

**MENU OPTIONS**

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- Cerritos College is an approved and licensed hands-on performance weld testing laboratory for the Los Angeles Department of Building and Safety.
- Welding tests may be taken by currently registered students, former students, and students from other schools, the general public, union members, and individuals from private companies.
- **THE TEST LABORATORY DOES NOT OFFER** the following hands-on performance weld tests: AWS D1.2 Aluminum (structural), AWS D1.3 Light Gage (sheet metal), and AWS D1.4 Reinforcing Steel (rebar)  
Note: To find an L.A. City approved and licensed weld test laboratory that offers these types of welding tests visit the L.A. City Department of Building and Safety website at [www.ladbs.org](http://www.ladbs.org) for a list of test laboratories.
- The welding test laboratory offers approximately a dozen GTAW / Aerospace type welding certifications on aluminum, stainless steel, and chromoly.  
GTAW weld tests are only offered to currently registered CCC students who are enrolled in a GTAW class.

**Welding tests are offered several times each semester on specific dates.**

- If you would like information on the next available weld test date, and or would like to sign-up for an upcoming weld test, please e-mail weld test laboratory manager Mark Tait at: [mtait@cerritos.edu](mailto:mtait@cerritos.edu).  
Please include:
  - Your first name, middle initial, last name  
(If you don't have a middle name, use an X for your middle initial)
  - The type of weld test you would like to take: (SMAW), (FCAW), (ASME 6" Pipe), (ASME 2" Pipe).
  - Your phone number with area code.
- Note: If you are a currently registered CCC student, DO NOT send e-mails, please sign up for the next weld test by putting your name on the "Next Weld Test Sign-Up Sheet" which is located on the welding office window.
- Weld test candidates are welcome to come to the weld test laboratory to see the facility, welding booths, and sample weld test plates.
- Non-students may also sign up for welding tests by coming to the weld test laboratory in person.
- SMAW and FCAW weld tests are administered and inspected in accordance with the AWS D1.1 Structural Steel Welding Codebook and Visual Inspection of Groove Welds Section 4.9.1.1.
- Pipe welding tests are administered and inspected in accordance with the ASME Section IX Codebook. Pipe welding tests are available on both six inch pipe and two inch pipe.

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**WELDING LABORATORY TEST FEES AND TEST TYPES**

The Welding Program **DOES NOT OFFER** the following Hands-On Welding Performance Weld Tests listed below:  
AWS D1.2 Aluminum (structural) \* AWS D1.3 Light Gage (sheet metal) \* AWS D1.4 Reinforcing Steel (rebar)

Note: To find a weld test laboratory that offers these types of welding tests.

Please refer to the Los Angeles City Department of Building and Safety website at [www.ladbs.org](http://www.ladbs.org) for a list of weld test laboratories.

**SMAW \* FCAW \* STRUCTURAL STEEL WELD TEST FEES**

- AWS D1.1 SMAW Structural Steel 3G & 4G Plate Weld Tests (E7018 electrodes)..... \$200.00 with 50% discount = \$100 (Note 1)
  - AWS D1.1 FCAW Structural Steel 3G & 4G Plate Weld Tests (NR 232 wire)..... \$200.00 with 50% discount = \$100 (Note 1)
- NOTE 1: Currently Registered Students Receive a 50% Discount on SMAW and FCAW Weld Testing.  
NOTE 2: SMAW and FCAW Weld Tests are \$200 for Public. (Consider: One 50 Pound Roll of NR 232 Wire Costs \$278.00)

**ASME SECTION IX PIPE WELD TEST FEES**

- ASME 6" Weld PIPE Test (6G-sch 80) E6010 root and E7018 fill & cover ..... \$200.00
- ASME 6" Weld PIPE Test (6G-sch 80) GTAW root and E7018 fill & cover ..... \$200.00
- ASME 2" Weld PIPE Test (6G-sch 160) E6010 root and E7018 fill & cover ..... \$200.00
- ASME 2" Weld PIPE Test (6G-sch 160) GTAW root and E7018 fill & cover ..... \$200.00

NOTE: All Pipe Tests are \$200.00 for Students and the Public. (Consider: 6" Schedule 80 Pipe Costs \$34.00 per foot)

**GTAW WELD TEST FEES**

NOTE: GTAW weld tests may only be taken by currently registered students in Weld 130, 240L, 250L, and 260L.

