



**Welder Qualification Data Report**

(34) Initial / Requalification  
(circle one)

**MANGO Welding Procedure NO. 1**

Welder: (35)

(36) Visual Inspection Results per API 1104, Twentieth Edition					
Butt Weld	Pass	_____	Fail	_____	Notes:
Branch Weld	Pass	_____	Fail	_____	
Inspector:	_____	Date:	_____		

(37) Destructive Test Results per API 1104, Twentieth Edition, Appendix B

_____ " Butt Weld						
Tensile Tests						
Specimen	Width	Thickness	Area	Max Load (Lbs.)	U.T.S.	Fracture Location
(38)T-1						
T-2						
						ie Base Material

Face Bend Tests		Root Bend Test _____ " Butt Weld		Nick-Break Tests _____ " Butt Weld	
Specimen	Results	Specimen	Results	Specimen	Results
(39) FB-1		(40)RB-1		(41) NB-1	
FB-2		RB-2		NB-2	

Fillet Weld Nick-Break Tests _____ " x _____ " Branch Weld			
Specimen	Results	Specimen	Results
(42) NB-1		NB-5	
NB-2		NB-6	
NB-3		NB-7	
NB-4		NB-8	

Tested by: (43)  
\_\_\_\_\_

Acceptable Date: (44) \_\_\_\_\_ Unacceptable Date: (45) \_\_\_\_\_

6 Month Requalification Due Date: (46) \_\_\_\_\_

Additional Information: (47) \_\_\_\_\_

## Guide for completing MANGO Welder Qualification Date Report

Each number below corresponds to a section on the welder qualification data report for the MANGO procedure number 1

- 1) Circle whichever test is being administered.
  - a. Initial if first time qualifying or requalifying after certification has lapsed.
  - b. 6 Month ReQual. If time elapsed since previous welding test has not exceeded 7 ½ months.
- 2) Check to ensure the proper form is being used
  - a. MANGO 1 for welding with E6010 electrodes.
  - b. MANGO 2 for in-service welding with E7018 electrodes.
- 3) Date test welds are completed by welder.
- 4) Full name of welder performing test welds.
- 5) Name of company or contractor authorizing/requesting test, if applicable.
- 6) Name of testing facility/lab administering test.
- 7) Welder identification used on test parts.
- 8) Employee number of welder taking weld test, if applicable.
- 9) Facility where weld test was performed.
- 10) Temperature at site of welding test.
  - a. When ambient temperature or parent metal temperature is below 40°F preheating is required.
- 11) Weather conditions if testing is performed outdoors.
- 12) Butt Weld Material grade.
  - a. Material must conform to the requirements of API 1140.
  - b. Mill test report number for material should be listed if available.
  - c. Mill test report may be referenced if material type comes into question.
- 13) Outside diameter and wall thickness of test material.
- 14) Direction of weld travels, must be downhill for MANGO 1.
  - a. Direction of travel must be monitored throughout the testing process.
- 15) Verify butt weld test sample is in the correct orientation throughout the test.
- 16) Verify branch weld test sample is in the correct orientation throughout the test
- 17) Brand and model of welding machine used for test.
- 18) Branch weld material grade.
  - a. Material must conform to the requirements of API 1140.
  - b. Mill test report number for material should be listed if available.
  - c. Mill test report may be referenced if material type comes into question.
- 19) Outside diameter and wall thickness of test material.
- 20) The welding polarity used during the test must be verified before and during the test.
- 21) Information on each line will correspond with the pass being ran for the butt weld.
  - a. Readings are required for at least one bead on each pass
  - b. Additional readings may be taken and listed as desired.
- 22) The process being uses must be listed.

- a. MANGO 1 uses the SMAW process only.
- 23) Size of filler rod being used.
- a. Reference MANGO No. 1 Welding Procedure Specifications for specific parameters based on size of filler rod being used.
- 24) Type of electrode being used.
- a. E6010 Lincoln Electric Co. Fleetweld 5P+ must be used for MANGO 1
- 25) The amperage must be checked, with a calibrated meter, during welding and recorded
- a. The amperage recorded must be listed
  - b. Amperage readings must be listed for at least one bead on each pass.
  - c. Reading outside the ranges listed in MANGO 1 will result in a failed test.
- 26) The voltage must be checked with a calibrated meter, during welding and recorded
- a. The amperage recorded must be listed
  - b. Voltage readings must be listed for at least one bead on each pass.
  - c. Reading outside the ranges listed in MANGO 1 will result in a failed test.
- 27) The time from the end of one pass to the beginning of the next pass being must be listed.
- a. If time exceeds 5 minutes preheating may be required.
- 28) Travel speed for each bead recorded must be calculated.
- a. Travel speeds outside the ranges listed in MANGO 1 will result in a failed test.
- 29) Method used to clean between passes shall be listed.
- 30) Recorded all information for at least on bead on each pass for the branch weld as listed in 22 thru 29 above.
- 31) Preheat temperature if used.
- a. When ambient temperature or parent metal temperature is below 40°F preheating is required.
  - b. Preheat temperature shall be 250°F for 3" on both sides of the weld, evenly around the pipe circumference, when required.
- 32) Post heat temperature if used.
- 33) If voltage is measured across terminal at the machine check box. Voltage should be measured as close to electrode and work as possible to ensure accurate readings due to voltage drop.

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- 34) This must be marked the same as 1 above.
- 35) List welder name or I.D. mark as listed in 6 above.
- 36) All welds must pass a visual inspection per API 1104, prior to destructive test.
- a. Qualified inspector mark pass or fail for visual inspection, list name of inspector and date welds passed visual inspection.
- 37) This area is for recording results of destructive tests.
- a. Reference section 6 table 3 for number to test weld specimens per welder.
  - b. The diameter of test pipe shall be listed.
- 38) Results of each tensile test shall be entered in this area.
- a. All information for required tensile test coupons shall be filled in.
  - b. The results of each tensile test shall be recorded individually.
  - c. If the test fails, the reason for failure shall be noted accordingly.
  - d. The diameter of test pipe shall be listed.

- 39) Results of each face bend test shall be entered in this area.
- All information for required face bend test coupons shall be filled in.
  - The results of each face bend shall be recorded individually.
  - If the test fails, the reason for failure shall be noted accordingly.
  - The diameter of test pipe shall be listed.
- 40) Results of each root bend test shall be entered in this area.
- All information for required root bend test coupons shall be filled in.
  - The results of each root bend shall be recorded individually.
  - If the test fails, the reason for failure shall be noted accordingly.
  - The diameter of test pipe shall be listed.
- 41) Results of each nick break test shall be entered in this area.
- All information for required nick break test coupons shall be filled in.
  - The results of each nick break shall be recorded individually.
  - If the test fails, the reason for failure shall be noted accordingly.
  - The diameter of test pipe shall be listed.

Branch weld fillet weld nick break test

- 42) The results of the fillet weld nick break shall be entered here
- Reference Figure 10 (API 1104) for location of nick break test specimens.
  - The results of each nick break shall be recorded individually.
  - If the test fails, the reason for failure shall be noted accordingly.
  - The diameter of test pipe shall be listed.
- 43) Name of qualified inspector who conducted destructive test.
- 44) Date weld test were successfully completed.
- 45) If weld failed list date of failure.
- 46) Date will be 6 months from date test weld was complete.
- 47) Inspector notes.
- If the test is a fail the reason for failure should be noted here.