

SSER

Task: Allegations A-115 and A-155

Reference Nos.: 4-84-A-06-10 and 4-84-A-06-50

Characterization: It is alleged that there were deficiencies in Cadweld splice, tensile testing rates when compared to the requirements in the Ebasco Cadweld specification. It is also alleged that the closure of the non-conformance report (NCR) which identified these deficiencies may not be adequate.

Assessment of Allegation: The specific concern stated on the NCR was that, contrary to the requirements of Ebasco Cadweld specification, there were Cadweld splice tensile test failure rates which exceeded 1 in 15 consecutive test samples. The concern was based on Cadweld splices performed by two Cadwelders.

The Cadweld specification required that, when such a situation occurred, the welding crew terminate splicing and be requalified. The specification also required that the production splices on either side of the last failing specimen be cut out and tested and that tests be performed on four more production splices from the balance of the last 100 production splices.

Based on the NRC staff review of NCR-W3-5998 and the two Cadwelders' tensile test records, the observed failure rate for each Cadwelder was no more than 1 in 15 consecutive test samples. NCR-W3-5998 identified the tensile test failure rate pertaining to the total output of all the Cadwelders. There were two permissible NRC options to satisfy the requirement related to a tensile test failure rate of more than 1 in 15. Ebasco selected the option of maintaining records on splice crews, rather than maintaining a composite record across the entire project, as was assumed in the NCR.

Based on the NRC staff review, the resolution of the NCR was correct. The records reviewed by Ebasco were correct and the specification requirement was met with regarding test frequency in the specific splices. This item has neither safety significance nor generic implications.

Potential Violations: None.

Actions Required: None.

References

1. NCR-W3-5998, Non-Conformance Report dated March 30, 1983.
2. Ebasco Specification No. LOU-1564.79 Rev. 0 "Mechanical Splicing of Concrete Reinforcing Steel", March 8, 1974.

3. U.S. AEC Regulatory Guide 1.10 "Mechanical (Cadmold) Splices in Reinforcing Bars of Category I Concrete Structures" Rev. 1, January 2, 1973.
4. U.S. AEC Interpretation of Regulatory Guide 1.10, May 15, 1973.
5. J. D. Davis memorandum dated on December 9, 1982. File reference Number W30AIRG-0215 (Ebasco).
6. J. D. Davis memorandum dated on December 12, 1983, (Ebasco).

Statement Prepared By:

Li Yang

Date

Reviewed By:

Team Leader

Date

Reviewed By:

Site Team Leader(s)

Date

Approved By:

Task Management

Date

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SSER X A-115

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The Cadweld specification required that, when such a situation occurred, the welding crew terminate splicing and be requalified. The specification also required that the production splices on either side of the last failing specimen be cut out and tested and that tests be performed on four more production splices from the balance of the last 100 production splices.

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Potential Violations: None.

Actions Required: None.

References

1. NCR-W3-5998, Non-Conformance Report dated March 30, 1983.
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*Comments
INCORPORATED
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Characterization: It is alleged that there were deficiencies in Cadweld splice tensile testing rates when compared to the requirements in the Ebasco Cadweld specification. It is also alleged that the closure of the non-conformance report (NCR) which identified these deficiencies may not be adequate. X

Assessment of Allegation: The specific concern stated on the NCR was that, contrary to the requirements of Ebasco Cadweld specification, there were Cadweld splice tensile test failure rates which exceeded 1 in 15 consecutive test samples. The concern was based on Cadweld splices performed by two Cadwelders. *and no requalification of the Cadwelder was completed.* X

The Cadweld specification required that, when such a situation occurred, the welding crew terminate splicing and be requalified. The specification also required that the production splices on either side of the last failing specimen be cut out and tested and that tests be performed on four more production splices from the balance of the last 100 production splices.

Based on the NRC staff review of NCR-W3-5998 and the two Cadwelders' tensile test records, the observed failure rate for each Cadwelder was no more than 1 in 15 consecutive test samples. NCR-W3-5998 identified the tensile test failure rate pertaining to the total output of all the Cadwelders. There were two permissible NRC options to satisfy the requirement related to a tensile test failure rate of more than 1 in 15. Ebasco selected the option of maintaining records on splice crews, rather than maintaining a composite record across the entire project, as was assumed in the NCR. X

Based on the NRC staff review, the resolution of the NCR was correct. The records reviewed by Ebasco were correct and the specification requirement was met with regarding test frequency in the specific splices. This item has neither safety significance nor generic implications. *and Cadwelder requalification* X

Potential Violations: None.

Actions Required: None.

References

1. NCR-W3-5998, Non-Conformance Report dated March 30, 1983.
2. Ebasco Specification No. LOU-1564.79 Rev. 0 "Mechanical Splicing of Concrete Reinforcing Steel", March 8, 1974.

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