Westinghouse Parts Business

Resistance Temperature Detectors

Background

Resistance Temperature Detectors (RTD) operate on the principle that the electrical resistance of a metal changes predictably in a linear and repeatable manner with changes in temperature.

- RTDs are an essential component that measures temperatures in plant systems that provide reliable and accurate temperature inputs for critical plant systems control and monitoring.
- RTDs must perform in the most challenging environments and seismic event situations.

Westinghouse has qualified new RTDs for narrow and wide range applications. The narrow range RTD is an improved design, engineered to be more robust in high vibration environments while maintaining critical operational characteristics. This is essential to ensure temperature changes are detected in a manner to provide the appropriate critical system monitoring and controls.

Westinghouse Narrow Range RTD

The newly designed Westinghouse Narrow Range RTD was developed to withstand high vibrations to mitigate premature failures experienced in the industry.

This RTD is a fit, form and function equivalent replacement for the previous Westinghouse offering; the improved instrument installs in existing primary loop thermowells that originally supported the previously supplied Westinghouse qualified RTD.

- The Westinghouse Narrow Range RTD has undergone extensive design and qualification testing to ensure reliable operation in the most severe environments and seismic events.
- Existing stringent time response and specified operational characteristics have all been met or exceeded.

Westinghouse Narrow Range Resistance Temperature Detector

Westinghouse Wide Range RTD

Westinghouse offers a replacement Wide Range RTD for primary loop temperature monitoring requirements.

- The Westinghouse Wide Range RTD has a history of reliability in numerous plants worldwide.
- The Westinghouse wide range response RTD is designed to be installed in existing thermowells and will maintain the required detection of temperature changes in the hot and cold legs of the reactor coolant loops of PWRs.
- The current Westinghouse Wide Range RTD offering has undergone the required Westinghouse qualification testing to ensure it meets the stringent requirements established by Westinghouse for the specified plant system end use applications

Westinghouse Wide Range RTD

Benefits of RTD Supply with Westinghouse

- **Part Availability:** Westinghouse will ensure that the required source of supply is maintained for maintenance and "end of qualified life" replacement requirements.
- **Ease of Replacement:** Like-for-like replacement that can be installed into existing thermowells, minimizing outage schedule impact
- **Performance:** Mitigates premature failure due to system vibration parameters
- **Part Quality:** Westinghouse has been the industry leader in qualified RTDs with extensive expertise in technical and plant installation support.

Environmental Qualification Chamber

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