

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
STAINLESS STEEL REINFORCEMENT

STR:SCK

1 of 2

APPR:REL:JAB:11-23-21
FHWA:APPR:12-09-21

After the second paragraph of subsection 905.03, Bar Reinforcement for Structures, of the Standard Specifications for Construction add the following:

Stainless steel deformed steel bars used for non-prestressed and prestressed concrete reinforcement must meet the requirements of ASTM A955/A955M. The following unified numbering system (UNS) designations are permitted: S24100 (XM-28), S31653 (316LN), S32205 (2205), and S32304 (2304) stainless steel for Grade 60 or Grade 75 stainless steel bars, unless otherwise required.

Stainless steel reinforcement bars must be in accordance with the chemical composition as specified in ASTM A955/A955M, Table 2, Chemical Composition.

Furnish stainless steel reinforcement bars free of dirt, mill scale, oil, and debris, by pickling or abrasive blasting.

After the last paragraph of subsection 905.03, Bar Reinforcement for Structures, of the Standard Specifications for Construction add the following:

- E. Bar Chairs and Wire Ties for Stainless Steel Reinforcement.** Bar Chairs and wire ties required for placing and fastening stainless steel reinforcement must conform to the following:
1. Ensure bar chairs are plastic coated, epoxy coated, plastic, or stainless steel conforming to the requirements of ASTM A493, Type 316 (UNS number S31600). Ensure the legs of chairs are turned up a minimum of 1/8 inch. Ensure stainless steel chairs used above steel beams or metal stay-in-place forms have plastic coated feet.
 2. Ensure wire ties are plastic coated, plastic, or stainless steel are in accordance with the requirements of ASTM A493, Type 316 (UNS number S31600), annealed. Ensure wire size is the same as used for mild carbon steel reinforcement.
 3. Ensure tie-down wires are plastic coated, or stainless steel in accordance with the requirements of ASTM A 493, Type 316 (UNS number S31600), annealed.
- F. Material Acceptance Requirements for Stainless Steel Reinforcement.** Ensure acceptance testing is performed on a per project basis. Sample size must be two bars per size, per manufacturer, one bar of 24 inch minimum length, and one bar of 36 inch minimum length. Submit samples to MDOT for testing. Testing will be in accordance with ASTM A370 and the ASTM specification applicable to the material referred to herein.

Furnish Mill Certificates for each project that must:

1. Be from the supplying mill verifying that the stainless steel reinforcement furnished has been sampled and tested and the test results meet the contract requirements;
2. Include a copy of the chemical analysis of the stainless steel furnished, with the UNS designation, the heat lot identification and the source of the metal if obtained as ingots from another mill;
3. Include a copy of tensile strength, yield strength, and elongation tests on each of the sizes (diameter) of stainless steel reinforcement provided;
4. Permit positive determination that the reinforcing furnished is that which the test results cover.