

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!