FABRICATION NEWS

July 1, 2025

BOARDMAN NEWSLETTER:

Your positive feedback to the newsletter we've sent out over the years is greatly appreciated. As STEWARDS for your Custom Fabrication needs, providing valuable education to the marketplace and building strong relationships is our primary focus. We promise to be your custom fabrication resource.

We hope you find this newsletter beneficial as we share tips in the pressure vessel design and construction process.

If there are any topics you would like us to address, please let us know

Post Weld Heat Treatment (PWHT)

PWHT is a critical process after welding to relieve residual stress and improve the mechanical properties of welded components. This process is completed after all welding on the vessel is finished. ASME Section VIII may require PWHT based on thickness/material, but it could also be required per process if your vessel is in an aggressive environmental/sour service.

Types of PWHT

- PWHT Furnace
    - Post Weld Heat Treatment (PWHT) furnace or oven is a specialized piece of equipment used to heat welded components to a controlled and elevated temperature for a specified period and then cool them down gradually, following a precise temperature-time profile.
- Electrical Resistance
    - Electrical resistance heat treatment works by passing an electric current through a material, typically a metal or alloy, which generates heat due to the electrical resistance of the material itself.
- Internal Combustion
    - An internal combustion engine or burner typically uses a fuel (e.g., natural gas, propane, diesel) and air to create a controlled combustion process.

PWHT Furnace

Electrical Resistance

Internal Combustion

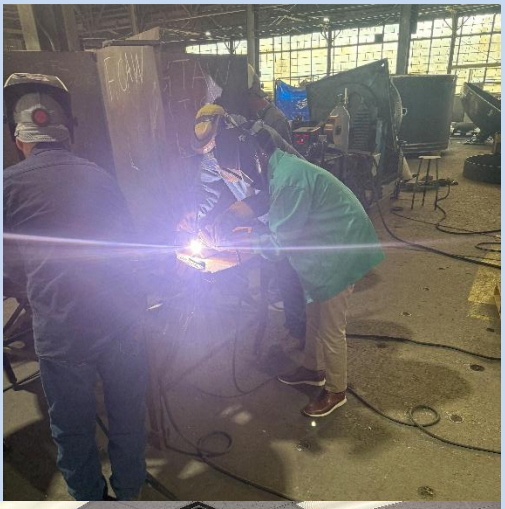
Risks and Considerations

- Potential Risks: Deformation, Cracking in the Welds
- Considerations:
  - Evaluate Large Diameter Vessels with Thin-Walled Walls
  - Review Fixed Internals within the Vessel
  - Consider How the Vessel is Oriented and Supported
  - Evaluate Thick Forgings in Thin-Walled Vessels

Resources

- ASME Section VIII
  - UCS-56, UNF-56, UHA-32
- WRC Bulletin 452
- NACE MR0175

BOARDMAN TECHNICAL SEMINARS



In April, we hosted 22 amazing clients from across the United States for our 10th Annual Engineering Seminar. This is a unique training opportunity that has been supported by our clients with incredibly supportive and positive feedback. The opportunity to dive into ASME code combined with the hands-on shop experience provides each attendee with an unmatched opportunity. We'll start planning for our 2026 event very soon so please reach out with any questions or if you would like to reserve your seat.

Coming this fall, our Annual Section IX seminar. This is another opportunity to combine classroom time with shop experience. With the positive feedback we continue to receive, we'll continue to offer this extremely popular course. Please reach out if you are interested in attending this fall.

We also provide several technical presentations at your locations. We have presentations prepared with several topics and are also able to put together a new topic that might be a greater benefit to your team. Just let us know and we'll make it happen!

BOARDMAN EMERGENCY FABRICATION

With fall turnaround season around the corner, keep Boardman's Emergency Fabrication team in mind. We are the premier solution when it matters most. You are guaranteed to receive a high-quality solution, safely, and in a timeframe that is unmatched to minimize your downtime!

BOARDMAN
EMERGENCY FABRICATION
24/7
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We would love to hear from you and have an opportunity to quote your next project

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