

American Railway Engineering & Maintenance-of-Way Association
Letter Ballot No. 15-23-23

Assignment: At the September 2023 Meeting, a new letter ballot 15-23-23 was proposed. The letter ballot revised language in Article(s) 5.13.4.3b and 5.13.6c in Part 5, Bearing Design and Construction of Chapter 15, Steel Structures.

Rationale: Based on the reaffirmation review of Article 5.13.4.3b it was noted by the Task Force that this article is impractical as bearing manufacturers do not know what bearings will be used for lot testing until the EOR or inspector selects the bearings that are to be tested. This typically occurs after the fabrication of the bearing and immediately before testing. Currently this article states that the bearing manufacturer would need to fabricate a single matching sole plate prior to testing which would add days or weeks to the process. Bearing manufacturers generally have a series of plates that can be stacked to accommodate any bevel and plate size to perform testing in a timely manner. The proposed language allows the bearing manufacturer to supply adapter plates with the bearing so that they can be tested without the need to fabricate a unique plate for each bearing.

In addition, Article 5.13.6c currently has a requirement for the maximum temperature for steel plates in contact with the elastomer during the welding process of 400 degrees F. During the reaffirmation process this temperature limit was discussed and determined that the limit that is currently in the manual is too high and may cause issues to the vulcanization of the steel plate to the elastomer. Currently industry practice is to keep this temperature below 225 degrees F.

Submitted by: William C Farrow III, Chair SC 7 Bearing Design and Construction

Due Date: January 26, 2024

Edit existing Article(s) 5.13.4.3b and 5.13.6c (additions shown as **underlined bold red**, deletions shown as **~~bold red strikethrough~~**). Editorial comments in brackets “[]” are not part of the new text. Existing text is shown with edits as it will appear in 2024 MRE.

5.13.4 TESTING AND ACCEPTANCE (~~2007~~**2025**) **R(2024)**

5.13.4.3 Testing

- a. All exterior surfaces ...
- b. Bearings with tapered sole plates, **which are when** selected for testing, **shall are to** be delivered to the test site **accompanied by a single unattached matching tapered plate with adapter plates enabling perpendicular application of test loads to the bearings. This plate shall be made of the same material and shall be the same size and thickness as the tapered plate. Additionally, the single matching tapered plate shall be so constructed that, when placed in contact with the tapered sole plate, the two shall form a single body, rectangular in shape and uniform in thickness.**

[Remainder is unchanged]

[continued]

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5.13.6 ERECTION (~~2007~~2025) ~~R(2024)~~

- a. In addition to ...
- b. In addition to ...
- c. In addition to provisions provided in Article 5.13.6d through Article 5.13.6i below, multi-rotational bearings with polyether urethane ~~elastomerie~~ disc elements shall be erected in accordance with the requirements of Article 5.12.12. **The temperature of the steel plate in contact with the polyether urethane disc element shall not exceed 225 degrees F (107 degrees C) during any welding process.**

[Remainder is unchanged]

Draft Not Yet Approved