



# Feedwater Debris Strainer (FWDS)

## Captures and retains debris to prevent debris related fuel failures

Debris is the # 1 cause of BWR Fuel failures. Fuel failures are expensive and the operational impact can range from \$5MM - \$10MM or more depending on severity and timing. GE Hitachi Nuclear Energy (GEH) designed the in-line Feedwater Debris Strainer (FWDS) to provide superior protection from debris resulting from equipment failures in-service, outage maintenance, or modification activities.

GEH's innovative design effectively captures and retains debris that would otherwise enter the reactor through the feedwater lines. The GEH FWDS was developed through an extensive design and testing process, to maximize debris capture capability, provide durability with essentially no risk of breakage/failure, while maintaining full flow and pressure drop performance.

The FWDS is designed to be installed in-line with current feedwater flow lines, on either the suction or discharge side of reactor feed pumps, as an integrated system made up of a housing, custom flange, strainer assembly and pressure drop sensing instrumentation. The design is compatible with the entire fleet of BWR reactor designs.

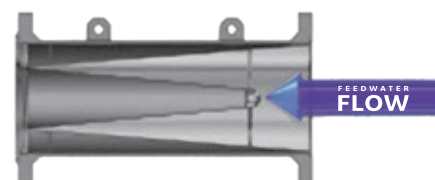
Owner installed pressure drop sensing instrumentation is utilized to monitor component operation.

GEH is the industry leader in Boiling Water Reactor (BWR) technology with over 50 years of experience in the nuclear industry. GEH offers a wide range of products and services that ensure safe operation and maintenance of the plant, while bringing greater efficiency and output.



## Services Include:

- Project management
- Engineering
- Hardware assembly plus filter spare
- Installation



## Product Features and Benefits

### Best in class debris separation capability

- Proven technology (operational in European and US BWRs)
- Protection for fuel from large and small debris from the steam plant
- 100% catch rate of wires, turnings, and particles above 0.016" diameter; 96% above 0.008"
- Captures debris of all lift/mass profiles and any upstream source
- Consistent debris capture at all flow rates
- Low pressure drop (Dp) minimizes operational impact
- Low maintenance...
  - Remote dP instrumentation for real time monitoring without visual inspection
  - Uninterrupted multi-cycle operation is possible
- Installation may be made across all feedwater lines in a single outage
- Durability: 40 year design life

For more information, contact your GE Hitachi Nuclear Energy sales representative or visit us at:

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