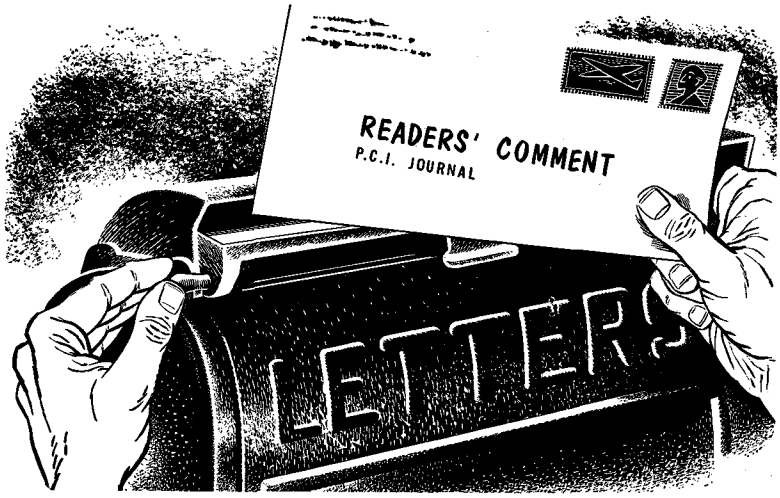

Readers' Comment Discussion

by **M. R. Montgomery**
President, Prestressed Concrete Manufacturers Association of California, Inc.

OF

MANUAL FOR INSPECTION OF PRESTRESSED CONCRETE

by **Joint Committee AASHO-PCI**
(December, 1962 PCI Journal)

Gentlemen:

The Committee is to be congratulated on their presentation of a much needed inspection manual. The manual is very complete, and should be of great value to all users of prestressed concrete.

About one year ago, our association, the Prestressed Concrete Manufacturers Association of California, recognized the need for some type of inspection guide or manual, and published a "Prestressed Concrete Inspectors Manual". This manual, while not as complete in every detail as the AASHO-PCI manual, was enthusiastically received by both private and governmental agencies, and is in constant demand here in this state. Although much of the material in our manual is quite similar to the AASHO-PCI manual, there are several areas where we feel that some modification should be made. All members of our association have reviewed the present AASHO-PCI manual, and the modifications we are suggesting represent the opinions and thinking of the association.

1. On page 16 of the manual, under "Tensioning of Tendons", the requirement for accuracy of elongation of the tendons does not appear to be practical. In post-tensioning medium length members from both

ends where elongation might be in the range of 2½ to 3 in., the present provisions would make it necessary to measure the elongation with an accuracy greater than 1/32 of an inch.

It is suggested that this wording be changed to "1% or ⅛th of an inch, whichever is *larger*".

2. On page 16, "Initial Tensioning", we suggest that this section be modified to the extent that initial tensioning should not be required for straight strands where single strand jacking is used.

3. On page 19, under "Draped Pretensioned Strands—Tensioning", we feel that there are other acceptable methods of eliminating the frictional forces and that this section should be modified to read: "Whatever means is used, low friction devices or stress equalizing systems must be used at all points of change in slope of strand projecting at the time of tensioning."

4. On page 23 of the manual, under "Grouting", the present wording requires that grouting be performed within 48 hours after completion of the stressing operation. We assume that this requirement is intended to prevent corrosion of the tendons. We feel that this limitation is not necessary for high tensile rods. In many cases, frictional forces may reduce or readjust if a little more time is allowed before grouting. For parallel wire systems, corrosion inhibitors may be used to protect the tendons. We suggest rewording this section to read "within 48 hours after the completion of the stressing operations. This period may be increased where high tensile rods are used as tendons or where adequate precautions are taken to prevent corrosion of the tendons".

5. On page 34, under "Steam Curing", we suggest that a notation be added pointing out that the prestress should be transferred to the member as soon as possible after the steam has been turned off to prevent shrinkage cracks developing due to complete cooling.

The suggested modifications are not intended to be criticisms, but in our opinion, tend to increase the usefulness of the manual.