

**INTERPRETATION IC 90.1-1989-11 OF
ASHRAE/IES STANDARD 90.1-1989
ENERGY EFFICIENT DESIGN OF NEW BUILDINGS
EXCEPT LOW-RISE RESIDENTIAL BUILDINGS**

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Request from: Laurie E. Reid, P. Eng., Commercial Programs Department, Ontario Hydro, 777 Bay Street, 26th Floor, Toronto, Ontario, Canada M5G 2C8.

References: This request refers to ASHRAE/IES Standard 90.1-1989, section 11.5.5.3 Heat Traps.

Background: Section 11.5.5.3 requires heat traps on storage water heaters with vertical risers to prevent the gravitational migration of hot water into the piping system when the system is idling.

Question: Since areas of poor water quality can experience significant scale build-up within two years even using a PVC-loop heat trap, I interpret this section as requiring source purification in these areas. Is this correct?

Answer: No.

Comment: Information available to SSPC 90.1 gives no indication that heat traps (which may be a simple inverted pipe trap) are more susceptible to scale build-up and corrosion than the rest of the system. In areas with poor water quality, purification systems may be desirable to increase the lifetime of all components of the water heating and distribution system, including heat traps, but such maintenance issues are not within the scope of this standard.