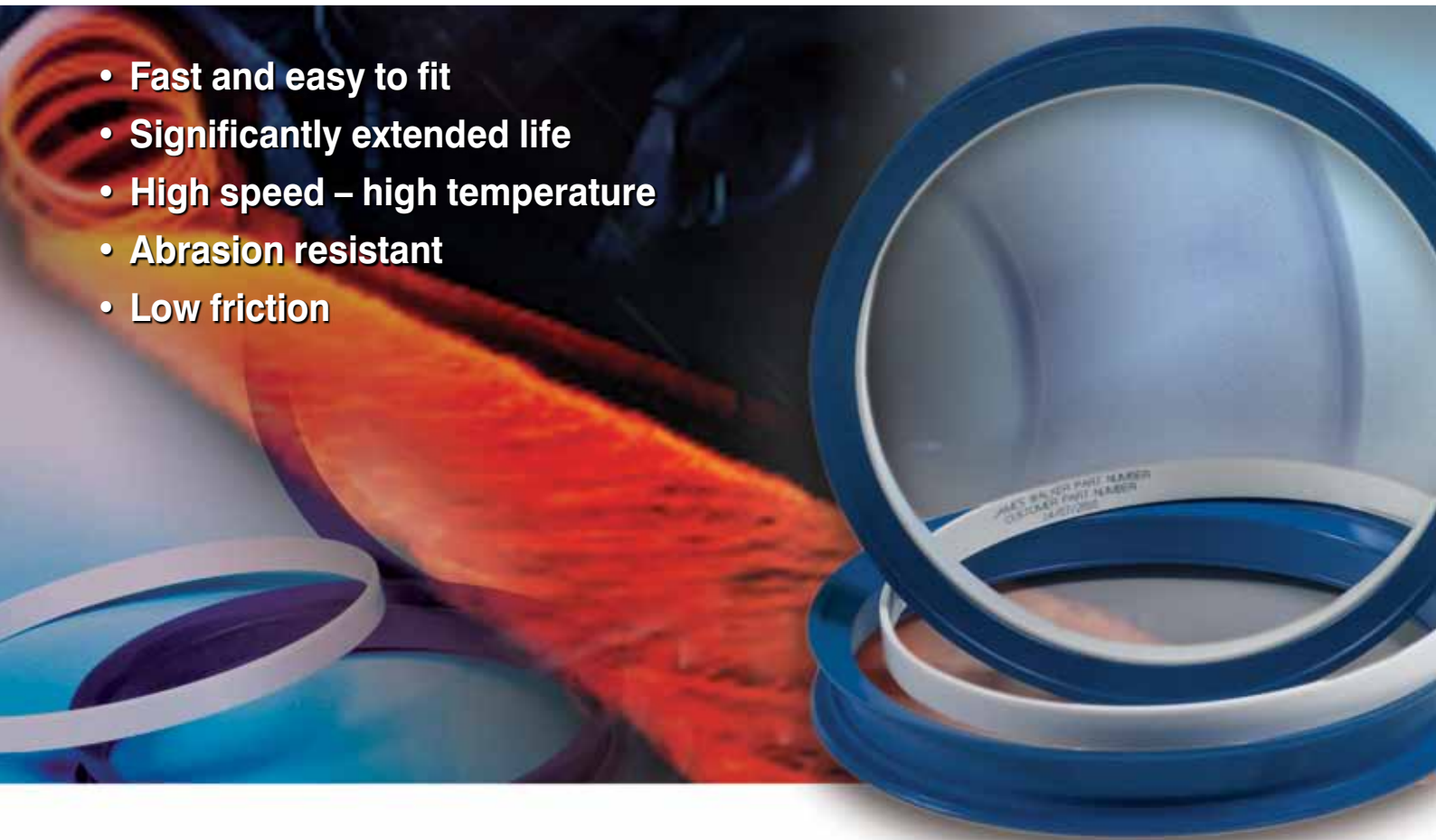


James Walker®

NTRMS SpeedFlex Composite no-twist rod mill seals

Issue 2

- Fast and easy to fit
- Significantly extended life
- High speed – high temperature
- Abrasion resistant
- Low friction



High Performance Sealing Technology



A new concept

New concept – new benefits

In many industries there is a natural resistance to new concepts because they usually involve changes in working practices and processes.

This is definitely not an issue with NTRMS SpeedFlex, which is used and works in exactly the same way as existing seals but is simply better in every respect.

The key benefit behind the innovative NTRMS SpeedFlex concept is the use of a flexible alternative to the traditional metal retaining band. The band material has been subjected to intensive testing during the selection process to verify its performance under the harshest working conditions.

Thermal cycling – Seal remained energised with no slippage following 18 thermal cycles between ambient and 150°C (typical operational temperature) over a period of 477 hours.

Oil resistance – Oil ageing tests carried out at 150°C showed that the material is fully resistant to the typical processing oils used in this application, the bands retaining their flexibility after 28 days of oil immersion.

