

Effects of ECCS on the Cold-Leg Fluid Temperature during SGTR Accidents

Authors : Tadashi Watanabe

Abstract : The LSTF experiment simulating the SGTR accident at the Mihama Unit-2 reactor is analyzed using the RELAP5/MOD3.3 code. In the accident and thus in the experiment, the ECC water was injected not only into the cold legs but into the upper plenum. Overall transients during the experiment such as pressures and fluid temperatures are simulated well by the code. The cold-leg fluid temperatures are shown to decrease if the upper plenum injection system is connected to the cold leg. It is found that the cold-leg fluid temperatures also decrease if the upper-plenum injection is not used and the cold-leg injection alone is actuated.

Keywords : SGTR, LSTF, RELAP5, ECCS

Conference Title : ICESET 2015 : International Conference on Energy Systems Engineering and Technology

Conference Location : Berlin, Germany

Conference Dates : September 14-15, 2015