

How To Qualify A Welder

5) Acceptability Criteria For Tests

- Visual Examination – Qw 302.4

Free From Incomplete Fusion / Penetration and Surface Defect

- Bend Test - QW 163

Opening not more than 3.2 mm in any direction on Convex Surface Within the Weld & HAZ

- R T – Qw 191.2

No Crack, L/F & Incomplete Penetration

No Slag, Cluster Of Porosity & Other Inclusions Beyond Specified Limit

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4) Type Of Test Required On Welded Coupon (QW-302)

- Visual Examination – Qw 302.4

Completed Coupon Shall be Subjected To Visual Inspection

- Mechanical Test - QW 452

Root Bend :- 1 No, Face Bend :- 1 No

Or

Side Bend :- 2 No

- Alternate to Mechanical Tests, Radiograph the Coupon –
6 " Minimum Length

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3) Preparation Of Test Coupon

- Prepare A Test Coupon Out of 300 x 150 x 20 mm CS Plates Or As Per Applicable WPS.
- WEP (Angle, Root Face & Root Opening) Shall Be As Per The WPS
- Provide Run in & Run Out Coupon & Fix the Test Coupon In In Any One Of The Positions To Be Qualified.
- Weld The Groove Fully In The Position
- All Welding Variables Shall be Strictly Within The Qualified WPS

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2) Train The Welder For The Process To Be Qualified

- Welder Shall Possess Adequate Skill In Performing the Process.
- He Shall have Necessary Knowledge In Operation Of Machine, Precautions In Storage & Usage Of Consumable, Defects In Welding, Their Causes And Remedy.
- He Shall Practice Welding In The Particular Position In Which He Is To Be Tested / Qualified

How To Qualify A Welder

1) Read ASME Sec. IX - Welding Performance Qualifications

- Variables For Different Processes – QW 350
- Limits Of Positions Qualified & Dia – QW 461
- Testing Requirements – QW 304-1