

Tohoku Electric Power Reports on Its Re-investigation of Pipe Wall Thinning

On August 21, Tohoku Electric Power Co. finalized a report on the results of its additional inspections on the thinning of pipe walls and the revised method of managing pipe walls that it had carried out at its Onagawa-1, -2 and -3 NPSs. It then submitted the report to the Nuclear and Industrial Safety Agency (NISA).

The thinning of pipe walls at the plants was first recognized as an unresolved issue last May, when a hole was found as a result of thinning at the first elbow of vent piping in the high-pressure secondary feedwater heater at Unit 2. The power utility inspected similar locations at Units 1, 2 and 3, and found pipe walls substantially thinner than technical standards at two spots: one at Unit 1, in the cooling system piping used when the reactor is isolated; and one at Unit 2, in the steam converter system piping. In the condenser system at Unit 1, one spot was found where the pipe wall had been substantially thinned, although it was not below the technical standards. Based on those circumstances, the additional inspections were undertaken, extending the scope of the initial inspection.

Additional inspections were conducted by Tohoku Electric Power at 54 places in the cooling system piping at Unit 1, and 160 places in the steam converter system piping at Unit 2. No other substantially thinned pipe walls were found.

The power utility has replaced the four sections of thinned piping, and will consider permanent measures against thinning from now on. It will, at the same time, implement measures to reflect the reality of the thinning occurrences in its management of pipe walls. Regarding the cause of the four cases of thinning, the utility assumes corrosion to have caused the thinning, due to the accelerated flow and/or erosion or corrosion related to cavitation.

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