



# Chicago Industrial Pump Company

VOL 2, #5



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**Pitbull® Pumps Are Ideal For Pulp & Paper Mills,  
Recycle Mills & Roofing Manufacturers.**

## Common Pulp & Paper Applications



- Kaolin & lime slurry
- Tank car unloading sumps
- Sludge off of DAF systems
- Clarifier underflow, sludge
- Hydropulper sumps
- Press sections of paper machines
- Hot condensate return from sump pits & receiver tanks
- General trash & raw sewage pumps
- Pumping green, white and black liquor
- Sumps around paper coating areas
- Belt Conveyor sumps
- Caustic transfer services
- Contaminated effluent services
- Secondary stock
- Wood yard chip, trash & debarking sump pump services
- Wash down sumps around stock chests & paper machines

*“The primary function of the government is - and here I am quoting directly from the U.S. Constitution - to spew out paper.”*

Dave Barry

### Fast Facts:

Not including recycling mills & roofing manufacturers there are **655 Paper Mills in the US alone.**  
**310 are Pulp & Paper Mills**  
**345 are Paper Only Mills.**



## **PITBULL® IS THE PUMP OF CHOICE IN THE HANDLING OF WHITE, BLACK & GREEN LIQUORS**

### **Paper Recycler Hydropulpers**

Hydropulpers are large stirring tanks that pulverize old corrugated container (OCC) bundles to break down the fibers of the paper in a mixture of hot water & chemicals. A lot of trash can be in these bundles including rope, wire, plastic, metal, wire ties, long strings, plastic, bottle caps, pens, tape, etc. Hydropulpers are notorious for over flowing pulp & trash into their sumps. Other pumps clog or fail from the large amount of trash inherent with this application but not the PITBULL®

### **Screening Process**

From the pulper the fiber moves through the disk refiner to the "wet end" of the Paper machine. Nozzles on the machine's head box spray the wet fiber onto a moving screen or "wire." The water that separates from the pulp during this process is collected in sumps.

### **Press Section Sumps**

The thin wet fiber moves to the press section where it is smashed through two steel rollers, squeezing out the water into sumps.

### **Chemical Recovery**

The PITBULL® is the pump of choice in the handling of white, black & green liquors.

In the digester, wood chips & white liquor (sodium hydroxide (NaOH) & sodium sulfide (Na<sub>2</sub>S)) are cooked in a pressure cooker to break down the lignin which holds the wood fibers together. The spent mixture of white liquor and lignin, known as black liquor is concentrated, through evaporation, until it consists of 66% solids.

The concentrated black liquor is burned in a recovery boiler which produces a green residue or smelt of sodium carbonate, sodium sulfate and sodium sulfide called green liquor. Adding water & lime to the green liquor processes it back to white liquor for reuse in the digester.

### **DAF - Dissolved Air Flotation**

DAF is used in the pulp and paper industry as well a variety of other industries to remove fine particulate matter in water treatment processing.