**(GTAW WELD TESTS ARE NOT OFFERED TO THE GENERAL PUBLIC)**

- AWS D1.2 Aluminum 6061-T0 2F Fillet.....Weld Certification ...\$80.00
- AWS D9.1 Stainless Steel 304 2F Fillet.....Weld Certification ...\$80.00
- AWS D9.1 Chromoly 4130 5F Fillet.....Weld Certification ...\$80.00
- AWS D17.1 Aluminum 6061-T6 3G Groove.....Weld Certification ...\$80.00
- AWS D17.1 Multiple Advanced Aerospace Weld Tests are offered ... Weld Certification....\$80.00

NOTE: Consider: 304 Stainless Steel Size 4'x8'x.063" costs \$368.00 and Consider: 6061-T0 Aluminum Size 4'x8'x.090" costs \$300.00

**\*\* IMPORTANT WELD TEST INFORMATION \*\***

- Retest Fees Are The Same As Initial Fee.
- Weld Tests will be given, tested, and inspected in accordance with the latest addition of:
- (AWS D1.1 for SMAW, FCAW Plate Tests), (ASME Section IX for Pipe Tests), (AWS D1.2, D9.1, D17.1 for GTAW Tests)
- Several Testing Dates will be offered each semester.
- Specific dates will be posted on the welding office window.
- Weld Tests may only be taken during these specific prearranged posted testing dates.
- SMAW & FCAW test plates must both be completed on the same day (within the 3 hour testing time period).
- Please read and sign the "Weld Test Candidate Contract".
- Then give the signed "Weld Test Candidate Contract" to the Inspector when you check in on the day of the test.
- Students must pay required test fees for each individual test prior to taking test. (Paying fees 1 or 2 days in advance, is recommended)
- Test fees must be paid in cash with **\$100 DOLLAR BILLS ONLY**. (No Checks or Money Orders will be accepted)
  - Please Pay Test Fees at the Welding Office.
  - Pay Test Fees to Inspectors Mark Tait or Johnny Nunez
  - The Inspectors will write you a Receipt for the test you are taking.
  - Keep your Receipt and you may be able to use it for an educational tax right off or a work related tax deduction (check with your own tax consultant)

