

공랭식 열교환장치의 내진해석 Seismic Qualification Analysis of Air Coolers

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Abstract : The analysis of Air Cooler models has been performed using the combined loading for conditions A (Normal), B (Abnormal), and D (Failure), which includes dead weight, 3" nozzle loads, and seismic spectra acceleration loads. Qualification is by detailed finite element model analysis of the KJ units and, due to its similar configuration but lesser weight and overall size, similarity analysis with appropriate rationale for acceptance on the GJ unit. As a result, Air Coolers are structurally adequate and qualified for use in imposed seismic environments and applied operational load. Stresses in the frame support structure are less than the allowable stresses, with minimum factors of safety for the combined seismic, dead weight, and nozzle loads of 1.16 (Level A), 1.17 (Level B), and 1.18 (Level D).