# Welding and PWHT are part of elevated-temperature material qualification

High-Temperature Steel for Pipe and Tube: Grades, Properties and Service Limits

| Control | Role | Evidence |
|---|---|---|
| WPS / PQR | Qualifies the process for the grade and application. | Qualified procedure |
| Preheat / interpass | Controls thermal cycle, hardness and cracking risk. | WPS + field record |
| PWHT | Controls residual stress and microstructure/properties. | Code + heat-treatment chart |
| Hardness / NDT | Verifies fabrication outcome in sensitive service. | Acceptance criteria |

Source / basis: https://niktrd.com/high-temperature-steel