

Operational Readiness Reviews

June 2025

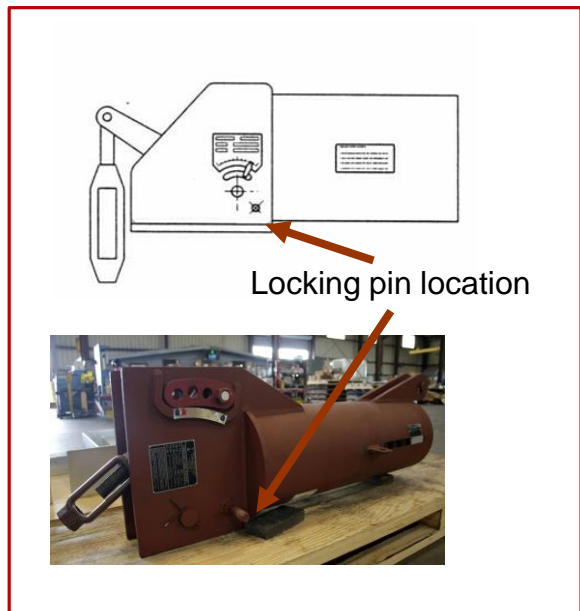


Figure 1. Spring hangers

A large plant was restarting after hydrotesting the steam superheater coils on a reformer furnace. No modification had been made to the coils. The locking pins on spring hangers for the pendant superheater were installed to support the extra weight of the water during the test. A step in the restart procedure to remove the pins was missed and they were not removed before heating was restarted.

As the heating of the reformer furnace continued, the superheater coils could not expand due to the locked spring support. An operator heard an abnormal noise from the coil area and reported it.

Operators halted the restart, removed the locking pins, and resumed the restart with no additional problems

Here, there was no modification to the superheater coils to require a Pre-Start-up Safety Review (PSSR), but an Operational Readiness Review (ORR) could have found the locking pins before the start-up was begun.

Did You Know?

- Restoring equipment to service is a dangerous activity since many systems may not be in their normal operating mode or position. Even equipment that has been off-line for a few hours can present hazards.
- An Operational Readiness Review (ORR) should be conducted when starting equipment that has been idle, even if nothing was modified.
- A Pre-Start-up Safety Review (PSSR) should verify that all systems are ready before starting or restarting new or modified equipment. A PSSR must ensure that the modification was completed according to design or that any changes were reviewed by MOC and are documented on redline drawings.
- Both a PSSR or ORR must be done BEFORE the hazardous materials are added to the system to avoid problems that could require clearing the system again to fix the problems.
- The most frequent problems from poor PSSRs or ORRs are: drains or bleeder lines left open, wrong motor rotation, instruments still in bypass mode, procedures do not match the new/modified equipment.
- When starting a large system, several reviews may be required to verify each part of the operation is ready before starting the entire system.

What Can You Do?

- Take the time to verify each item on the PSSR or ORR checklist is done before signing it off.
- If there are items missing on the PSSR or ORR checklist, bring them to the attention of your supervisor.
- Follow the company's Lockout and line break procedures when removing isolation devices.
- Document your actions on the PSSR form and unit logbook so others know what was done and when it was completed.

Operational Readiness Reviews Differ from PSSRs