





From data gathered through HiLo, the vast majority of Undesired Events under this category are related to Loss of Primary Containment – Steam. Reporting vessels have also included a number of airline ruptures, categorized as Explosion – No preceding fire.

Together in Safety Golden Safety Rules:

Apply Together in Safety [Golden Safety Rules](#)

<p>9. Stop</p>  <p>Ensure all staff are empowered to STOP WORK and intervene where uncomfortable.</p>	<p>5. Line of fire</p>  <p>Ensure yourself and others are positioned away from suspended loads, stored pressure, moving machinery and snap-back areas.</p>	<p>3. Invisible Hazards</p>  <p>Verify Isolation before working with stored energy and invisible hazards (e.g. Electrical, pressure).</p>	<p>1. Enclosed Space Entry</p>  <p>Only enter an enclosed space if it has been ventilated and the atmosphere confirmed safe.</p>
---	--	---	---

Additional Guidelines and Best Practices:

- Implement a robust isolation control (lock out – tag out) system, along with permit to work, whenever conducting maintenance on pressure systems. Designated Senior Engineering officer to have responsibility of Isolation Register
- Maintenance on pressure systems to be carefully planned with high supervision. Avoid SIMOPS activities which may distract from safety critical tasks.
- Ensure Planned Maintenance Systems include testing of safety relief valves and limit switches, as per makers recommendations.
- Recommissioning of equipment after maintenance to be supervised by the Chief Engineer.
- Check with Manufacturers and Class / Flag to ensure authorized “Competent Persons” are charged with overhaul and maintenance of safety critical components on boilers and associated steam systems, such as safety relief valves.
- No unauthorized temporary repairs. Any repairs to systems covered by Class certification or survey must be to the satisfaction of Class.
- Any work inside boilers or pressure vessels must be covered by Enclosed Space Entry permits and job-specific risk assessments.
- Ensure onboard routines include regular draining of any oil and water compressed air systems.
- Inspect and replace airline bursting disks as per manufacturers recommendations.

Training:

- Train crew on the Company’s risk assessment processes and Tool Box Talks.
- Train crew on permit to work systems and isolation control included within the Safety Management System.

Learn from industry case studies:

See Safety Bulletin - [Steam Burns.pdf](#)



Verification:

- Sailing Engineering Audits.
- Routine Inspections by the Technical Superintendent.