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Introduction ANSI/TPI 1-2002: Third Party Auditing by Stan Sias, WTCA Director of Industry Services & Membership, & Charlie Goehring, TPI Managing Director

How do third party inspections complete the in-plant quality assurance process and help build a culture of excellence for component manufacturers?

The National Design Standard for Metal Plate Connected Wood Truss Construction, ANSI/TPI 1-2002, adopted March 25, 2002 with a voluntary implementation date of May 1, 2003, is the American National Standard under which truss design and manufacturing is governed. Chapter Three, Section 3.1.3 (see sidebar for full text) states that, where required, the truss manufacturers' quality assurance procedures are subject to independent third party audit.

WHAT IT MEANS TO THE COMPONENT MANUFACTURER

All the Model Building Codes, from BOCA and UBC to IBC 2000 and 2003 and NFPA 5000 (the exception is the Southern Building Code pre-1997), have provisions requiring truss manufacturers to retain an approved agency to make nonscheduled inspections of truss manufacturing. So, if you are producing trusses to deliver into a jurisdiction that is governed by any one of the above referenced model codes, you are required to have independent third party auditing or inspections. This requirement, it would seem, would cover most if not all, truss manufacturers in the United States and certainly will soon if not today.

DOES THAT MEAN EVERYONE OUT THERE IS BEING INSPECTED?

An article in the Introducing ANSI/TPI 1-2002 series (see the September/October 2003 issue of SBC Magazine) addressed manufacturing quality assurance procedures, by reviewing in-plant compliance monitoring concepts. This article will take a look at the third party auditing process of the in-plant QC procedures: how the two are different and how they complete the quality monitoring process and facilitate the achievement of quality performance excellence.

ESTABLISHING A THIRD PARTY QUALITY ASSURANCE INSPECTION PROGRAM

The truss manufacturers' participation in a Third Party Inspection Program, besides fulfilling a code mandate in many jurisdictions, provides assurances to the specifiers and building officials

ANSI/TPI 1-2002, CHAPTER 3, SECTION 3.1.3

3.1.3 Truss Manufacturers and inspection agencies shall establish methods that document the application of these quality assurance procedures throughout the manufacturing process. The Truss Manufacturers' methods shall be subject to periodic audit for compliance with the requirements of this standard by an approved inspection agency, where required by local authorities having jurisdiction, or other means.

that your plant, from managers to shop and delivery personnel, are serious about quality. The steps involved in establishing a Third Party Inspection Program are much like the steps taken when establishing a relationship with an auditor. Just as the accountant comes in to audit your books, the Independent Third Party Inspector comes in to audit your ongoing in-plant quality control process.

The basic criteria for the independent third party inspection are two-fold. First and foremost is the quality standard itself. The quality standards for manufacturing metal plate connected wood trusses can be found in Chapter 3 of ANSI/TPI 1-2002. (These criteria were thoroughly reviewed in the September/October issue.) The same criterion that must be met in the ongoing in-plant quality assurance process is what also must be met when the third-party auditor walks through your door. The ANSI/TPI 1 Standard sets the allowable tolerances. The truss manufacturer needs to show evidence that they meet or exceed the standards. Herein lays the auditing part of the third party inspection. The inspector must be able to audit the records of your ongoing in-plant inspections. Of particular interest will be the records from the last audit. The standard states, "... shall establish methods that document the application of these quality assurance procedures throughout the manufacturing process." In a nutshell, are you doing what you say you are doing and can you prove it? Just as accepted practices and good bookkeeping please your accountant auditor, your ongoing in-plant inspection documentation, along with its availability and ease of use, will go great distances in making the independent inspection audit go smoothly.

Your independent third party inspection agency will help you establish the required "manufacturing quality assurance procedure," and help define documentation needs. The parts and pieces are pretty simple. All you need is some basic data to establish your plant's QA reference points, some means of assessment and accountability reporting, management and staff involvement, a dedicated quality surveillance squad, and some form of a process improvement implementation plan.

Alternately, you could reap the benefits of the efforts of members of the WTCA's QC committee and many others in the field by looking seriously at In-Plant WTCA QC 4.0. This new software was developed in accordance with the new standard (see page 11 to review the many benefits of 4.0) by component manufacturers for component manufacturers. The data collection, storage, reporting and compliance records are all there in one neat package. Just think: data collection with a hand-held PDA device rather than paper, storage in a computer rather than a file in a storage facility. You'll get reports available on shifts, tables, crews, trends, plate placement, embedment and lumber substitution. You'll have the data handy to make wise management decisions. And when the time comes for the third party inspector to look at your inspection records, you won't have to think twice about where you'll come up with the documentation. For more information on the value of implementing this program please contact any of the WTCA QC committee members that were involved in making this process a reality.

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