

## FASTER THAN A SPEEDING BULLET



The pictures are made available by the company involved to improve safety awareness across the industry.

### Here's What Happened:

A piece of equipment was being pressure tested at approximately 5,000 psi. During the pressure check, two employees were inspecting for leaks. Without warning, a 3/4" threaded thermowell failed at the threaded joint, the force separated it at a very high rate of speed and it struck one of the employees in the leg, leading to a very serious injury.

#### Common causes of failures like this:

- threaded connections can be weak points, especially if the threads are corroded, stripped or if the threaded connection is not fully made up
- these problems are often hidden from view; finding a problem may be possible only if the connection is disassembled and all threads inspected
- in the above incident, what made the accident very serious was the fact that someone was standing right in front of the thermowell when the joint failed

#### What can I do?

- While complete failures of joints are rare, they can and do occur. In this incident, the force on the thermowell was approximately 1-3/4 ton, and the failure propelled the thermowell at roughly **90 MPH**. When increasing pressure in equipment attempt to stand a safe distance away or behind barricades until the final pressure is reached.
- Whenever threaded connections are disassembled, inspect **BOTH** sets of threads for corrosion, signs of cross threading, etc. If there is a problem, get it repaired before putting pressure on the joint.
- Threaded connections can be "backwelded" - this will improve the overall strength of the joint. The disadvantage, of course, is now the joint can not be disassembled easily.
- For systems where significant corrosion is present, flanged connections are generally better than threaded.

**When threaded equipment is taken apart, look carefully for stripped threads, corrosion or anything that looks abnormal – it may be a WEAK POINT in your system!**