Dominion Engineering, Inc.

Fuel Crud Sampling System

Description

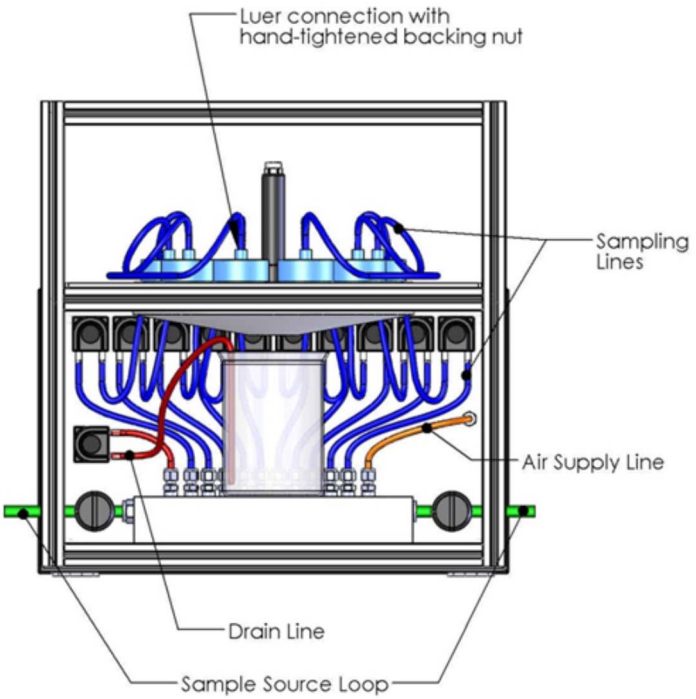
DEI's crud sampling system is offered as an optional component as part of DEI's high efficiency ultrasonic fuel cleaning (HE-UFC™) equipment. The crud sampling system integrates with the HE-UFC™ control software and facilities controlled crud collection from individual fuel bundles and from individual spans along the length of a fuel bundle. These samples can then be analyzed on-site in the plant's laboratory or shipped off-site for subsequent characterization.

Applications

The crud sampling system can be utilized in lieu of crud scraping/analysis techniques in order to:

- Assess the mass of crud present on PWR and BWR fuel bundles and removed by HE-UFC™ cleaning (including at specific spans along the fuel bundle)
- Determine the crud composition (elemental and isotopic) and specific activity
- Assess noble metal distribution/redistribution on BWR fuel bundles and channels
- Assess zinc distribution in PWR and BWR fuel crud

Crud sampling system and control unit



Crud sampling system layout

Features and Benefits

- Facilitates controlled collection of crud during HE-UFC™ for subsequent crud analysis
- Synchronizes with HE-UFC™ control software so that crud can be collected from individual fuel bundles or specific spans along the length of a fuel bundle

Industry Experience

- Successfully used in place of crud scraping at several PWR units
- Utilized for BWR crud composition and diagnostics (zinc and noble metal distribution)
- Utilized as a secondary confirmation of crud mass removal at several units performing HE-UFC™

For more information, contact
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