



**PREQUALIFICATION PROCEDURES AND ACCEPTANCE CRITERIA FOR HEADED ASTM
A 706 REINFORCING STEEL BARS**

- I. Manufacturer/Supplier provides
 - A. The model number/name of the product.
 - B. Brochures, shop drawings, and other technical information that indicates
 1. Dimensions
 2. Materials
 - C. Documentation of heat treatment **and/or** any special manufacturing process (e.g., forging the bar end).
 - D. Quality control manual for materials and manufacturing process (es). As a minimum, the QC manual shall include the following:
 1. The pre-production procedures for the qualification of materials and equipment.
 2. The methods and frequencies for performing QC procedures during production.
 3. The calibration procedures and calibration frequency for all equipment.
 4. The welding procedure specification (WPS) for friction welded headed bar reinforcement.
 5. A system for marking and tracking headed bar reinforcement lots with the following information:
 - a. Production lot numbers
 - b. Heats of bar material and head material used in the manufacture of each production lot
 - c. Number of bars in each production lot
 - d. Manufacturing records, including tracking and production parameters for welds or forgings.
 - E. Test report from an independent testing lab verifying that the product meets Caltrans' Standard Specifications, Section 52, and ASTM A970/A 970M specifications.
 - F. Four headed rebar samples for each rebar size: 4 feet long for rebar sizes #9 and below and 6.0 feet long for rebar sizes #10 and above.
 - G. Mill certificates for head material and rebar for each sample and rebar size.
- II. Caltrans will:
 - A. Ensure all required documentation and samples are received.
 - B. Review the technical information the supplier provided.
 - C. Perform mechanical testing
 1. Cyclical test per Test Method CT 670
 2. Tensile test per Test Method CT 670
 - a. Tensile strength shall conform to the requirements specified in ASTM Designation: A 970/A 970M, Class A (80 ksi minimum).
 - b. Rupture in the rebar, with visible necking or decrease in the sample's cross-sectional area, at the point of rupture. The visible necking must be located at least one bar diameter away from the affected zone.



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- D. Upon evaluation of results from II.A to II.C above, issue either an acceptance letter or rejection letter.
- E. Update the [AUTHORIZED LIST OF HEADED REINFORCING STEEL FABRICATORS](#), if applicable.

III. Authorization Expiration Date

- A. Each authorized headed bar will be assigned an expiration date after being authorized. To maintain authorization on the Authorized Materials List, manufacturers must submit documentations/test samples as specified in section IV at least 60 days prior to the expiration date.

IV. Documentation required to maintain authorization on the AML include the following:

- A. Documents specified in section I.A to I.C.
- B. A signed memo to the Department, stating/specifying modifications/revisions (if any) were made to the headed reinforcement since authorized by the Department. Revisions include but are not limited to dimensional changes, material specifications, and manufacturing processes.
- C. Upon satisfying the submittal requirements, you may be contacted by the Department to submit samples for reauthorization testing.

For more information, you may contact the Structural Materials Testing Branch at SMTL@dot.ca.gov.