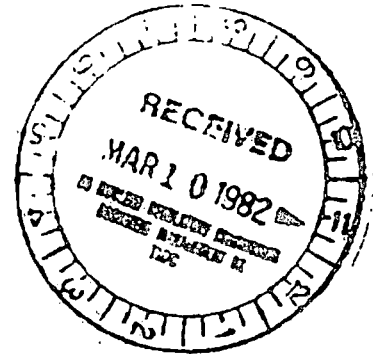


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MEMORANDUM FOR: E. Gallagher  
Factor Engineering Branch, IE

FROM: E. G. Arndt  
Mechanical/Structural Engineering Branch, RES

SUBJECT: REBAR SPLICE SAMPLING

- References:
- (1) Regulatory Guide 1.10, Mechanical (Cold) Splices in Reinforcing Bars in Category I Structures, Revision 1, January 2, 1973
  - (2) ANSI M45.2.5-1974, Supplement, QA Requirements
  - (3) ANSI M45.2.5-1978
  - (4) ASME B&PV Code, Section III, Division 2, CC-5324, 1973
  - (5) III-2, CC-4334.6.3, 1975
  - (6) III-2, CC-4333.4.3, 1977
  - (7) III-2, CC-4334.6.3, 1980
  - (8) Regulatory Guide 1.136, Materials, Construction, and Testing of Concrete Containments (partially endorsing III-2)
  - (9) Regulatory Guide 1.94 (endorses ANSI M45.2.5)

In response to your recent inquiry, references 1, 2, and 4 incorporated a provision that rebar splice tensile test samples have separate test cycles "...for each splicing crew..." This provision has been missing from references 3, 5, 6, and 7. Two approaches could remedy this condition to take care of the concerns expressed in Enclosure 1, with which we agree.

First, the III-2 Code committee can consider and adopt a code change as requested by Enclosure 1. So far, the Working Group on Rebar has considered, but not adopted, such a change.

Second, the next revisions of references 8 and 9 could also address this and restore the word: "for each splicing crew."

In a call this week to Bill Black, the former Working Group (WG) Chairman (he has just resigned his chairmanship), it was learned that the WG also has similar concerns about not sampling on a crew basis. However, they have information that the implementation in the field of this requirements has been impractical, controversial, and an accounting problem due to a lack of precision in defining "splicing crew," as well as a lack of stability in crew makeup in terms of numbers of personnel in the crew and how long they remain with that crew before switching to other crews or to other jobs or jobsites

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on a temporary or permanent basis. The WG seems interested in finding a practical, efficient handle on the problem of crew definition. To this end, they plan to solicit recommendations from Mr. Valentenyi, and would welcome the same from the NRC.

Once a feasible implementation is identified, the WG seems prepared to submit a code change requiring sampling on a crew basis.

The WG's concern over effective implementation seems valid. A requirement that produces an accounting nightmare or that licensees find some way to subvert is no good, whatever its theoretical merit. As a result, before revisions of Regulatory Guides 1.94 and 1.136 restore the words "for each splicing crew," recommendations by which this requirement can reasonably be implemented are hereby sought from all receiving a copy of this memorandum.

Meanwhile, it would seem appropriate to apply a sampling requirement on a crew basis only where there is a clear agreement with a licensee on how such a requirement will be implemented without unreasonably complex accounting problems resulting from it.

E. G. Arndt  
Mechanical/Structural Engineering Branch  
Division of Engineering Technology

## Enclosures:

1. Ltr Valentenyi to Black,  
dtd October 30, 1980
2. Partial Minutes of WG on  
Reinforcing and Prestressing  
Systems, dtd June 17, 1981

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