DISCUSSION

Specifying Bolt Length for High-Strength Bolts

Paper by CHARLES J. CARTER
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Discussion by Ronald L. Flucker. P.E.

The article "Specifying Bolt Length for High-Strength Bolts" by Charles Carter appearing in the Second Quarter 1996, Volume 33, No. 2 of the *Engineering Journal* includes the following statement relative to the use of the tabular information presented in the paper, "If direct tension indicator devices are to be used, the tabulated values remain useful if the thickness of such devices is considered to be part of the grip." Interestingly, this statement neither recommends or rejects the addition of the direct tension indicator (DTI) thickness to the grip calculation upon which the tables are predicated. I wish to clarify this situation.

In over 20 years of supplying DTIs for used as bolt tension inspection devices there has never been brought to the attention of J&M Turner Inc., an instance where, if the instructions given in the RCSC Specification for the computation of required bolt length are followed, it was necessary to include the DTI thickness in the grip calculation. To do so might add, unnecessarily, to the required bolt length. The reader should note that even in the case given in the text of the article, showing a rounding down, had a DTI been used but not included in the calculation of the grip the sick-through would still be $\frac{3}{32}$-in.

Therefore we state categorically, it is not necessary to include the thickness of the DTI in calculation of the grip when determining the required length of a bolt.

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