

**AUTHORIZED LABORATORY QUALIFICATION REQUIREMENTS TO PERFORM TESTING
ON ASTM A 706 REINFORCEMENT SPLICES FOR CALTRANS**

- I. Testing laboratories seeking approval to perform testing on reinforcing steel splices shall provide brochures and any other technical documentation that proves that the laboratory has the following:
 - A. Proper facilities and equipment, including a tensile testing machine capable of breaking #11 rebar. (include photographs of equipment)
 - B. A device for measuring the total slip of the reinforcing bars across the splice to the nearest 0.001-inch, that, when placed parallel to the longitudinal axis of the bar is able to simultaneously measure movement across the splice at 2 locations 180 degrees apart. (include photograph of equipment).
 - C. Competence of testing per CT 670, ASTM A970, A370 and A1034. Competence of testing shall be demonstrated for flash welded hoops, couplers and headed bars with the following:
 1. Current training records/certification that show personnel are properly trained and are certified to perform ASTM and California Test Methods listed in "E" below.
 2. A formal written reporting procedure for testing and interpretation of test results including published test report forms. The written procedure should include references to relevant sections of the current Caltrans Standard Specifications, ASTMs and CT 670.
 3. Actual tensile testing results for the following materials: flash welded hoops, couplers and headed bars.
 - i. For each type of material, four (4) samples shall be tested using the smallest, largest and #7 size rebar. (*ex. couplers: test results should be submitted for four #4 bars, four #7 bars and four #18 bars with couplers*)
 - ii. Coupler test reports shall include the actual calculations for slip.
 - iii. Flash welded hoops test reports shall show strain calculations using CT 670, Necking Option II.
 - iv. Test Reports shall be signed and state whether or not the material meets specification requirements.
 - D. Two years of annual calibration records for testing equipment (UTM, calipers, slip measuring device components) shall be submitted. The calibration must be performed by an independent third party that has:
 1. Testing standards that are traceable to the National Institute of Standards and Technology
 - E. Current and continuous accreditation by a nationally recognized accreditation agency certifying compliance with ISO 17025 for testing laboratories and Scope of Accreditation for the following test methods:

1. California Test 670: Method of Tests for Mechanical and Welded Reinforcing Steel Splices.
2. ASTM A 1034: Standard Test Method for Testing Mechanical Splices for Steel Reinforcing Bars.
3. ASTM A 970: Standard Specification for Headed Steel Bars for Concrete Reinforcement.
4. ASTM A 370: Standard Test methods and Definitions for Mechanical Testing of Steel Products.

Testing laboratories that do not have current accreditation must become fully accredited within (1) year of achieving "Conditional Approval" status. The accreditation process can take up to one year, so labs are advised to begin the application process early. A copy of your application should be sent to Caltrans as soon as you apply for accreditation.

F. Mail the submittal documents to:

Division of Materials Engineering And Testing Services – MS #5
Attention: Structural Materials Testing Branch
5900 Folsom Boulevard
Sacramento, CA 95819

G. Caltrans Evaluation:

1. Caltrans will review the submitted documentation. Upon completion of the review, Caltrans will send notification of any deficiencies to the Testing Laboratory. Acceptance letters are only issued after all comments have been resolved.
2. Caltrans will add the Testing Laboratory to the Authorized Laboratories List as "Fully Approved" for labs with accreditation, if accepted.
3. If the Testing Laboratory is not yet accredited, a waiver is issued, for up to one year, for accreditation to be obtained. "Conditionally Approved" status will be given if all other requirements are met.
4. Caltrans will remove the Testing Laboratory from the Authorized Laboratories List if it fails to renew accreditation per the requirements of the Independent Accreditation Agency or if it fails to submit all renewal documents to Caltrans prior to expiration.

H. Once "Fully Approved," Testing Laboratories are required to submit renewal documentation every two years, **30 days prior to their expiration**. Renewal documentation includes, but is not limited to the following:

1. Current accreditation certificate with a nationally recognized accrediting agency
2. Training records for any new employees for the latest test methods
3. Calibration records for the past two years for your UTM, calipers, and slip measuring devices
4. Completed test reports for welded hoops, couplers and headed bars tested at your lab.

5. A formal written reporting procedure for testing, interpretation of results and reporting
 - i. Including references to the Caltrans Standard Specifications, relevant ASTMs, and CT 670
 - ii. Procedure used to evaluate and interpret test results as a pass/failure

For more information, you may contact the Structural Materials Testing Branch at (916) 227-7253.