

# APPLICATIONS PUMPS



## SEAL GLAND FLUSHING

File No. 168

### Section 6

#### PROBLEM:

To extend the seal life in a centrifugal pump, salt water injection application.

#### SOLUTION:

Use a CAT PUMP to flush seal areas clean and improve seal life from two to three months without flushing to approximately one year with flushing.

#### SPECIFICATIONS:

CAT PUMPS Model (two) .....	*524
Pressure (each) .....	1600-2000 PSI
Flow (each) .....	3-4 GPM
Temperature .....	Ambient
Fluid .....	Water
Duty Cycle .....	Continuous
Drive .....	Electric

\*Alternate CAT PUMP model 3CP1120 or 5CP2120W.

#### BENEFITS:

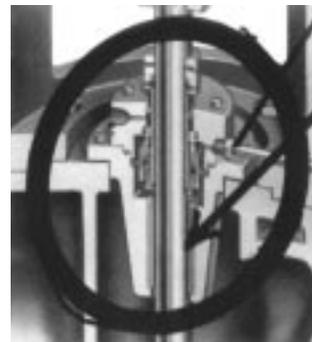
- Reduces expensive downtime and operating costs.
- Greatly extends seal life.
- Small compact design conveniently fits system.
- Consistent flow and pressure to overcome the 2000 PSI centrifugal pump operating pressure.

#### OPERATION:

Some oil production sights require the disposal of hundreds of gallons of waste water. In this particular application a large can-type pump (vertical turbine multiple stage centrifugal pump) running at 350-400 GPM is required to inject the salt water back into the ground.

The oil company experienced a problem with this application which the CAT PUMP solved. The centrifugal pump had premature failure of the seal glands due to the abrasive particles in the water being trapped in the seal area. This resulted in costly repairs and downtime. To overcome this situation, they installed a CAT PUMP to flush the seal area. Since the centrifugal pump was operating near 2000 PSI, they needed a pump capable of continuous duty and overcoming the high pressure. The CAT PUMP satisfied these requirements perfectly.

The CAT PUMPS' compact size allowed it to conveniently fit right into the system. The seal glands are positioned just before the stuffing box to seal off the fluid from the shaft. Salt water and abrasive material in the pumped fluid can attack these seals quickly. The CAT PUMP is capable of injecting high pressure water into the stuffing box to flush any impurities from the seal glands and eliminate costly and troublesome failures.



This is a close-up view of the stuffing box and seal gland in a centrifugal pump. The arrow indicates the location of injection to prevent grit and abrasives from becoming embedded in the seals.

*“Customer confidence is our greatest asset”*

Products described hereon are covered by one or more of the following U.S. patents 3558244, 3652188, 3809508, 3920356, 3930756 and 5035580

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*The Pump with "Nine Lives"*

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