SPLIT SEAL SOLUTIONS FOR THE MILL

Change the seal. Not the production schedule.

Pulp and paper mills run some of the largest, hardest-to-reach rotating equipment in industry. Split mechanical seals let you replace packing or a failed seal without dismantling the pump or agitator – turning a major outage into a routine job.

- ✕ No uncoupling
- ✕ No motor or pump removal
- ✕ No re-alignment
- ✕ No pipework disturbed

Why split seals?

No dismantling
Fitted around the shaft in situ – no uncoupling, no pulling the motor or pump, no re-alignment afterwards.

Back in production faster
A seal change becomes a short planned stop instead of a major maintenance outage.

End packing leakage
Convert packed pumps and agitators: no gland water diluting stock, no leakage, less housekeeping.

Protects shafts & sleeves
No packing wear on sleeves means fewer sleeve replacements and longer equipment life.

Made for big, awkward kit
Side-entry chest agitators, double-suction fan pumps and large stock pumps – where a conventional seal change is a major job.

Lower cost of ownership
Less labour, less lost production and less water – savings that repeat at every seal change.

A seal change, two ways

Typical large between-bearings pump or side-entry agitator

Conventional seal

1. Isolate & drain
2. Uncouple the drive
3. Move motor & strip bearings
4. Withdraw rotating element
5. Fit new seal
6. Rebuild & re-align
7. Restart

→ **Major outage & full crew**

Split seal

1. Isolate
2. Remove old packing or seal
3. Fit split seal around the shaft
4. Restart

← *fewer steps, less dismantling, shorter stop*

→ **Routine planned stop**

STILL RUNNING ON PACKING?

Every packed gland is a conversion opportunity.

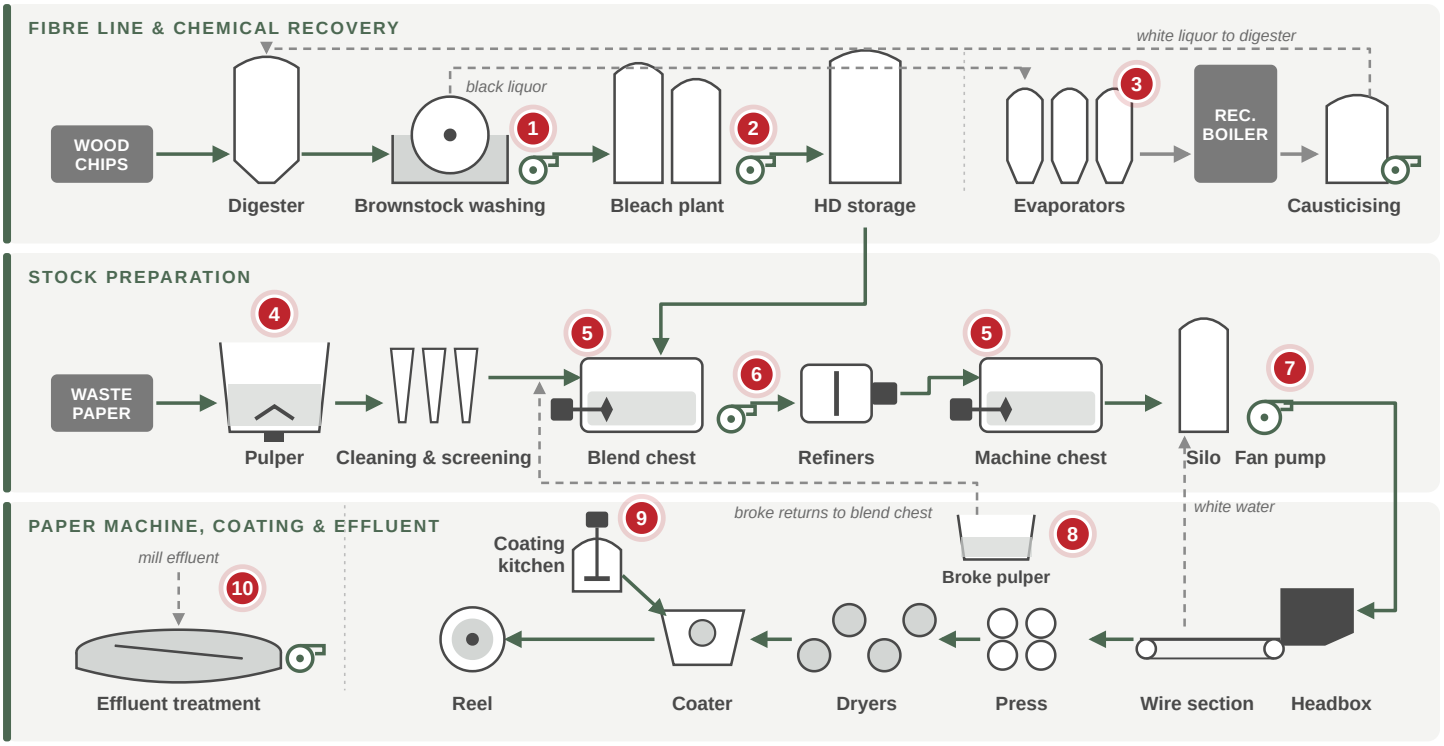
- **Gland water** – continuous flush water that dilutes stock and adds to effluent load.
- **Leakage & housekeeping** – stock, liquor and chemicals on the floor around the pump.
- **Sleeve wear & adjustment** – constant re-packing, worn sleeves and fitter time.

