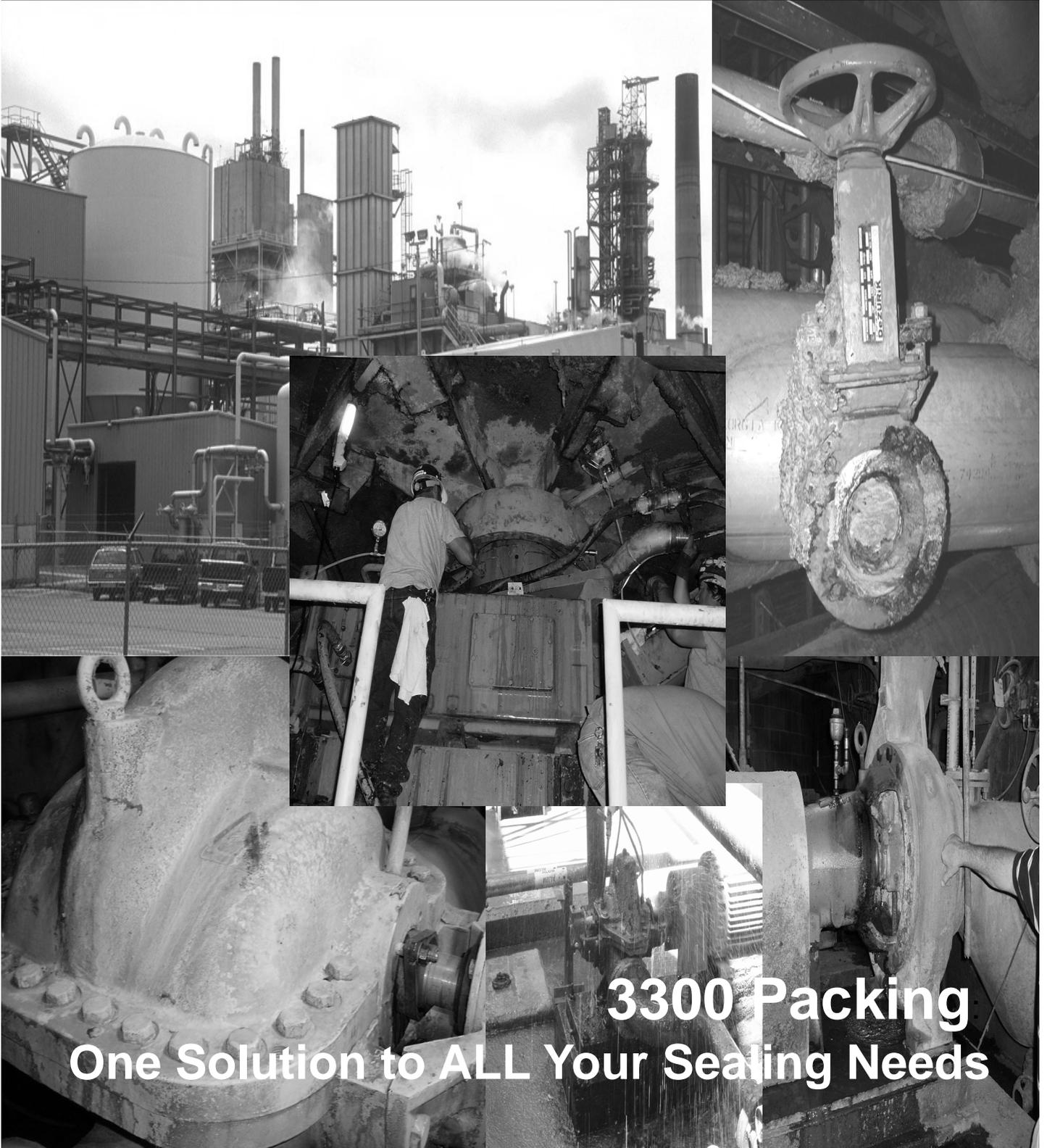


# SLADE



## Mechanical Packing for the Pulp and Paper Industry



**3300 Packing**  
**One Solution to ALL Your Sealing Needs**

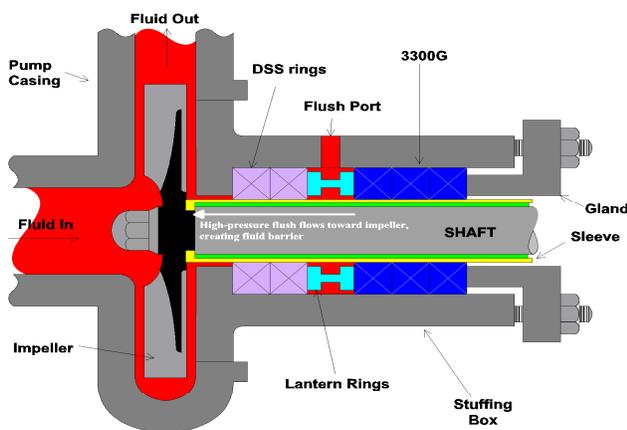
# Pump and Mixer Applications

## Water Conservation

- Reduce flush usage by at least 50%
- Slade runs leak free – no flush needed to cool or lubricate
- DSS rings reduce flush flow reducing product dilution
- Flush ONLY to keep solids out of the stuffing box

## Equipment Longevity

- No leakage to washout bearings or damage motor
- Rather than wear sleeves from leakage, Slade protects sleeves by coating them with graphite
- No need to replace previously worn sleeves or stuffing boxes



## Simplicity

- Only two ring designs
  - DSS – Anti-Extrusion/Filtration
  - 3300G – Sealing Ring
- No need to change or add to original equipment; no extra gauges to monitor
- Can not burn up or over tighten
- Not necessary to replace entire set, just add a ring.



## What Makes Slade Different?



Slade manufactures all of its own patented graphite yarns. The advantage is that each individual strand has its own unique core made of high tensile carbon fiber (for sealing rings) or stainless steel (for anti-extrusion or bushing rings). The yarns are protected by US & EU patents. They were developed to conduct heat like a steel alloy, to transfer heat away from the shaft.