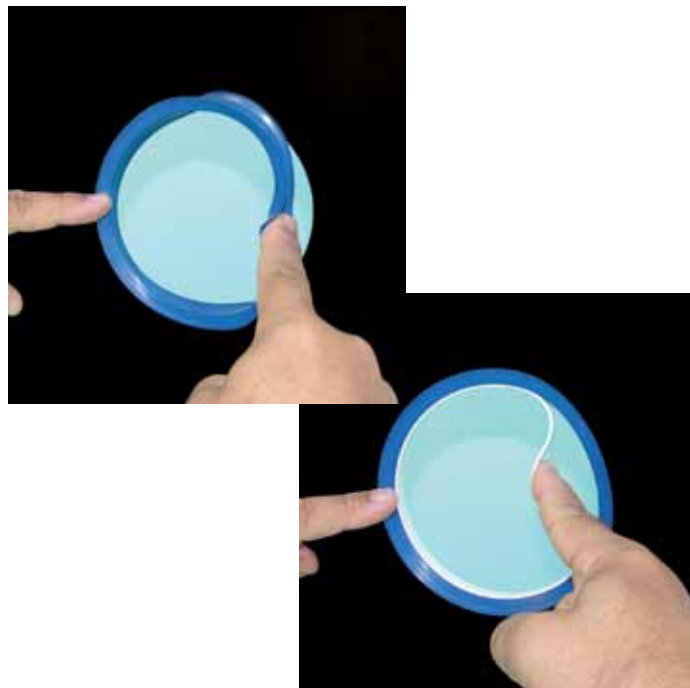
Steam resistance – No crazing or damage occurred to the bands following 1000 cycles of exposure to steam at 132°C. Prolonged exposure to hot water immersion for 16,000 hours at 90°C also had no impact on the material's physical properties.

Running speed and operational reliability are key to output and cost control for a rolling mill. The new concept NTRMS SpeedFlex addresses these issues:

- **Faster and easier to fit**
- **Suitable for high speed / high temperature running**
- **Increased resistance to abrasion**
- **Extended life**
- **Low friction**
- **Reduced downtime**



Flexible for fast, easy fitting



Maintenance engineers who have fitted the traditional metal band retained seals on a no-twist rod mill stand will appreciate the huge leap forward offered by a totally flexible seal and band combination, which simply folds for insertion into the sealing aperture and snaps into place when released.

Field trial proven for easy installation

Following in-house testing of both seal and band materials, NTRMS SpeedFlex underwent extensive field trials at rod mills in both Asia and Europe.

In every trial the seals were highly praised for their speed and simplicity of fitting. The flexible retaining band was appreciated for the way it eliminated any risk of damage to the seals by the tools and jigs needed to fit metal retaining bands.

A new material

A new benchmark in performance

The sealing element offers improved levels of performance compared with current alternatives.

The element is precision moulded in hydrogenated nitrile (HNBR) elastomer that offers significantly enhanced properties to help it withstand the high temperature, high speed and abrasive working environment of a water-cooled rolling mill.

Improved 'sealability'

Low 15% compression set (24 hours at 150°C) helps maintain sealing integrity, even on worn components.

Significantly enhanced abrasion resistance

A key element in providing extended life.

High temperature capability

Operational up to constant +150°C.

High speed capability

Proven in field trials on mills with exit speeds up to 120m/s.

Dramatically extended seal life

At least double the life of other typical nitrile (NBR) and hydrogenated nitrile (HNBR) seals in field trials.

Field trial proven for extended life

Three years of intensive development has gone into the creation of NTRMS SpeedFlex, including two years of field testing at plants in Europe and Asia. These trials have proven that NTRMS SpeedFlex is not only far easier and quicker to install than existing metal band retained seals but is also far more durable and exhibits no slippage on start-up or during high-speed running.

The existing seals on mill stands in these plants had a mean time between replacement (MTBR) in the order of four weeks... On the same equipment, running the same operating patterns, **NTRMS SpeedFlex achieved at least eight weeks with no drop in performance.**

Laser marking

Both sealing element and band are laser etched with the relevant James Walker part identification details and can also carry further dedicated customer information to assist spares identification and maintenance procedures.



Specifying NTRMS SpeedFlex

NTRMS SpeedFlex is available for the two most common housing sizes on 6" and 8" rollers.

**James Walker NTRMS SpeedFlex 6A
COMPOSITE NO-TWIST ROD MILL SEAL
(to fit 110.0mm diameter housing)**
JW Part No. RONTRMS2620880

**James Walker NTRMS SpeedFlex 6B
COMPOSITE NO-TWIST ROD MILL SEAL
(to fit 114.5mm diameter housing)**
JW Part No. RONTRMS2555010

**James Walker NTRMS SpeedFlex 8A
COMPOSITE NO-TWIST ROD MILL SEAL
(to fit 149.0mm diameter housing)**
JW Part No. RONTRMS2620859

**James Walker NTRMS SpeedFlex 8B
COMPOSITE NO-TWIST ROD MILL SEAL
(to fit 154.5mm diameter housing)**
JW Part No. RONTRMS2555017

Please note: The 6" or 8" size refers to the size of the roller used on a No Twist Rod Mill and not the dimension of the seal itself. If your housing diameter is not quoted here, please contact James Walker for further advice.

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