Comments on Gapped Seismic Supports (Revised Jun-2004)

There are at least two things that are important about a seismic restraint, the first that it mitigates dynamic amplifications and second that it limit displacements. A large gap will do neither. A small gap can do both. A designer can locate gapped supports such that in the cold condition the pipe is up against one side of a box type support frame and in the hot condition the pipe is up against the other side of the box type support frame. In such a configuration, the pipe can be accelerated in one direction but not the other. This effectively eliminates significant amplification, at most some amplification due to impact. Since the gap is only as wide as the thermal movement at that location, it can be inferred that the dynamic stresses may not exceed thermal stresses by much, if at all.