When compressed by 25% (the denser the better), the rings are die formed into the stuffing box. This forms a “heat sink” in the stuffing box. So you don’t need flush-water to cool the shaft sleeve. In addition rather than allow leakage to erode the packing and sleeve, Slade’s ability to operate “leak free” protects the sleeve and packing. This gives Slade a much longer life compared to conventional packing.

## Applications

- |                        |                        |                  |                       |
|------------------------|------------------------|------------------|-----------------------|
| •Hydropulpers          | •Stock Pumps           | •Flotation Pumps | •Condensate Pumps     |
| •Top Separators        | •Thick Stock Pumps     | •Shower Pumps    | •Boiler Feed Pumps    |
| •Continuous Digesters  | •Dewatered Stock Pumps | •Fire Pumps      | •Solid Recovery Pumps |
| •Refiners              | •Refined Stock Pumps   | •Fan Pumps       | •Deflaker             |
| •Washer Drums          | •White Water           | •Sludge Pumps    | •Black Liquor         |
| •Stock Chest Agitators | •Green Liquor          | •Vacuum Pumps    | •Mixers               |

# Valve Applications

## Simplicity

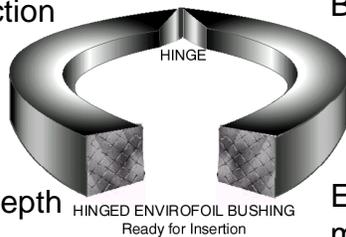
- Same packing for Pumps and Valves, reduces inventory costs
- No "Live-loading" required (no weight loss at temperatures up to 1,000°)
- No special end-rings required, carbon reinforcement keeps packing from extruding
- No lubricants, graphite coats stem for low coefficient of friction
- Slade does not harden, but remains flexible, much easier to extract

