



Structural Integrity
Associates, Inc.®

CONTINUOUS NOBLE METAL INJECTION (CNMI)

BWR PASSIVE PLATINUM INJECTION



To meet criteria for intergranular stress corrosion cracking (IGSCC) mitigation and inspection relief for vessel internals and piping, BWRs using noble metals + hydrogen need a method to accurately inject a catalyst into the feedwater over long periods of time. A passive platinum injection system is needed to perform this function while meeting the intent of Delivering the Nuclear Promise®.

The CNMI Skid is a **reliable, inexpensive, passive** method of injecting platinum chemical into the BWR feedwater at normal power operating conditions to mitigate IGSCC.

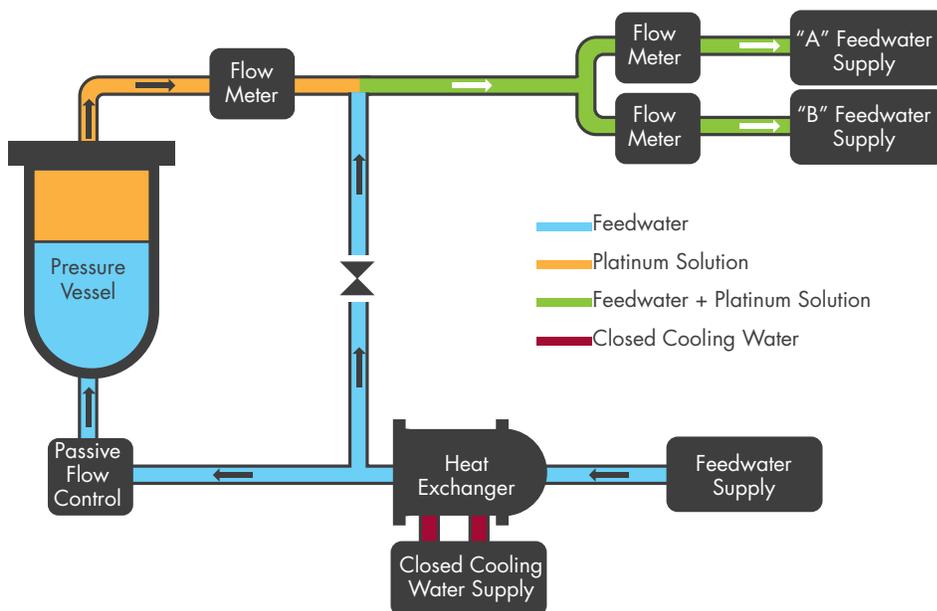
WHAT IS PASSIVE PLATINUM INJECTION?

Passive Injection of a dilute solution of the platinum compound, $\text{Na}_2\text{Pt}(\text{OH})_6$, without the use of pumps. Using patented technology, the driving force for injection is the differential pressure between two points in the feedwater system. This passive injection system has a wide range of injection flow capability, high dilution flow and is designed for minimal operator or maintenance intervention supporting the Delivering the Nuclear Promise® initiative. CNMI is a proactive and versatile approach that will eliminate needed existing platinum injection skid upgrades further reducing future O&M costs and extensive labor requirements.

EXPECTED BENEFITS

- Lower plant labor burden compared to existing equipment for Operations, Chemistry and Maintenance
- Improved equipment reliability (no pumps)
- High dilution flow (lower propensity for injection line plugging)
- Wide Pt injection flow range, spanning current to continuous, for long-term process optimization

This new CNMI passive noble injection system has been conceived, patented, designed, built and factory tested. Installation and demonstration at Nine Mile Point 2 is scheduled for fall 2018.



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