**REMEMBER YOU MUST PAY YOUR TEST FEES Before You Can Take Your WELDING TEST!!**

**PERFORMANCE WELD TEST  
RULES, PROCEDURES, AND DIRECTIONS**

**Please read the following information. If you have any questions ask the inspector before starting the test.**

1. Pay for test and give receipt to inspector. The inspector will fill out paperwork and will return your receipt to you.
2. Please sign the "Weld Test Candidate Contract" and give to inspector with your Test Fees Receipt.
3. Obtain official test plates from inspector. Your initials will be stamped on each plate.
4. Obtain "Test in Progress" sign and hang on the outside of your welding booth.
5. Tack up test plate(s) to fixture (never tack on the back up bars).
6. Make sure that vertical or overhead test plates are tacked for the position which is stamped on the back of each plate.
7. Make sure that test plates are within plus or minus five degrees.
8. Make sure the tacks are strong enough to hold the test plate in position for the entire test.
9. Inform the test inspector that you are ready to start the welding test.
10. The test inspector will spray paint the tack welds holding your test plates.
11. **DO NOT** start welding test plates before the test inspector has spray painted your tacks.
12. If test plate becomes loose, stop test, and find test inspector before continuing.
13. If test plate falls off fixture – the test is over – you have failed the test.
14. The spray painted areas must not be re-tacked or welded over during the test.
15. After the weld test inspector has spray painted the tacks, you will be given the OK to start the weld test.
16. The average time needed to finish the test is two hours; you will have 3 hours to complete both test plates.
17. Failure to finish both weld test plates in the specified time (3 hour test session) will result in a weld test failure.
18. The welder must weld on both plates simultaneously to complete the test in 3 hours.
19. When the weld test plates are finished, inform the testing inspector.
20. **DO NOT** take down or un-tack the test plates before given permission from the test inspector.
21. After the weld test, the inspector will lock up your weld test plates in the official weld test plate holding locker.
22. **DO NOT** cool weld test plates down in water.
23. **DO NOT** ask for help or talk to anyone during the weld test.
24. **DO NOT** use any kind of power tools, such as a grinder or power wire brush.
25. **DO NOT** deface cover passes.
26. **DO NOT** file, chisel, or excessively beat up the cover passes with chipping hammer.
27. **DO NOT** try to weld on only one plate at a time, you will run out of time and fail the test. (weld on plates simultaneously)
28. Hand tools like chipping hammers, files, cold chisels, saw blades, and picks may be used during the weld test.
29. Use only 1/8 E7018 electrodes from the holding oven for SMAW weld tests. Use rods with white numbers. (Lincoln LH78MR)
30. Use .068 size wires for FCAW NR232 (E71T-8) weld test.
31. Weld test plates must have completed weld filled from end to end – use back up strips.
32. The weld must have full cross sectional filling (i.e. all four end corners must be welded and not visible).
33. Maximum Weld Face Reinforcement cannot exceed 1/8 inch.
34. Maximum Overlap cannot exceed 1/8 inch on each side of joint.
35. Welds must be free from Undercut. (There should be No Visible Undercut)
36. Weld test plates must be free from Arc Strikes.
37. Weave and or Wash Bead type cover passes are not permitted.
38. Cover Passes must be made with straight Stringer Beads. (Restarts are prohibited on cover passes)
39. Cover Passes should not have: Valleys, inter bead undercutting, or high and low spots.
40. Cover Passes should have more than 50% overlap and have a consistent progression.
41. Cover Passes must have a smooth and aesthetically pleasing appearance.
42. Maximum allowable single discontinuity is .125" (for any one coupon).
43. Maximum allowable total discontinuity is .375" (all discontinuities added together).
44. **SAFETY GLASSES AND COMPLETE SAFETY CLOTHING IS MANDATORY!!!**
45. **CANDIDATES WHO DO NOT FOLLOW WELD TEST PROCEDURES WILL BE FAILED ON THE SPOT**
46. **The plates will be tested and candidates will be notified of results in approximately one week by email or phone**

**PERFORMANCE WELD TEST  
RULES, PROCEDURES, AND DIRECTIONS**

**1. Vertical Weld Test Plate Root Pass:**

- a) Use your chipping hammer to put a few dents on the backup strip at the center of the plate.
- b) Start from the bottom of the backup strip and weld vertical up and stop at the center of the plate.
- c) Reload a new rod and continue weld stopping at the very end of the backup strip.
- d) This is Root Pass layer one. Now do the exact same thing for the second Root Pass (layer two).
- e) The best procedure for the Vertical Root Pass is to use two rods per pass and two root passes or layers.
- f) Your focus and technique should concentrate on the sides of the joint.
- g) Weld time and deposit should be focused on the sides of the joint.
- h) The flatter the Root Passes are, the better (a Convex Root Pass is bad). (A Flat or Concave Root Pass is good)

