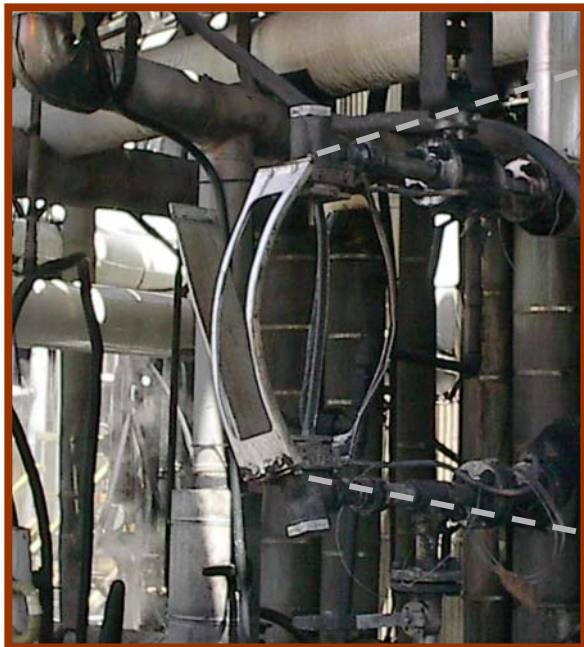


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## But the pressure rating was okay...!?



### Here's What Happened:

The picture on the immediate left shows a new rotameter. The other picture shows what happened when it was exposed to excessive pressure at high temperatures.

In this case, the line down stream of the rotameter had a history of plugging. Several times in the past, 150 psig steam was used successfully to clear the plug. When it plugged again, steam was used but this time the outcome was different!

**WHY?**

### What You Can Do

☞ Remember that most equipment has lower pressure ratings at high temperatures. Looking only at the pressure rating can get you in trouble when heating is also involved. Know your equipment limitations and compensate where needed!

☞ Don't assume that a practice is safe just because it has not caused an accident before. You may have been lucky or the situation might have been *slightly* different before. This time may result in an accident.

☞ All operating and maintenance activities must be done "by-the-book" on **all** shifts. Don't try new things without evaluating the change (MOC) and do not revert to old outdated practices.

### How Did This Happen?

#### ❑ The Facts:

- The rotameter was rated for 175 psig at 200° F. At 360° F, the rating drops to only 80 psig. Steam used to clear the plug was 150 psig and 360° F.
- The rotameter failed because it could not withstand the steam pressure *at the elevated temperature*.

#### ❑ The History:

- Using steam to clear this line had been done many times in the past but was officially discontinued approximately two years ago. However, it was practiced "un-officially" during off-shifts.
- The supervisor was uncertain of the pressure rating of the piping and rotameter and had second thoughts. When he saw that the steam hose was already connected, he decided to proceed.

### *Temperature and Pressure Ratings—usually an inverse relationship!*