

State of Louisiana
Department of Transportation and Development (DOTD)
Materials and Testing Section Approved Materials Procedure
for

STEEL WIRE & WELDED WIRE REINFORCEMENT

MATERIAL SPECIFICATION REFERENCE:

DOTD Standard Specifications, Subsection 1009.01.3, 1009.01.4, ASTM A1064, Supplemental Specifications and Special Provisions. Reference specifications: AASHTO M 32, AASHTO M 225 AASHTO M 55, AASHTO M 221.

APPROVED MATERIAL EVALUATION SUBMITTAL:

The manufacturer shall submit a completed Approved Materials Evaluation Submittal to the DOTD Materials and Testing Section Coordinator listed below.

PRELIMINARY REQUIREMENTS:

The complete submittal must include:

- Complete Approved Materials Evaluation Form
- Letter requesting evaluation of the material
- Product Data Sheets
- Manufacturer's specifications
- Safety Data Sheet (SDS)
- Samples
- Independent Laboratory Test Results
- AASHTO National Transportation Products Evaluation Program (NTPEP) Results

The address of the contact affiliated with AASHTO NTPEP is:

NTPEP Coordinator
AASHTO National Transportation Products Evaluation Program
444 N. Capitol St. N.W.
Suite 249
Washington, D.C. 20001
Phone: (202) 624-3695
Fax: (202) 624-5806
<http://data.ntpep.org>

For detailed information, refer to the Operational Procedures of the AASHTO NTPEP available from the NTPEP Coordinator.

NOTE: Evaluation will not begin until all required items listed above are received by the Materials Laboratory

PRELIMINARY REQUIREMENTS CONTINUED:

Certifications and/or Test Reports

Prior to submitting an “Approved Materials Evaluation Form” to the Materials and Testing Section, the manufacturer shall have successfully completed the requirements of the AASHTO NTPEP Committee Work Plan for “Evaluation of Reinforcing Steel Manufacturers” utilized with NTPEP document SP01, *Qualification of Highway Product Manufacturers Through the Use of NTPEP Audits*. The laboratory results obtained from the AASHTO NTPEP report will be used to determine conformance of the material to DOTD Standard Specifications.

The manufacturer shall provide a Mill Test Report (MTR) and a Certificate of Analysis (CA) by an independent laboratory showing the required physical and chemical properties for all reinforcing steel in accordance with DOTD Standard Specifications, Subsection 1009.01.3, 1009.01.4, ASTM A1064, Supplemental Specifications and Special Provisions. Reference specifications: AASHTO M 32, AASHTO M 225 AASHTO M 55, AASHTO M 221.

Product Data Sheets shall provide all pertinent information relative to the material to be evaluated, including but not limited to:

- Manufacturer’s specifications
- Typical analysis
- Physical and chemical properties

Samples (to be furnished at no cost to the Department)

The manufacturer shall contact the Materials and Testing Section Coordinator to discuss available sizes manufactured from the mill. Samples of WWR and Wire Reinforcement shall be accompanied by their corresponding Mill Test Report (MTR) and submitted to the Materials and Testing Section for evaluation.

- For Welded Wire Reinforcement (WWR) which is either plain, deformed or both, the producer shall submit at least three (3) uncut samples of each type seeking approval from different heats of different sizes which are large enough to ensure that at least six (6) “T’s” and at least four (4) “Straights” can be obtained from the sample. WWR samples are generally four feet by four feet (4’ x 4’) in size to ensure an adequate of samples can be acquired.
- For Wire Reinforcement which is either plain or deformed, the producer shall submit at least three (3) samples of each type seeking approval from different heats of different sizes which are no less than 36 inches in length.

TEST REQUIREMENTS:

Laboratory Testing

All reinforcing steel samples will be tested and evaluated according to ASTM A1064. Reference specifications: AASHTO M 32, AASHTO M 225 AASHTO M 55, AASHTO M 221.