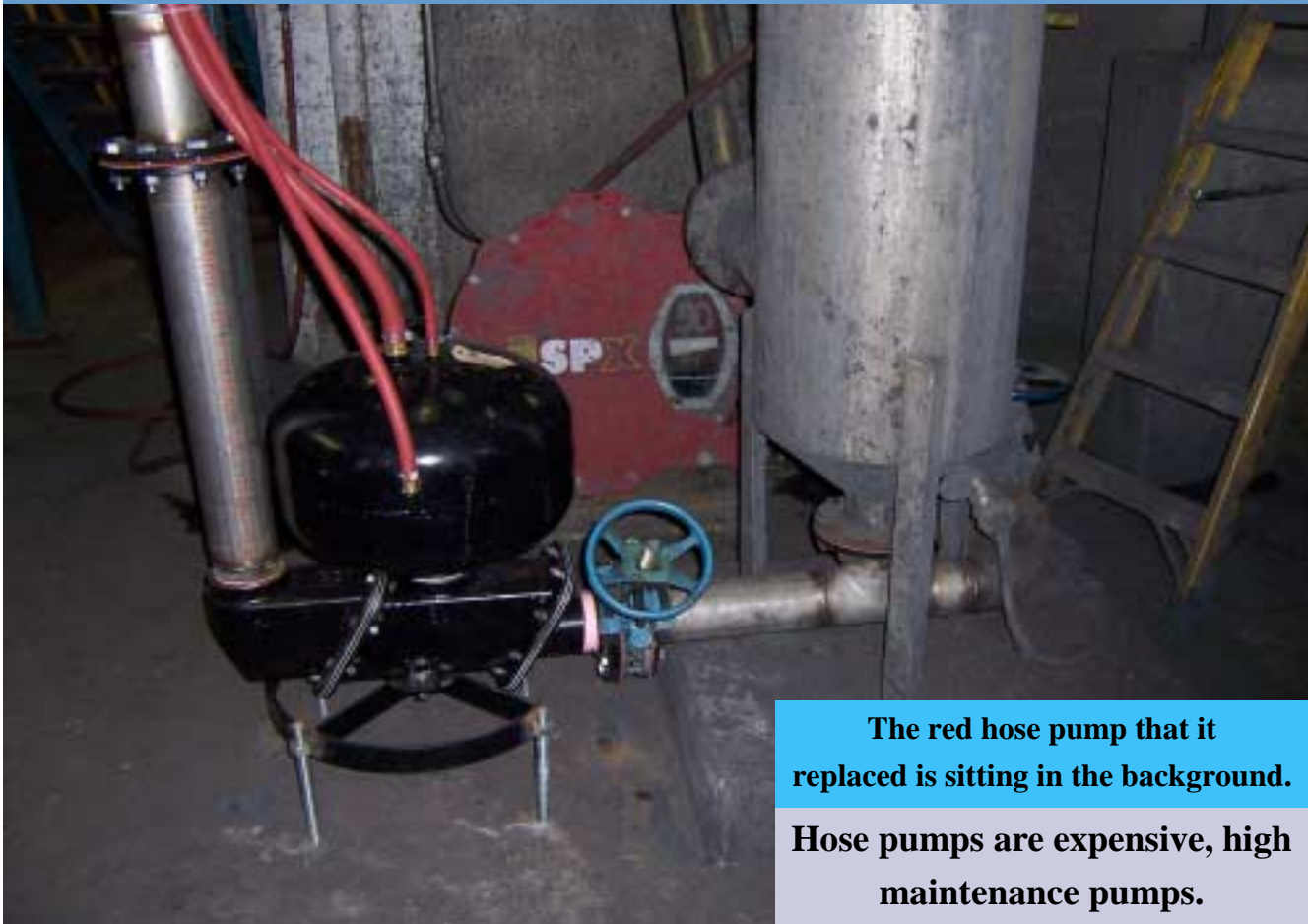
### **Wood Yards**

Moving solids such as wood chips and knots without clogging is what the PITBULL® does best.

*"No arsenal, or no weapon in the arsenals of the world, is as formidable as the will and moral courage of free men and women."*

- Ronald Reagan

**This black PITBULL® transfer pump is installed in a paper mill.  
to pump the sludge coming off a DAF system**



**The red hose pump that it  
replaced is sitting in the background.  
Hose pumps are expensive, high  
maintenance pumps.**

**These problems occur in paper mills  
with other pumps-**

- **Rope causes centrifugal pumps to lock up or even snap the shaft.**
  - **Mechanical seals fail**
  - **Floats of the float controls bind and stop working**
  - **Pump loses its prime**
  - **Heat and Cavitation damages the pump**
- but NOT with the PITBULL®.**



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Be sure to visit us on the  
web and view the video  
of the Pitbull® in  
action at:

[www.pitbullpumps.com](http://www.pitbullpumps.com)



Home of the  
PITBULL® Pump  
since 1990



The F Series  
Filter-press feed and  
sludge pump

### Clarifier sludges

Above is a heavy slurry taken off the bottom of a clarifier. This is usually not a high flow application but it will be high in solids content and likely to be abrasive, trash laden and varied in consistency.

This is a perfect place for a Pitbull 'F' series whose **LARGE STROKE VOLUMES & LOW CYCLE/WEAR RATES,** give you **SUPERIOR RELIABILITY** compared to double diaphragm, progressive cavity, hose, centrifugal and other types of pumps that have solids to handle.

And like all PITBULL® pumps it does it with  
**NO SEALS - NO DIAPHRAGMS - NO IMPELLARS**  
**NO PACKING - NO FLOATS - NO SHAFTS**  
**NO MOTORS - NO BEARINGS**  
**NO MECHANICAL SEALS**  
**NO CAVITATION**

- Have a PITBULL® success story you would like to share?
- Have a suggestion for an article you would like to see in a future issue?
- Want to add your email address to the PIT BULLETin mailing list?

Email me at [RSutherland@pitbullpumps.com](mailto:RSutherland@pitbullpumps.com)

You and your company could be featured in an upcoming issue.

Roger Sutherland - Operations Manager