



*Bringing Awareness to Pump Preservation*

## **Shelf Life:**

*With the possible exception of Twinkies™\*...all things have a finite shelf life.*

The purpose of this month's SSWSP is not to go into the details of pump preservation, but to simply make you aware that it is required. For today we will only discuss new single stage pumps that have not previously been in service.

When you receive a new pump; proper storage procedures must be followed. The enemies are **dirt** and **dust**, **humidity** and **temperature**, **vibrations**, **ultraviolet light** and **ozone**, and of course the ever present **oxidation** and **corrosion**.

From the moment a casting is poured, or a metal part is ground or machined,

an elastomer is formed ... without exception... the useful life span clock starts and waits for no one.



When a pump is received from the factory and properly stored indoors, it should be satisfactory for short-term storage. As you approach storage schedules of 3-6 months or longer before startup, you must consider long term storage procedures.

### Humidity and Temperature Control:

In the decision process you need to know if the pump will be stored indoors or out and if it is indoors, will the temperature and humidity be controlled. Do not confuse *temperature* controlled with *climate* controlled. Climate controlled storage spaces manage both, which together work to regulate moisture levels.



Climate controlled typically means 65 to 85 degrees F with no changes in temperature of more than 10 degrees in one hour. Humidity should be less than 60 percent and often less than 50 percent. Note that pump parts stored below 65 F will not normally be an issue if other parameters are controlled.

## There are also Specific Cautions and Procedures for Rotors, Bearings, Greases, and Seals - Oh My!

For instance, pump rotating assemblies should be turned by hand every month or two and left in a different position than found to prevent rotor bowing and false brinelling (bearing) issues.

### Note:

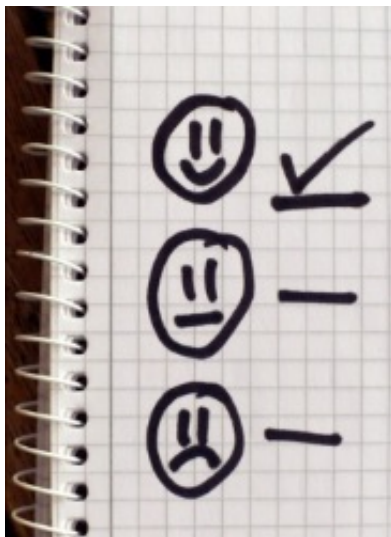
False brinelling can occur simply from small vibrations due to passing traffic and heavy machinery operating nearby.



Sealed for life ball bearings have a 5 year maximum shelf life (due to the grease) even under ideal storage conditions. Mechanical seal assemblies are a detailed combination of metallic and nonmetallic components, which must each follow their own unique preservation regiment.

### Ozone:

Exposed (to the atmosphere) rubber products such as spare progressive cavity pump stators and other elastomers are subject to ozone attack. Some elastomers such as EDPM and Viton™ are inherently less prone to ozone issues.



### Procedures:

We have formal engineering procedures to fit most storage situations. We will work with you to make sure the pump and ancillary equipment are stored properly. If you are in a marine, coastal or tropic environment special steps are required even before the pump is shipped.

### Postscript:

\*The purported shelf life of Twinkies™ ...as a millennium, is an urban myth.

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