



GE VERNOVA

FACT SHEET

HITACHI

ON-LINE NOBLECHEM™

Mitigate Stress Corrosion Cracking with Critical Path Savings

On-Line NobleChem™ (OLNC) is GE Vernova Hitachi Nuclear Energy's (GVH) new and improved solution for mitigating stress corrosion cracking in Boiling Water Reactor (BWR) nuclear power plants.

The extreme environmental conditions—such as high temperature, high radiation and high oxidants—inherent to reactor operations can result in intergranular stress corrosion cracking (IGSCC) of reactor vessel internal components and piping. OLNC applications and operation with low hydrogen is a process to mitigate IGSCC.

Plant personnel conduct the OLNC application process while a plant is operating. Compared to conventional NobleChem™, performed during outages from 1996 to 2009, OLNC eliminates the need for an average of 60 hours of critical path time, saving over a million dollars every four to six years in replacement power.

Available Now

On-Line NobleChem™ (OLNC) is now ready for your reactor. The process is available for both first-time applications or for plants already using NobleChem™.

Better Crack Mitigation

Since cracks may be more open during the normal pressure, temperature, and flow conditions of full power plant operation, OLNC promotes better penetration of noble metal into existing cracks, compared to conventional NobleChem™. Furthermore, with OLNC being applied during normal plant operation, plants can perform applications annually, vs. conventional NobleChem™ every four to six years. Frequent reapplications of OLNC reduces the risk of crack flanking, a condition that can occur when extreme material conditions or low hydrogen availability allow a crack to grow beyond the catalytic effects of the most recent NobleChem™ application.

Plant Savings

Since plants save approximately 60 hours of critical path time every four to six years, OLNC provides immediate cost benefits, along with the less tangible benefit of avoiding costly repairs in future years. GVH will perform the first OLNC application and will provide hands-on training to plant personnel, allowing them to perform future applications with GVH oversight or entirely on their own, as desired.



OLNC Injection Skid

For more information, contact your GE Vernova Hitachi Nuclear Energy sales representative.

Learn more at governova.com/nuclear

