



CASE STUDY

HEAT TRANSFER SURFACE LEAK



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PROBLEM

Bioreactor Heat Transfer Surface Leak

SCOPE

- Located the cracked weld, found on the HTS outlet in the weldment between the HTS pipe and the header
- Inspected the HTS for stress corrosion cracking
- Removed only the sheathing necessary to expose the area of remediation
- Back groove to remove the damaged weld
- Added ASME full penetration weldment
- Hydrotested to satisfy ASME requirements
- Installed flexible boot to absorb movement from thermal shock and to alleviate stress on the connection
- Provided all re-certification and R-stamp documentation

RESULT

- Identified and repaired a leak caused by thermal shock
- Completed containment of HTS medium
- Reduced stress on the connection from thermal shock
- Vessel exterior, no visual indication of work done
- Vessel back in service within 72 hours



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