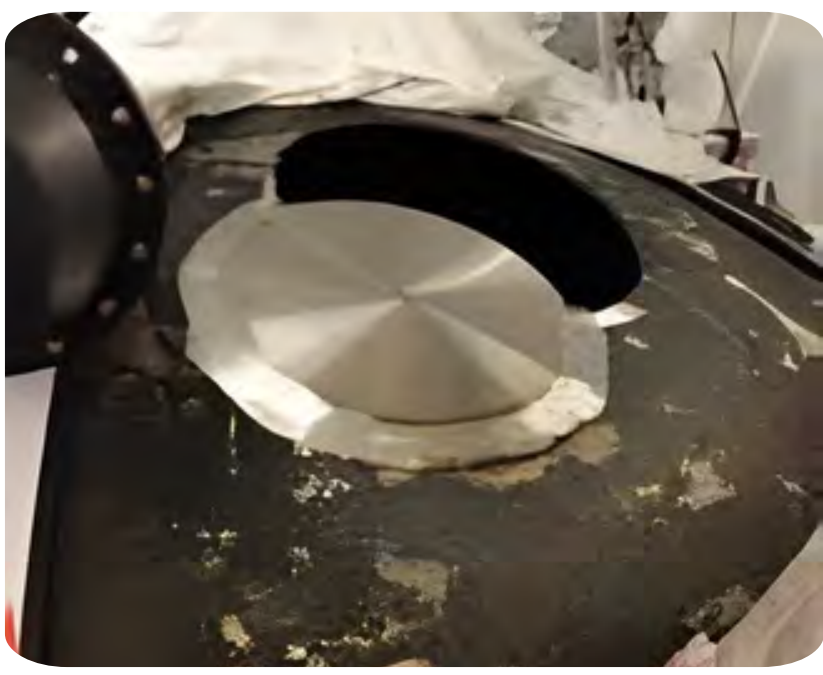
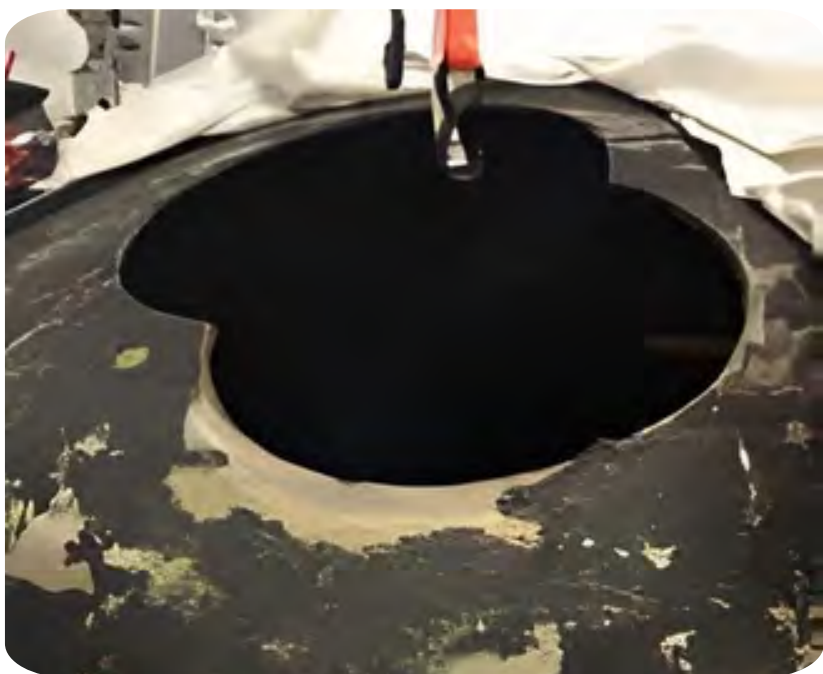


CASE STUDY

REPLACE 18" VESSEL MANWAY WITH 24" VESSEL MANWAY



THE DETAILS

- 9,000 gallon liquid storage tank
- 20µin Ra interior / mechanically polished exterior
- Located in production suite

THE CHALLENGE & SCOPE

- Job Safety Analysis (JSA) created to ensure correct response to potential hazards
- Replace existing 18" manway with new 24" manway on top head
- Re-locate valve actuator to avoid interference with piping
- Remove and plug sidewall manway assembly
- Find new location for CIP assembly
- Perform spray ball coverage test

THE RESULT

- Lined interior of the vessel to ensure that no sparks damaged the interior
- Cut out old manway and cut hole for new manway
- Had blanks pre-cut to weld into old manway hole as a plug. Cut into that plug to make room for new manway hole
- Added reinforcement to meet ASME thickness requirements
- Welded in manway using heat sink* method to prevent the manway or the plugs from warping
- Cleaned, polished and spot Electro polished the working area and returned the exterior to the same condition as original
- * Heat sink = Aluminum plug placed in fitting being welded to help dissipate heat and avoid warpage

Image Details: Plugged old hole and added new manway with use of heat sink to prevent warpage

THE BENEFITS

- Avoided all piping interference issues
- Vessel entry is improved
- Plugging manway on the sidewall helped avoid cleanability issues that were resulting in contaminations and downtime

ABEC'S UPGRADE SERVICES

- **Automation Services:** Expert equipment and process analysis identifying improved functionality with development, integration, modifications and upgrades to equipment control systems, hardware and software
- **Vessel Modifications & Upgrades:** Equipment enhancements to meet process/product changes and improve efficiency.
- **Equipment Upgrades & Retrofits:** Changes to equipment for modified functionality or footprint. Fully documented and compliant



Image Details: Completed 24"



Maximizing Customer Productivity, Controlling Costs, and Reducing Risk

ABEC's service team is highly trained and experienced, working for customers to maximize productivity, control operating costs and mitigate risk. In every way, we strive to eliminate unscheduled shutdowns, while bearing in mind all factors associated with maintaining and improving bioprocess production operations and equipment. Our expertise and capability to address your specific requirements, in line with your schedule, make us the first choice for bioprocess services, no matter the location, the scale of the task, or the original manufacturer.

