

SSER

Task: Allegation A-171

Reference No.: 4-84-A-0. 56

Characterization: It is alleged that, EBASCO's practice of allowing the use of oversize Cadweld sleeves to make Cadweld splices might have impaired the quality of Cadweld splicing, and that this practice was authorized by a "speed letter" which is not part of the quality system.

Assessment of Allegation: The NRC staff reviewed a file of speed letters, which were not part of a quality assurance records system, and extracted two letters which authorized the use of Cadweld sleeves one size larger than the reinforcing bar to be spliced. No documentation from the sleeve manufacturer, Erico Products, Inc. (Erico), could be located in the files for the Waterford 3 project, although several EBASCO personnel indicated that manufacturer's procedures had been followed when the larger splice sleeve was used. The NRC staff was aware of the fact that use of a larger sleeve has been an accepted industry practice as long as the powder charge was increased so as to completely fill the annular space between the bars and the sleeve with the Cadweld melt material.

At the request of the NRC staff, EBASCO obtained documents supporting the actions they had taken. These documents contained Erico's statement that the practice of using a sleeve of the next larger size than the reinforcing bars to be spliced was acceptable with an increase in the powder charge. Additionally the results of a series of tensile tests performed earlier by Erico to support the application of the larger sleeve were also obtained. Erico enclosed another set of documents which defined the necessary weights of the various charges required for increasing the powder charge. The NRC staff agreed that this practice and the associated information was acceptable.

The NRC staff was aware that the result of using a charge too small for a splice would be easily detected during a visual inspection by the QC inspector by observing incomplete filling in the end(s) of the sleeve.

Two other speed letters reviewed by the NRC staff addressed the use of a specific #6 Cadweld sleeve for use in a direct weld to a steel plate or shape with proper end preparation for a J-groove weld, and addressed the practice of adding powder to some cartridge kits. Both of these actions were acceptable to the NRC staff under the manufacturer's standard use of this commercial construction product.

The NRC staff had no major concern over the fact that speed letters were used in these instances. The practices noted in these speed letters were basically the recommendations by the manufacturer and represented standard construction practice. These practices had generally developed since the original specification for the project was prepared, so they were not specifically addressed by that specification. From the standpoint of quality assurance it would have been preferable if these issues had been addressed by an FCR, DCN or a specification revision, but the technical issues involved were acceptable to the NRC staff. This allegation has neither safety significance nor generic implications.

Potential Violations: None.

Actions Required: None.

References

1. Speed letter from EBASCO to J. A. Jones, JAJ No. 0257, September 29, 1977.
2. Speed letter from EBASCO to J. A. Jones, JAJ No. 0369, May 10, 1978.
3. Speed letter from EBASCO to J. A. Jones, JAJ No. 0440, October 19, 1978.
4. Speed letter from EBASCO to J. A. Jones, JAJ No. 0775, September 7, 1979.
5. Telex dated April 24, 1984 from Abe Cochran, Civil QC Supervisor, EBASCO to Mr. R. T. Benko of Erico Products, Inc.
6. Telex dated April 26, 1984 from Mr. R. T. Renko of Erico Products Inc. to Mr. Abe Cochran, EBASCO.
7. Letter dated April 26, 1984, from Mr. R. T. Renko of Erico to Abe Cochran, EBASCO.
8. Cadweld rebar splicing by Erico, 1980.

Statement Prepared By:

L. Yang

Date

Reviewed By:

Team Leader

Date

Reviewed By:

Site Team Leader(s)

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Approved By:

Task Management

Date

Document Name:
SSER A-171

Requestor's ID:
CONNIE

Author's Name:

Document Comments:

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Task: Allegation A-171

Reference No.: 4-84-A-06-66

Characterization: It is alleged that, Ebasco's practice of allowing the use of oversize Cadweld sleeves to make Cadweld splices might have impaired the quality of Cadweld splicing, and that this practice was authorized by a "speed letter."

Assessment of Allegation: The NRC staff reviewed a file of speed letters, which are not part of a quality assurance records system, and extracted two letters which authorized the use of Cadweld sleeves one size larger than the reinforcing bar to be spliced. No documentation from the sleeve manufacturer, Erico Products, Inc., could be located in the files for the Waterford 3 project, although several Ebasco personnel indicated that manufacturer's procedures had been followed when the larger splice sleeve was used. The NRC staff was aware of the fact that use of a larger sleeve was accepted practice as long as the powder charge was increased so as to completely fill the annular space between the bars and the sleeve with the Cadweld melt material.

At the request of the NRC staff, Ebasco obtained documents supporting the actions they had taken. These documents contained Erico's statement that the practice of using a sleeve of the next larger size than the reinforcing bars to be spliced was acceptable with an increase in the powder charge. Additionally, the results of a series of tensile tests performed earlier by Erico to support the application of the larger sleeve were also obtained. Erico enclosed another set of documents which defined the necessary weights of the various charges required for increasing the powder charge.

The NRC staff was aware that the result of using a charge too small for a splice would be easily detected during a visual inspection by the QC inspector by observing incomplete filling in the end(s) of the sleeve.

Two other speed letters reviewed by the NRC staff addressed the use of a specific #6 Cadweld sleeve for use in a direct weld to a steel plate or shape with proper end preparation for a J-groove weld, and addressed the practice of adding powder to some cartridge kits. Both of these actions were acceptable under the manufacturer's standard use of this commercial construction product.

The NRC staff has no major concern over the fact that speed letters were used. The practices noted in these speed letters were basically the recommendations by the manufacturer and represented standard construction practice. These practices had generally developed since the original specification for the project was prepared, so they were not specifically addressed by that specification. This allegation has neither safety significance nor generic implications.

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Potential Violations: None.

Actions Required: None.

References

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FINAL SSER ROUTING

Revision :	0	1	2	3
✓ Denny Crutchfield	<i>[Signature]</i>			
Jim Gagliardo				

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FINAL SSER ROUTING *A-171*

Revision :	0	1	2	3
✓ Denny Crutchfield	<i>[Signature]</i>	<i>[Signature]</i>		
✓ Jim Gagliardo	<i>[Signature]</i>	<i>[Signature]</i>		

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 A-171, Rev 2, 6/21/84
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Potential Violations: None.

Actions Required: None.

References

1. Speed letter from Ebasco to J. A. Jones, JAJ No. 0257, September 29, 1977.
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~~CONFIDENTIAL~~

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