Evaluation Time (3 Months)

INSPECTION:

The Department's Construction Fabrication Section or the Materials & Testing Section may elect to send a representative to the steel mill or manufacturing facility under evaluation to inspect the following:

- **Production** - The manufacturing process and condition of wire draw and mesh welding line. Reinforcing steel may be checked to determine if it has been rolled from billets identified by a heat number from an approved source. Finished reinforcing steel may be checked for traceability from melt or smelt through each subsequent phase of manufacture. Production inspection will include:
 - Wire draw line
 - Mesh welding line
 - Mill facilities
- **Quality Control (QC)** – The inspector may conduct an in-depth review of the following:
 - If the QC laboratory facility actively participates in the quality control of steel production
 - Calibration records on all testing equipment used to test reinforcing steel
 - Sampling rates and testing frequency for reinforcing steel
 - Physical testing of reinforcing steel for compliance with specifications
 - Chemical analysis of reinforcing steel for compliance with specifications
 - Generation of Mill Test Reports (MTR)
 - Complete Training and Competency Records for all technicians involved with the production, handling and testing of reinforcing steel
- **Documentation** - The documentation and records shall be maintained by the mill or facility for a period of three (3) years to support MTRs and available upon request.
- **Mill Test Reports (MTR's)** - All reinforcing steel furnished to LA DOTD shall be accompanied by a MTR, certified as correct by a person who can legally bind the mill or facility. The MTR shall show:
 - Applicable specification number and year of issue
 - Physical and chemical properties of the materials as required by the specifications
 - Heat number, lot/run number, etc. (Identification number)
 - Origin of the materials and of the manufacturing processes
- **Material Identification** – The following may be checked for compliance with requirements:
 - Heat/Lot/Coil numbers
 - Mill markings on deformed reinforcing steel
- **Storage Facility** - Material storage for finished reinforcing steel may be checked to assure compliance with applicable requirements.
- **Shipping Records** - Shipping records and associated documentation may be reviewed for completeness and accuracy.

GENERAL:

Upon completion of the evaluation, the submitter will be notified in writing concerning the results of the evaluation and whether the mill or facility will or will not be added to the Approved Materials List (AML). The Materials Engineer Administrator shall be notified in writing of any change in product markings, steel formulation, or manufacturing process, including significant changes in the mill's Quality Control Program. The Department reserves the right to re-evaluate any material at any time. Mill samples accompanied by a MTR shall be submitted every two (2) years for verification to the DOTD Materials and Testing Section Coordinator to remain on the AML.

It is also the manufacturer's responsibility to supply the contact information of the representative responsible for the material to the Materials Section Coordinator to remain on the AML. This is done by completing the Approved Materials Evaluation Form every two (2) years or when there is a change in the manufacturing representative responsible for the material.

PROJECT ACCEPTANCE REQUIREMENTS:

The inclusion of any material on the AML is not blanket approval for its use. All materials, regardless of prior approval, shall be sampled in accordance to the Materials Sampling Manual. Sampling and testing of reinforcing steel for project acceptance may not be required if the LA DOTD inspector can identify the reinforcing steel as coming from a mill listed on the AML and accompanied by a MTR for each shipment.

DISQUALIFICATION AND REMOVAL:

Any qualified steel mill may be removed from the AML at any time. Causes for removal from the AML may include, but are not limited to the following:

- Non-conformance with this procedure
- Non-conformance with specifications
- Performance requirements
- Failure to supply biennial mill samples accompanied with MTRs as required by this procedure
- Failure to notify the Department of any change in material formulation
- Failing test results obtained by the Materials Section of project verification samples.
- Failure to supply current contact information for the material representative in accordance with this procedure.

REQUALIFICATION:

A steel mill or facility which has been disqualified and/or removed from the AML will be considered for re-evaluation only after submission of a formal request along with acceptable evidence that the problems causing the disqualification and/or removal have been resolved.

**DOTD MATERIALS & TESTING
SECTION COORDINATOR:**

Justin Morris, P.E.
Physical Test Engineer
DOTD Materials and Testing Section
5080 Florida Boulevard
Baton Rouge, La. 70806
(225) 248-4219
Justin.Morris@la.gov

Approved 05/24/17



BRIAN OWENS, P.E.
DOTD MATERIALS ENGINEER ADMINISTRATOR