

## “Reduction of Spent Resin of SGBD Ion Exchanger for PWR”

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Spent ion exchange resins of PWRs coming from the SG blowdown demineralizer are increasing, and the amount accounts for about 65% of the whole. A large amount of this spent resin is radioactive, and the processing is not easy. In view of this, a review of the replacement criteria for SGBD ion exchange resin and an experiment on the performance of the ion exchange resin were performed in order to reduce the spent resin.

There was no standard replacement criteria for the SGBD ion exchange resin of PWRs in Korea. Sodium was a typical ion to determine the ion-exchange removal capacity in many plants, however, it was not a typical ion in all plants. In the experiment on the performance of the ion exchange resin, the ion absorption capacity, the ion selectivity, and the resin replacement criteria were examined. Results such as the establishment of spent resin replacement criteria, understanding of the selectivity to the H-type ion exchange resin, decrease of spent ion exchange resin (370t/year), and the reduction of radiation exposure was obtained.

