



Flue Gas Condensation Within Boilers

The following note can be found on the cover page of any of the Slant/Fin boiler Installation/Operation manuals.

IMPORTANT

RADIANT FLOOR, LOW WATER TEMPERATURE, And LARGE WATER VOLUME systems require special piping arrangements. See page—.

Additionally, the following will be included in the piping section of the manuals. At a later date, we plan to add suggested piping arrangements for applications such as these.

RADIANT FLOOR, LOW WATER TEMPERATURE, and LARGE WATER VOLUME systems: A boiler by-pass loop, three-way valve arrangement, or primary secondary pumping (with a boiler loop) must be used to provide a minimum 130°F return water temperature to the boiler. This will prevent condensation on the cast-iron sections that can result in improper operation of the boiler.

These conditions are detrimental to the proper operation of, and the life expectancy of boilers. They can cause rust particles to drop to the base of the boiler. It is often the origin of damage to ribbon type burners used in most boilers. Fortunately, the burners are easily replaced.

These applications can also cause difficulties in Concept 21 and Prodigy 21 boilers. To date, there have been a several cases of rust particles building up on the ceramic burner surface, causing ignition problems. If a Concept or Prodigy boiler, operating under one of the conditions listed above, and operated for several seasons, develops unexplained ignition problems, a rust buildup may be responsible. The rust must be removed and the cause of the build up eliminated. If there are any questions regarding these, or any other operational problems, please contact Tech Service at 1-800-873-4346

To sum up, systems with RADIANT FLOOR, LOW WATER TEMPERATURE, and LARGE WATER VOLUME must be carefully piped and configured to avoid low water temperatures returning to the boiler.