

Bulletin from

Royal & SunAlliance Insurance

Engineering Insurance & Loss Control, Mid-Canada Region

Spring 1999

“PERTINENT POINTERS”

- 1) Safety valves on boilers and pressure vessels are the primary overpressure protection devices. They should be checked regularly for freedom of operation (check to see that they are not seized or rusted shut or, suffer other mechanical problems) - we suggest, as a minimum, once a month. Manually testing these important safety devices will also prove that the connection to the boiler or vessel is clear (sludge, scale or rust deposits can build up in them and must be flushed out).
- 2) There has been a lot of talk about 3-way valve piping configuration on low water cut-offs. It should be noted that the 3-way valves are not safety devices in themselves; they are intended to be used for flushing and testing the cut-off devices in an as-near-as possible low water condition. We periodically find low water cut-offs that will operate during quick draining or flushing, however, some will stick (due to sludge/scale build-up in the float bowl or due to worn linkage or other mechanical problem) if drained slowly in an actual low water condition. The 3-way valve set-up lends itself to detecting these problem situations and addressing them before a catastrophic incident occurs.
- 3) The end of the heating season is quickly approaching. Summer is the time to dismantle boilers for internal inspections. This should include cast iron boilers on steam service. It is important that the bottom passages of each section be checked clean and any deposit (sludge or scale) be removed completely. Hot water heating boilers are not normally drained and inspected annually (every five years or so would be reasonable). However, the low water cut-offs should be dismantled annually for cleaning, checking for worn or otherwise defective parts and the automatic water feeder operation should be checked and the strainer cleaned. It is also a good time to repair all piping and pump leaks.
- 4) With spring comes the air conditioning season. Make sure crankcase heaters are working (48 hours) prior to start-up to boil out any accumulated refrigerant in the crankcase thereby ensuring adequate lubrication on start-up and precluding damage from slugging. Contactor points should be checked and the cable connections should be tightened before start-up. Once started, the amperage draw should be checked. This could give indications of problems in the compressor or the system.