

# STRUCTURAL BUILDING COMPONENTS MAGAZINE (FORMERLY WOODWORDS)

June/July 1999

## WTCA QC

"Why Use *WTCA QC*? Reason #2?" by Jay Edgar

### REASON #2: EDUCATE YOUR PLANT PERSONNEL ON WHAT YOU MEAN BY "QUALITY."

The word "quality" is used so much these days that one could imagine it is losing its meaning. Do we know what we mean anymore when we use the word? There is one group of people who must know what this word means, and that is the folks who are actually on the table building the trusses! When they are asked to build trusses of high quality, do they know what that means?

In our industry, the baseline of quality is defined by ANSI/TPI 1-1995, the standard developed by the Truss Plate Institute. How familiar are your manufacturing personnel with this standard? It is not necessary for them to read all 93 pages of the standard; there are basically 8 pages (section 4) that contain the most important information on truss quality. How many of your personnel who are actually *doing the work* know the answers to the following questions? Do you? (See answers below.)

1. If a 6x8 plate is translated (moved) 5/8", is it still placed within tolerance?
2. If the same size plate is rotated 3/8" (in terms of corner movement), is it still within tolerance?
3. According to the *standard*, what is a rolled tooth?
4. What percentage of effectiveness (i.e., gripping power) does a tooth have when there is an embedment gap (i.e., between the plate and wood) of 1/32"?
5. Is a maximum gap of 3/32" allowable between members on a top chord splice?

*WTCA QC* is a very effective way of pointing out those aspects of the ANSI/TPI 1-1995 standard that your manufacturing personnel find most challenging. You then have the opportunity to train them as to exactly what the TPI quality standard means.

For more information about *WTCA QC*, call 608/274-4849 or visit our web site at [www.woodtruss.com](http://www.woodtruss.com).

---

## WTCA QC—Part II: The Answers (numbers below are section numbers in ANSI/TPI 1-1995):

1. NO. According to Figure 4.5.3.1, the maximum allowable translation for a 6x8 plate is 1/2".
2. YES. The tolerances for rotation and translation are the same, and shown in Figure 4.5.3.1 as stated above. Since the tolerance is 1/2", this plate is OK.
3. According to Section 4.5.4.3, ". . . A tooth shall be considered flattened if 1/4 of the tooth length or greater is visible with the tooth-slot opening [as viewed from above—shown in the figure below]. A tooth shall also be considered flattened if the surface to the wood has raised (wood lifted up beyond its normal surface plane) within the tooth within the tooth-slot opening of the metal connector plate . . ."
4. According to Table 4.5.4.4, a tooth experiencing embedment gap of 1/32" is only 60% effective. FYI, a gap of 1/16" reduces the effectiveness to 40%, and anything at or above 3/32" is 0%.
5. This is a trick question. It depends if the top chord is in tension or compression. The answer is YES or NO, respectively, since the tolerances are 1/8" and 1/16", respectively.

---

## WTCA QC Program Participants

Companies who invest time into using WTCA QC discover that the benefits outweigh the costs in terms of better educated crew members, fewer call-backs and in repairs, increased awareness of the quality of incoming lumber, and even better communication between employees and management!

To learn more about the program call 608/274-4849 TODAY!

Take the next step in quality!

---

[SBC HOME PAGE](#)

Copyright © 1999 by Truss Publications, Inc. All rights reserved. For permission to reprint materials from SBC Magazine, call 608/310-6706 or email [editor@sbcmag.info](mailto:editor@sbcmag.info).

The mission of Structural Building Components Magazine (SBC) is to increase the knowledge of and to promote the common interests of those engaged in manufacturing and distributing of structural building components to ensure growth and continuity, and to be the information conduit by staying abreast of leading-edge issues. SBC will take a leadership

role on behalf of the component industry in disseminating technical and marketplace information, and will maintain advisory committees consisting of the most knowledgeable professionals in the industry. The opinions expressed in SBC are those of the authors and those quoted solely, and are not necessarily the opinions of any of the affiliated associations (SBCC, WTCA, SCDA & STCA).