



## Development of a Pressure Drop Calculation Method for Debris-Covered Sump Screens in Support of Generic Safety Issue 191 Nureg-1862 (Paperback)

By NRC Staff: United States Nuclear Regulatory Commission

Bibliogov, United States, 2012. Paperback. Book Condition: New. 246 x 189 mm. Language: English . Brand New Book \*\*\*\*\* Print on Demand \*\*\*\*\*.A set of equations has been derived to calculate the pressure drop for flow across a compressible porous medium debris bed composed of thermal insulation such as fiberglass fibers (Nukon) and calcium silicate (CalSil) particles. The equations account for the kinetic and viscous contributions to pressure drop. The compressibility of the porous medium debris bed is considered by initially assuming an irreversible, inelastic process followed by elastic behavior with constant compressibility. Semiempirical relations and constants required to solve the flow and compression relations are determined using available test data. An iterative procedure has been developed to estimate the pressure drop across a debris bed composed of one debris type (e.g., fibers) by applying the flow and compression relations to a one-volume, homogeneous debris bed model. The pressure drop across a debris bed composed of two debris types (e.g., fibers and particles) depends on the distribution of the two debris types in the bed. Procedures have been developed to estimate the lower bound pressure drop for a debris bed composed of two debris types by using the one-volume, homogeneous...



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