A split seal converts the pump in place – **no strip-down required.**

APPLICATION MAP

Where you'll find split seals in the mill

From the fibre line to the effluent plant, these are the most likely places a split seal will save you a strip-down. The red markers show where to look first.



1 Brownstock washing
Washer filtrate & stock pumps
Hot, fibre-laden duty running around the clock – packing leaks are messy and costly here.

2 Bleach plant
MC stock pumps, tower agitators & filtrate pumps
Aggressive chemistry and large equipment where a seal change is a big job.

3 Liquor circuit
Black, green & white liquor transfer pumps
Abrasive, caustic liquors that punish packing and sleeves.

4 Pulping
Hydrapulper rotors & pulper dump pumps
Heavy, hard-to-reach drives under high-solids load.

5 Stock chests
Side-entry agitators on HD, blend & machine chests
One of the biggest wins – replace the seal without withdrawing the agitator.

6 Stock preparation
Transfer, cleaner & refiner feed pumps
Many pumps, many packing glands – ideal for a planned conversion programme.

7 Short circulation
Fan pumps & white-water silo pumps
Large double-suction fan pumps: no need to strip the bearing housing or move the motor.

8 Broke system
Broke pulper agitators & broke pumps
Under the machine, tight on access – exactly where split seals pay off.

9 Coating kitchen
Mixers, agitators & coating feed pumps
Clean, leak-free sealing protects expensive coating colours.

10 Effluent treatment
Clarifier, sludge & effluent pumps
Solids-laden duty where downtime and leakage both cost money.

Start with the biggest wins: side-entry chest agitators 5 and double-suction fan pumps 7 – where a conventional seal change means the most dismantling and the longest stop.

Suitability depends on the duty. NASH reviews temperature, pressure, speed and media for every application before recommending a seal.

FLEXASEAL STYLE 85 · SUPPLIED BY NASH

The obvious choice of split seal: just two pieces.

The world's first true two-piece split cartridge mechanical seal. Place two halves over the shaft, bolt them together, and mount it like any other cartridge seal.



2 pieces to handle. That's the whole installation.

Many split seals arrive as a kit of loose parts to be assembled around the shaft. The Style 85 is a fully split **cartridge**: everything that matters is already assembled, set and tested inside each half.

- No measurements
- No shims
- No special tools
- No glue



Two halves. Faces secured inside. Nothing loose to lose in the stuffing box.

Fitted in four steps

STEP 1
Take out the old packing or seal
The pump, motor and coupling stay exactly where they are.

STEP 2
Place two halves around the shaft
Bolt them together – seal faces stay protected inside each half.

STEP 3
Mount it like any cartridge seal
No measuring, no shimming, no glue and no special tools.

STEP 4
Ready to run
Every seal is assembled and pressure tested at the factory before it reaches you.

Engineered for pulp & paper duties

Faces never handled
Both lapped faces are secured in the cartridge halves, so they cannot be cocked, chipped or contaminated during fitting.

Built for fibre & solids
Stationary multi-springs sit out of the product, and centrifugal action keeps solids away from the faces – no clogging.

Seals on worn sleeves
The static sleeve O-ring sits outside the stuffing box, giving a good seal even on worn packing sleeves – ideal for conversions.

Hydraulically balanced
Handles higher speeds, pressures and misalignment than many split designs.

Style 85 vs conventional component split seals

	TYPICAL COMPONENT SPLIT	FLEXASEAL STYLE 85
Pieces handled during fitting	Many loose components	**Two cartridge halves**
Fitter touches lapped seal faces	Usually	**Never**
Setting measurements / shims	Often required	**None**
Glue or adhesive on joints	Some designs	**None**
Factory pressure tested as a unit	Rarely possible	**Every seal**

Operating limits

SHAFT SIZE	TEMP	RPM	PRESSURE
45 – 75 mm (1¾″ – 3″)	175°C	3600	17 bar
80 – 95 mm (3⅛″ – 3¾″)	175°C	1800	14 bar
100 – 120 mm (3⅞″ – 4¾″)	175°C	1800	10 bar
125 mm + (5″ +)	175°C	875	7 bar

Sizes 45 – 219 mm (1.437″ – 9″) · **Metal parts** 316 stainless · **Faces** silicon carbide vs carbon or silicon carbide · **Springs** Hastelloy C® · **Elastomers** Viton® (Aflas® / Fluoraz® options)

Limits are individual maximums and do not apply simultaneously. Viton® – DuPont Performance Elastomers; Aflas® – Asahi Glass Co.; Fluoraz® – Greene Tweed; Hastelloy® – Haynes International, Inc.

NASH

Stop pulling pumps to change seals.

Talk to NASH about reviewing your pumps, chests and agitators for split seal conversion – we'll match the right Style 85 to every duty.

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