Some examples of the types of things to look for include:

Check trench gratings and look for tripping hazards:

Are flexible hoses being stored correctly?

Do relief devices discharge to a safe area? Could we hurt someone if it was to discharge?

LESSONS LEARNED COMMUNICATION

05/03/2001 – LL2001-004

"Short Bolting in Bolted Joints"

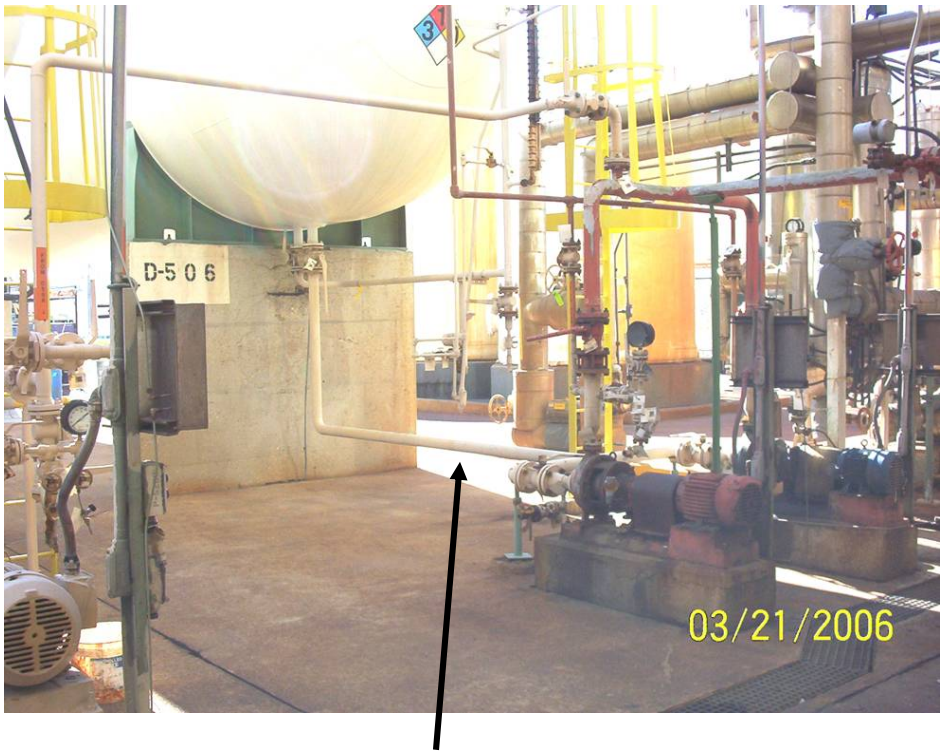
During the 2000 and 2001 Property Insurance Facility Inspections, the inspection team observed several cases of "short bolting" at some of our facilities.

"Short bolting" is the industry term used to describe situations where bolts are installed and the threads do not fully protrude through the nuts. In order for the full strength of nuts to be realized, it is vital that bolt threads protrude through the nuts. Failure to do so runs the risk that thread stripping will occur, which may result in disastrous consequences. This is most critical where bolted joints are used in high pressure, flammable material, and/or toxic material applications.

Look for short bolting.

Are critical supports protected against vehicle impact?
What's up in the piperack? Are piperack supports and foundations in good condition?

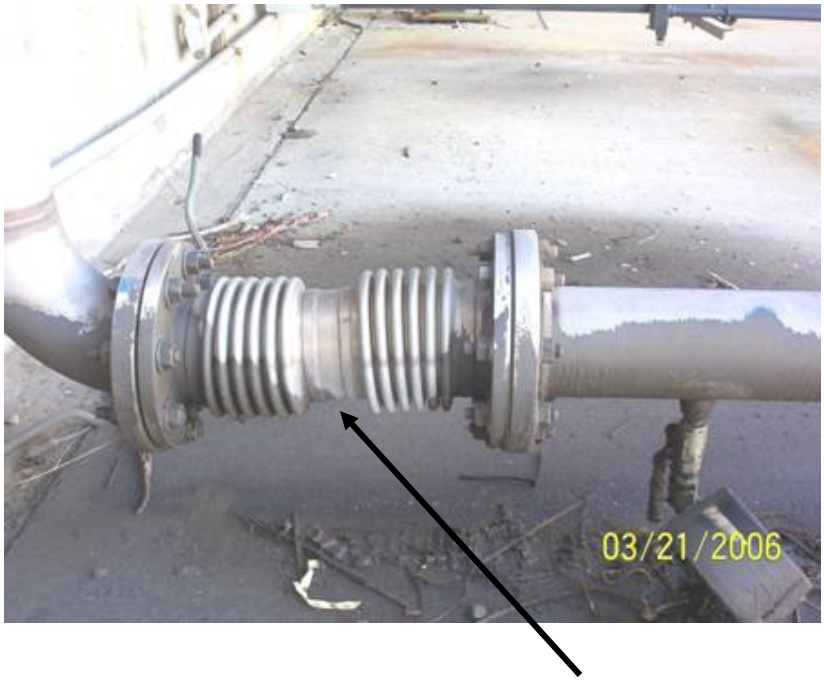
Is access to elevated areas adequate based on the potential safety hazards and routine activities etc.?



Are pipes adequately supported to prevent failure from pump vibration etc.?

Look for improperly maintained equipment.

Look for corrosion or other penetrations that may compromise the electrical classification requirements of the area.



Are expansion joints installed per manufacturers recommendations and maintained in good condition (alignment etc.)?

Are flexible hoses installed and operated per manufacturers recommendations?

Hose Standpipe hazard considerations:

Standpipes 12” or more above ground level should be fitted with elbows with outlets directed downward.

This will:

- **Protect personnel from media stream in case of accidental disconnection or line rupture;**
- **slow aging of the hose tube and oxidation of the reinforcement braid by “straightening” the flow of steam; and**
- **Reduce bend stresses at the hose assembly end.**

Is emergency response equipment operated and located in a position such that it can be accessed in a fire scenario (not too close to the fire envelope exposure area - at least 40 ft. away is typical)?

Are batteries in protective cases or in screened areas such that people are protected from injury during a catastrophic failure of a battery?