EGS Hi/Lo Pressure Seal

for Seal Table



Nuclear Power Products and Services





Product Description

A new idea for sealing of in-core instrumentation thimble tubes. Curtiss-Wright's nuclear qualified EGS product line includes an innovative combination Hi/Lo Pressure Seal for seal table use on Westinghouse PWRs.

The Hi/Lo Pressure Seal replaces an existing Swagelok™ adapter fitting and retains the metal-to-metal sealing characteristics currently in use. The seal can therefore be accepted via an equivalency determination since:

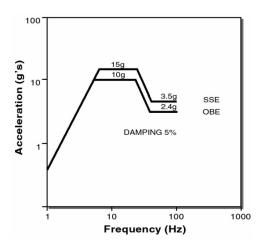
- The material is the same (stainless steel)
- Seismic qualification proven by testing and/or analysis (performed by Curtiss-Wright)

The Hi/Lo Pressure Seal also functions in the low-pressure mode, with no added configuration. The new seal permits thimbles to be withdrawn by simply removing a 1.5-inch union nut and loosening a 2.0-inch union nut. Tightening the 2.0-inch nut after thimble withdrawal maintains the low-pressure seal and secures the thimble in place. After refueling, the process is reversed and the two unions are tightened to specific torque values. The Hi/Lo Pressure Seal will reduce radiation exposure, labor costs, maintenance expenditures, and outage time.

The Hi/Lo Seal can be customized to fit any configuration.

Qualification Levels

- Qualified Life: >40 years at 150°F (65.56°C)
- Vibration Aging: None
- Radiation: 5E6 rads gamma
- Seismic: EGS generic TRS (See seismic graph below)
- Cycles: 40 cycles
- LOCA: Not applicable
- Fluid: Borated water at 2500 psig/150°F (service) (17,338.3 kPa/65.56°C)
 - Tested to 3,750 psig (25,956.7 kPa)



Note: Horizontal and vertical generic qualification level required response spectra (RRS).

