

ULTRASONIC TESTING

Ultrasonic Testing (UT) In Lieu Of (ILO) Radiography Testing (RT)



GE VERNOVA

HITACHI

Fact Sheet

UT ILO RT is a newer offering from GE Vernova Hitachi Nuclear Energy's (GVH) Inspection Services business. GVH is constantly improving and adapting our techniques, tooling, and procedures to satisfy a multitude of customer inspection needs. GVH also provides a single-vendor solution for any component/piping replacement activities. From first-cut to post-weld heat treatment, and all applicable Non-Destructive Examinations. Manual, semi-automated, and fully automated welding options are available based on configuration and/or budget. GVH's UT procedures are approved for a code case that allows UT in place of code required RT exams, including B31.1 and Section III piping. GVH is also expanding our procedure capabilities to include Section VIII.

During the Spring 2023 outage season, GVH executed a 10-weld scope in the bottom head drain area of the drywell at a major U.S. utility customer. The conditions of the working environment were challenging from a radiological perspective, and was applauded by our customer, "The Project Manager and team performed well during schedule changes and higher dose than expected conditions. Supported the site with additional equipment and resources when requested to meet critical path."

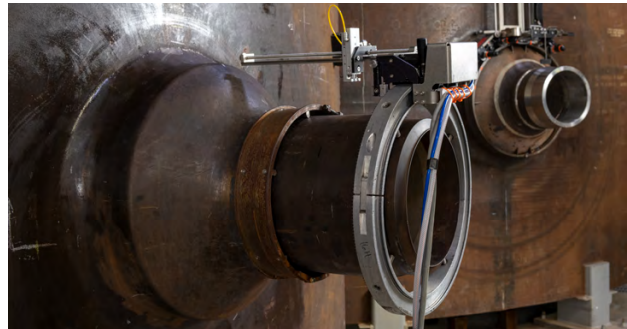
More and more customers are utilizing GVH for UT ILO RT work each year. GVH performed 2 UT ILO RT scopes in 2023, 3 scopes in 2024, and 4 scopes in the spring of 2025.

Benefits of UT

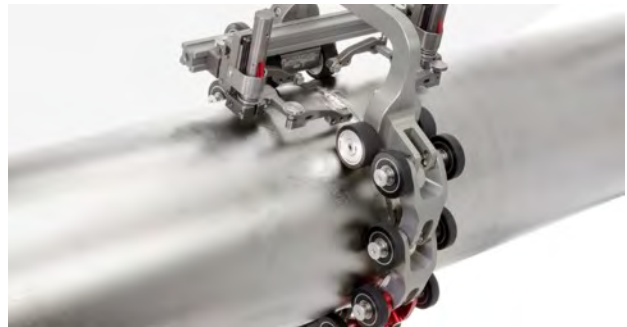
- Ferritic:
 - Single Sided
 - Thickness – 0.118" – 1.938"
 - Diameter – 1.5" NPS and greater
- Austenitic:
 - Thickness – 0.118" – 1.625"
 - Diameter – 1.5" NPS and greater

Challenges with RT

- Time consuming
- Requires exclusion areas that impact all workgroups, which can shut down entire elevations



GVH offers fully automated encoded exams as well as manual encoded exams.



PWR UT

GVH is committed to constantly improving and expanding our capabilities to service our existing and new customer's PWR's. GVH performed 10 dissimilar metal weld inspections during the 2023 spring outage season. This was GVH's first large PWR inspection scope and the team delivered in the face of many challenges and changing conditions. Once again GVH delivered the project on time, with no HU errors or injuries and improved upon the station dose goal of 4.1 Rem, coming in at 3.0 Rem.

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