Nuclear-rated machinery protection and condition monitoring

Operations and maintenance personnel in nuclear plants around the world rely on GE Energy’s Bently Nevada™ sensors for robust, accurate machinery measurements. We have two new nuclear-rated sensor offerings that build on the experience we have gained from decades of diverse machinery monitoring and protection applications, including in demanding nuclear environments. Specifically designed and tested for monitoring pumps, motors, and other rotating machinery in harsh Pressurized Water Reactor (PWR) and Boiling Water Reactor (BWR) nuclear radiation environments, both are key components for identifying changes in bearing condition, rotor unbalance, and misalignment, all of which can result in machine damage, plant safety issues, and associated costs.

For proximity measurements, our Radiation Resistant 3300 XL Proximitor offers industry-leading technology and is part of a system specifically designed for nuclear radiation environments. The Proximitor is part of a complete system that includes existing cable 27490 and existing probes 27482, 27485, 36446, 36447 or 36448. Systems are available with an integrated probe/cable option. The system is ideal for capturing XY radial and axial vibration measurements. There are two new Proximitors—330280 (0.300) supports system lengths of 15, 40 or 110 feet, while 330281 (0.420) supports a 15 foot system length. Both Proximitors are gamma radiation resistant up to 3 Mrads and can be optioned for either panel or DIN-rail mounting.

For seismic measurements, the 330530 Radiation Resistant Velomitor Sensor is also available to measure absolute (relative to free space) bearing housing, casing, or structural vibration. With similar gamma radiation resistance, this robust sensor incorporates solid-state electronics with no moving parts and will not suffer from mechanical degradation and wear. It can be mounted vertically, horizontally, or any other orientation angle.

As we’re highlighting in this issue of ORBIT, the nuclear industry is experiencing a Renaissance, and both of these new products extend the Bently Nevada product line to incorporate our very latest technology to address our nuclear customers’ needs. Visit us at www.ge-energy.com/rr3300xl or www.ge-energy.com/rrvelomitor for more information on these products or contact your sales professional.