**2. Overhead Weld Test Plate Root Pass:**

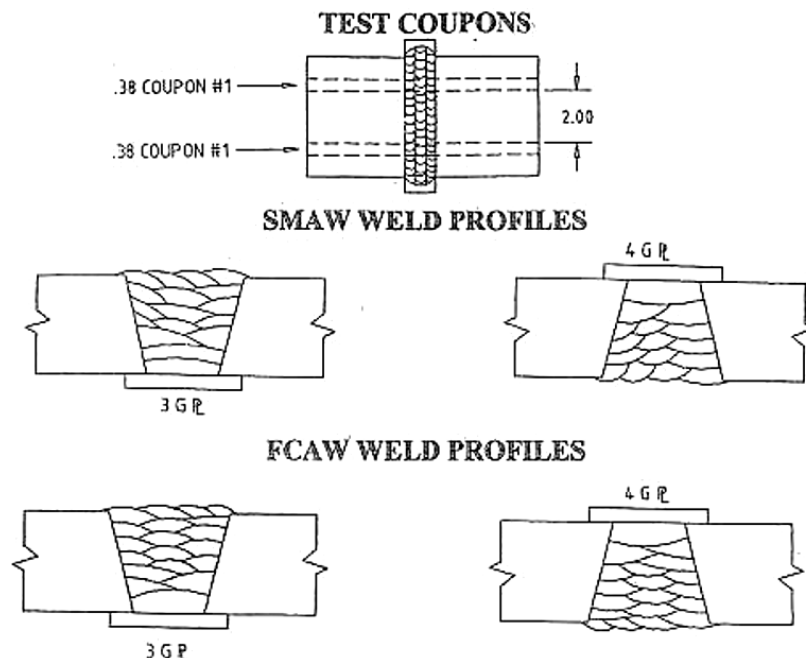
- a) Use your chipping hammer to put a few dents on the backup strip at the center of the plate.
- b) Start from either end of the backup strip and weld to the center of the plate.
- c) Reload a new rod and weld from the other end of the backup strip to the center of the plate.
- d) The overhead plate only needs one Root Pass.
- e) Again, your technique should focus all of your attention on the sides of the joint.
- f) Again, the Flatter the Root Pass the better.
- g) The second layer of the weld should be made with two stringer bead type weld passes.
- h) Overhead weld passes should be made with a very close or tight arc length and a very, very small and slow side to side technique.

**3. Cover Passes:**

- a) Cover passes must be made using stringer beads only.
- b) The vertical plate will typically have 4 to 5 cover passes.
- c) The overhead plate will typically have 4 to 6 cover passes.
- d) It is recommended to put a new clear lens in your welding hood before welding the cover passes.

**IMPORTANT NOTICE:**

**Please see weld test laboratory tacking example inside the weld shop for correct location to tack weld the vertical and overhead weld test plates to fixtures.**



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**WELD TEST CANDIDATE CONTRACT**

**Weld test candidates must understand and agree to comply with the following Weld Test Rules, Procedures, Directions, and Sign this Contract before starting the weld test.**

1. Safety glasses must be worn at all times.
2. Full welding personal protective equipment (PPE) must be worn at all times.
3. Safety boots must be worn at all times.
4. Both weld test plates must be completed in three hours.
5. If both plates are welded simultaneously then three hours is more than adequate time to complete the test.
6. If you cannot weld both weld test plates in three hours then don't take the test.
7. If you cannot weld two 5" long plates in three hours you are not ready to be a Certified Welder.
8. Power tools like grinders and power wire wheels cannot be used on the Los Angeles City Structural Steel SMAW and FCAW weld tests.
9. Hand tools like files, cold chisels, saw blades, and picks may be used during the weld test.
10. ASME Pipe welding tests must be completed in three hours.
11. ASME Pipe welding tests candidates may use all tools including power tools.

**MOST COMMON REASONS WELD TEST PLATES FAIL VISUAL INSPECTION**

1. The cover passes exceeded the 1/8" maximum height limit.
2. The cover passes were under the thickness of the plate.  
(the plate must have full cross-sectional filling)
3. The cover passes cannot overlap the joint edge more than 1/8".
4. There cannot be any restarts on the cover passes.
5. The cover passes shall be free of undercut.
6. The cover passes are ugly, uniformed, and or inconsistent.  
(cover passes must be straight, uniform, and have a good aesthetic appearance)
7. The test plate falls off fixture before the test is complete.
8. The test plate was taken down before the final inspection.
9. The welder failed to follow Test Rules, Procedures, and Directions.

\_\_\_\_\_ I have read and understand the Weld Test Laboratory Rules, Procedures, and Directions.  
(Initials)

\_\_\_\_\_ I have read and understand all 5 pages of the Weld Test Laboratory Information.  
(Initials)

\_\_\_\_\_ I have read this Weld Test Candidate Contract.  
(Initials)

\_\_\_\_\_ I have familiarized myself with the weld test laboratory tacking example and I will tack up my  
(Initials) weld test plates to fixture accordingly.

Please Print Very Clearly

Print Name: \_\_\_\_\_ Signature: \_\_\_\_\_

Email: \_\_\_\_\_ Phone #: \_\_\_\_\_

- Please print out this contract.
- Please fill out this contract.
- **Please give this Contract to the test inspector on the day you take your Test. Thank You.**