



**SPINNAKER CORPORATION**  
EQUIPMENT AND PROCESS SOLUTIONS

## *SpinTech Newsletter*

Volume 7 July 2012

### New Capabilities Added

The mission of Spinnaker is to provide a full line of equipment, components and field services from stock preparation to finishing/converting. Using our process knowledge, equipment expertise, engineering capabilities, field services resources, and manufacturing we provide paper mills lower cost alternatives for standard equipment, field services, and repairs. This is accomplished via our own resources, Distribution for other manufacturers, and partnering with roll & machine shops.

Continuing this process a full range of roll service capabilities has been added in 2012. This includes:

- New roll design and manufacturing
- Roll & journal repairs
- Balancing & grinding
- Bearing housing repair
- New bearing housings

This newsletter edition will focus on roll journal and bearing housing repair options.

### Journal Repairs

#### Technically Sound & Cost Efficient Options

A common roll issue is a failed or spun bearing that damages the roll journal. We can repair damaged journals via either chrome or metal spray depending on roll size & weight, the end use application, and the mills' preference.

The procedures for chrome or metal spray repair are basically the same.

1. Using the roll and the bearing data, the machining drawing is prepared.



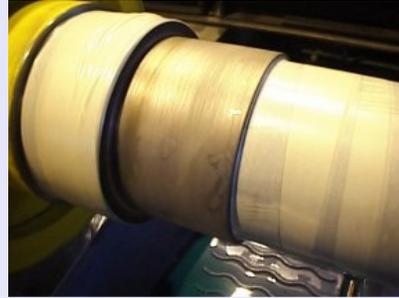
Damaged Roll Journal

2. The damaged area is ground down until only good metal remains.
3. The journal is masked off so that only the repaired area to be chrome plated or arc sprayed is exposed.
4. The damaged area is then either chrome plated or arc sprayed with metal with a build-up of up to .060".
5. After the appropriate curing/cooling time the roll is then placed in the lathe or grinder and the bearing seat machined to the
6. original specifications.

The metal typically used in the arc spray repair process is stainless steel.

Typical lead times are two weeks after receipt of the roll. In emergencies, the repairs can be completed in 24 - 48 hours.

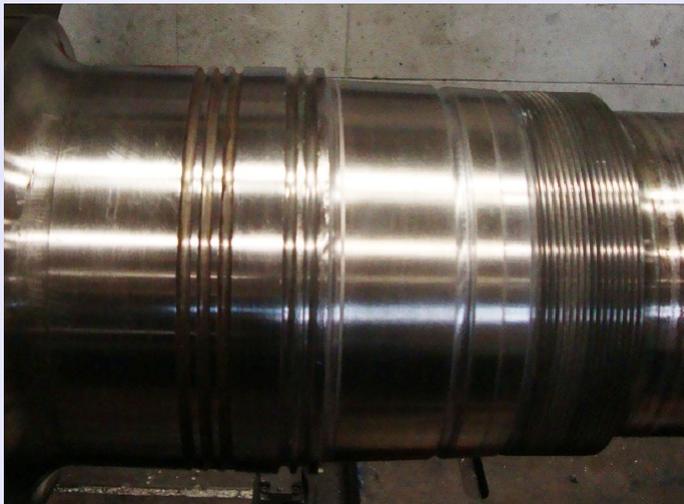
Copies of all journal and housing drawings generated for the repair process are delivered to the mill for their records.



Prepped & Masked Journal



Metal Arc Spraying



Repaired Journal



Metal Sprayed Journal

## Bearing Housings: Repairs & New

If the bearing failed or spun on the journal, there is a good chance that the bearing housing also received damage. In those cases we are able to repair the housing(s) at the same time the journal(s) are being repaired. The preferred method when possible is to machine the damaged area out of the housing ID, shrink fit in a bronze, cast iron, ductile iron, or steel sleeve, and machine the ID to the bearing tolerance.

In cases when sleeving is not practical or possible, the damaged area is machined out and the area built up with metal arc spraying, which is then machined to the bearing tolerance.

In cases where the damage is too extensive for repair we are able to manufacture new bearing housings. Typically at a fraction of the cost of obtaining from the OEM.



Sleeve Repaired Housings



New Bell Housings

## Maintenance Tip

### Rotary Union Support

The rotary union support used on dryers with enclosed gears is often a fabricated steel cage of multiple support bars welded to two flanges. This type of support can suffer failures at the welds due to long-term continuous stresses generated by vibration in the sections. Additional stresses are imparted by flooding, bearing issues, etc.

One of our partners, **Power Train Services** (PTS), has created a new rotary union support that eliminates many of the weaknesses of the welded cage. The support is a single ductile iron casting. Ductile iron has greater elongation and vibration dampening compared to steels. Being a single piece casting there are no weak points or stress concentrations as there are in a steel weldment.

This is an excellent replacement option if you are experiencing rotary union support failures in your dryer sections, or want to improve on the existing support to eliminate a failure potential.

In Ohio and Lower Michigan contact Spinnaker via phone at 920-265-0941 or email to: <mailto:info@spin-corp.com>

For all other areas contact PTS directly via phone at 920-336-4631.



New Rotary Union Support

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