

Finding the Brass Prevention and Contractors

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Chris's story

- ❖ Project was addition to an existing refrigeration system
- ❖ 60,000 lbs of NH₃
- ❖ 20 Evaporators added
- ❖ Change order called for contractor to install gauges on all evaporators to set back pressure
- ❖ System running less than 2 weeks
- ❖ W/I 10 min, 10 brass gauges failed



760 Lb./hr release (1 hr)



Liability (Business Risk)

- ◆ Who is responsible for your system
- ◆ What happens if you have a release

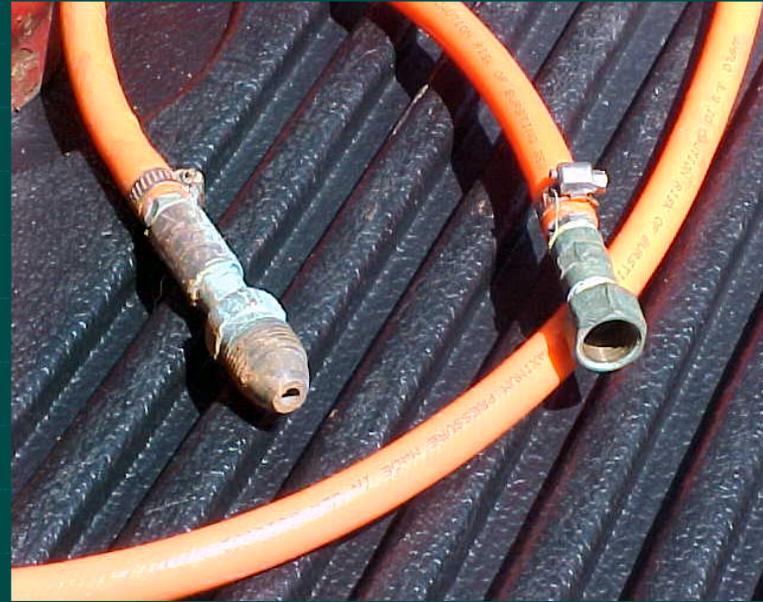
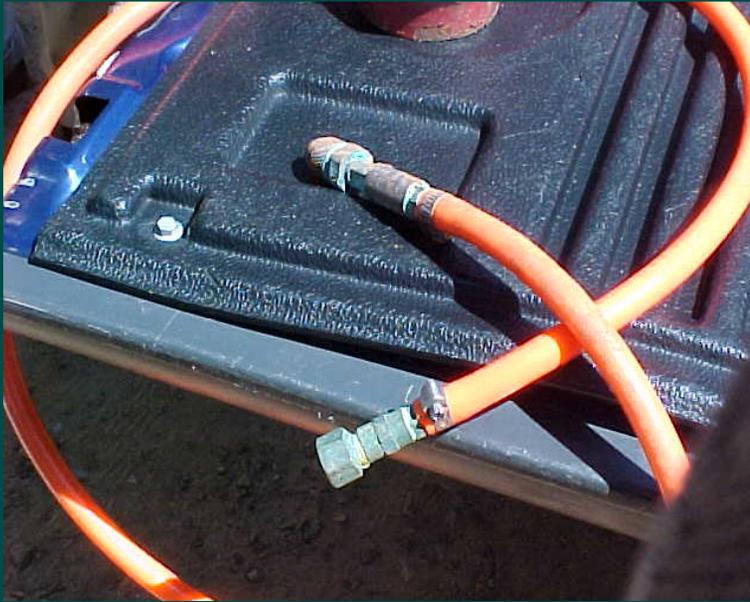


Brass Policy

- ❖ Brass- brass, copper or bronze should not be used on ammonia refrigeration systems
- ❖ Safe Work Practice (SWP-25) helps keep it out of your systems



What happens to brass exposed to ammonia



Where do you find brass

- ◆ Gauges, many stock gauges have brass components
- ◆ Add on valves, fittings, caps
- ◆ Some vacuum pumps have brass components



How does this integrate into our current system

- ❖ Contractor Approval Process – Mandatory
- ❖ Mechanical Integrity- Mandatory
- ❖ Management of Change – Mandatory
- ❖ Pre use checklist – part of MOC
- ❖ Training- Mandatory



Contractor Approval

- ◆ Pre approval
- ◆ What to check
- ◆ Pre –start safety meeting (this is huge, sets the tone)
 - If contractor is authorized to use brass



Mechanical Integrity Program (PSM)

- ◆ The employer shall assure that maintenance materials, spare parts and equipment are suitable for the process application for which they will be used.
- ◆ Performance based standard which means we need to meet it by our means (not scripted)
- ◆ Periodically inspect and evaluate
- ◆ Document it (example: Brass Policy)



Management of Change (PSM) Pre Start safety checklist

- ◆ PSM program says we must have a system



Internal Training Requirements (PSM)

- ◆ Required initially and refresher
- ◆ Training your folks on what to look for and what to do when they find it



Inspection after work

- ◆ Who inspects the work
- ◆ What to do once you find it
 - Only qualified trained personnel with PPE should remove it



Questions

