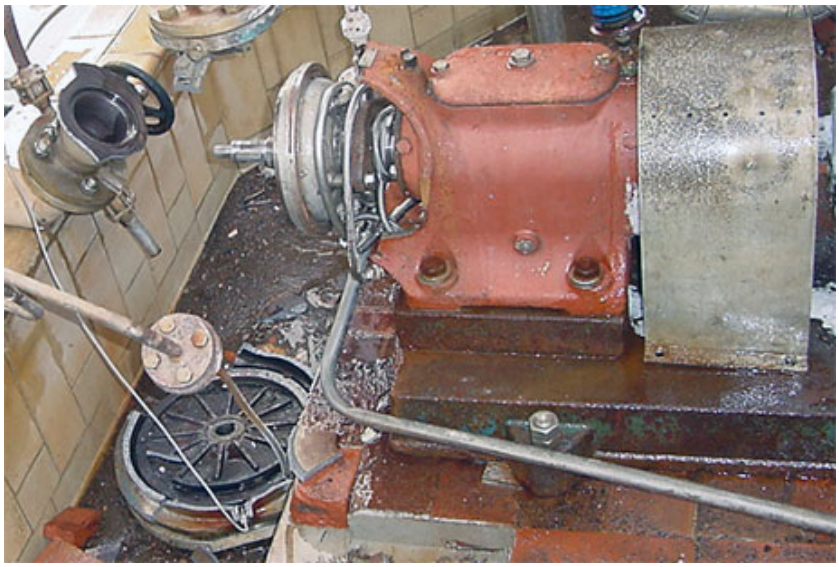
Pumping Related Hazards – Part 1

Generally-speaking, pumps are not considered to be dangerous pieces of equipment. For most operators, pumps quietly do their jobs day-in and day-out without requiring much consideration. However, like any other industrial equipment, they can become hazardous if operating guidelines are not followed. We all know that guards should be in place before running, and to pay attention to electrical safety, but other failures to observe established operational guidelines can have unexpected consequences. In this series of articles, we'll outline some specific incidents that have happened in the past.

Incident #1

A pump running in an Ammonium Nitrate service began to experience some leakage around the stuffing box. Rather than properly investigating the root cause of the problem, the maintenance team simply tightened the stuffing box until the leak subsided. Unfortunately, this caused friction and heat to build up between the packing and shaft sleeve until the Ammonium Nitrate became so hot and unstable that the case ruptured and the pump exploded. Fortunately, no one was seriously hurt.



Lesson to be learned

Properly investigate the root cause of the problem instead of using quick fixes. In this incident, the root cause was later identified and could have been easily prevented. Also, when it comes to Ammonium Nitrate, make sure that you constantly monitor the temperature of the pump.

Wilfley pumps, particularly the A9 Heavy Duty Process Pump, have been designed to specifically handle this type of application. The Wilfley Dynamic Expeller Seal effectively seals the pump during operation with **NO** rubbing contact in the seal chamber. This means there is little or no temperature buildup within the pump when operated correctly. Once again, this is another reason why Wilfley Sealing Technology is a superior alternative to traditional mechanical seals and packing. The A9 pump can also be fitted with various thermowells to make it easy to monitor internal temperature and ensure **SAFE** operation.

This incident illustrates the importance of following proper guidelines for operating and maintaining industrial process pumps. For official Wilfley recommended procedures, please review the IOM manual for your pump.

Wilfley prides ourselves on almost 100 years of pump knowledge and expertise. Contact your local Wilfley representative today to learn more about how we can help tackle your difficult pumping applications.