## Equipment Longevity

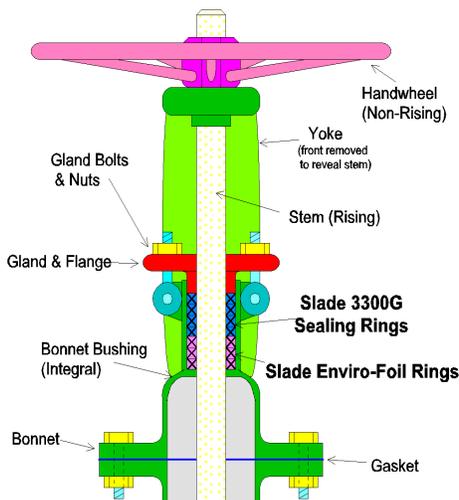
- No need to replace pitted or worn stems and stuffing boxes. When properly compressed, Slade will fill inconsistencies
- Rather than wear stems from leakage, Slade protects stems by coating them with graphite
- No wire reinforcement that could damage stem
- Lifetime replacement warranty, pack it with Slade and forget about it

## With Slade Enviro-Foil Less Is More

- 3-5 sealing rings is all that is needed.
- Less sealing rings means less friction
  - Easier to operate
  - Easier to compress
  - Easier to seal
- Use Slade Enviro-Foil Rings as a permanent bushing to raise the depth of the stuffing box.



Braided with Slade's patented graphite yarns reinforced with Stainless Steel and densely die formed. Replaces carbon bushings. Easier to install, less costly, and no machining required.



## Features

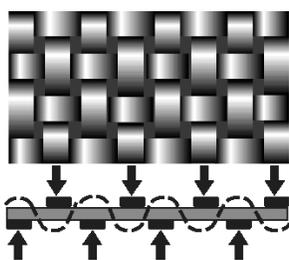
- Each yarn reinforced with carbon fiber (600,000 PSI tensile strength)
- API Fire Tested (607 and 589 at 1,800°F)
- No lubricants, grease or impregnates that can be squeezed, washed or cooked out

## Pump and Valve Service Limits

Temp: up to 1,800°F  
 Chemical: 1-14 pH  
 Pressure: Up to 5,000 PSI

## Knife Gate Valves

Slade is flexible enough to be formed around and seal knife gates, using Slade 3300CJ or 3300CJK as a top ring for longevity.



## Pyro-Tex Sheet Gasket

Slade's patented graphite yarns reinforced with stainless steel are woven to form a 80" wide sheet. This design produces a 'metallic leaf-spring effect' while giving the sheet great flexibility. It handles temperatures over 1000°F, pressures up to 4,500 PSI, and the full pH range of 1-14. It's flexible enough to roll up and ship in tubes. It is able to be cut with scissors.



# Case Histories



**Type of Equipment:** Turbo Separator

**Conditions:** Grinds up paper, cardboard, staples, wire, glass, and anything else thrown in. Flush water pressure varied causing typical packing to run dry and burn up. Highly abrasive, slow turning, large shaft about 10". Stock thrown everywhere.

**Solution:** One ring of Slade 3300CJK followed by five rings of Slade 3300G. No flush was used when Slade was installed. Running great with out worry of "smoking" the packing or leakage.

**Type of Equipment:** Warren 14x14x22 white water pump.

**Conditions:** Server sleeve wear causing heavy leakage causing problems with the bearings and motor.

**Solution:** Two rings of 3300CJ allow flush water to pass through. Lantern ring with flush on followed by 3 rings of 3300G. Due to sleeve wear larger CS of packing used (called for 9/16" used 5/8").

**Outcome:** At start-up, some flush water leaking out. Made few adjustment to get it down to a steady drip.



**Type of Equipment and Material:** Lightening agitator 6-1/2" shaft and a 8"Bore. Mixes bleached stock.

**Problem:** Heavy leakage in a high traffic/visible area. Causing a safety hazard and a loss of 2-1/2 gallons a minute at a consistence of 2.63%, \$800 a day.

**Solution:** Lantern ring with a flush, left in place, 2 DSS rings , followed by 3 – 3300C rings compressed individually.

**Outcome:** Three weeks later, still just a slight drip, and the maintenance manager is impressed to the point of submitting a safety award proposal.

## SLADE

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