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New In-Plant WTCA QC Version 4.0 Has Arrived by Tony Piek

The new industry quality standard has arrived, and the key to an efficient and accurate quality control program that provides useful management data for your plant is WTCA QC v.4.0.

Can you believe it already May 2003? Ask any plate company software developer or other employee involved in the ANSI/TPI 1-2002 software upgrade, including me, odds are we will all have something similar to say...time has flown by!

We now have updated plate supplier software capable of producing the Joint QC Details referenced in ANSI/TPI 1-2002. We can finally design and inspect trusses according to this standard, using the more time efficient Plate Placement Methodology (PPM). Recently, WTCA also introduced our upgraded quality assurance program software: [In-Plant WTCA QC version 4.0.](#)

The purpose of this article is to discuss the new In-Plant WTCA QC program and will address the following questions: What is it about? Why does WTCA, and an increasing number of component manufacturers, see such potential in this tool? How can the program benefit your plant? Why does WTCA want you to consider it for your plant? Give WTCA a chance to prove it to you, especially if you are nervously pacing around the plant trying to decide how to begin implementation of a quality program. Not just any quality program, In-Plant WTCA QC is an effective, useful and productive program that utilizes a systematic approach to collect quantitative data.

WHAT ARE THE ADVANAGES IN USING THE IN-PLANT WTCA QC PROGRAM?

Advantage 1: Benefit from the Data You Collect

So why are we, at WTCA, and those countless individuals in the industry who have been instrumentally involved in making this happen so excited about the new In-Plant WTCA QC program? ANSI/TPI 1-1995 and all third party inspection programs in the past have required that "truss manufacturers and inspection agencies shall establish filing methods, which document the proper application of quality assurance procedures throughout the manufacturing and inspection process." Performing the ANSI/TPI 1-1995 mandated inspection process (this carried over to ANSI/TPI 1-2002) leads to writing down numbers and information on that truss, thus increasing paperwork. If you are going to make the effort and use resources to inspect the trusses and to collect data, why not enter that information into a computer database? Your inspection records will be in-credibly organized. Can you imagine going through filing cabinet after filing cabinet, drawer after drawer, looking for that one pesky paper inspection form that is several years old? It could drive you nuts; you may even question if you still have that paper inspection form. With a database, you can retrieve and print off that inspection report at any time with the click of a button. You will be performing inspections and collecting data, why not enter and keep that

information safe in a database format?

Advantage 2: Get a Clear Picture of Your Plant's Quality

By entering inspections into a database, you will have the capability to create analytical reports. At your fingertips, you will have the power to answer the following types of questions: How many joints in trusses did not meet the standard over a certain time period? Did that percentage increase or decrease over time? Did your quality improve or worsen over the course of a month? What can you attribute the issues to: outside of the tolerance polygon, rotation, poor set up, the finish roller, a specific crew, etc? All these questions and more can be answered by creating specific reports based on criteria, attributes and personalized reports you select. You can pick the range of time, what criterion you want to select like a certain line or crew or shift, specific machinery, etc. Also we provide an all-encompassing summary report to give you that total picture of quality from a quantitative viewpoint. You can print all comments to determine what quality issues you are having and can obtain more insight about what was done to fix them.

Advantage 3: No Need to Reinvent the Wheel

So ask yourself this question, if you are not going to use WTCA QC, how are you going to implement an in-plant quality program to “establish filing methods which document the proper application of quality assurance procedures throughout the manufacturing and inspection process?” You would have to develop your own program, your own inspection forms and your own procedures to meet the criteria. Take a moment to consider the resources that would be necessary to pull that off. How daunting does that sound? We know because WTCA's Quality Control Committee has been working on creating a solid quality program for the last year. Additionally, this program was developed by component manufacturers with the specific needs of all component manufacturers in mind. Our goal has been to make quality control as easy as possible for you!

Advantage 4: The Value of Time

What is keeping you from investing in the In-Plant WTCA QC version 4.0 program? Well, one guess would be the four-letter word that few plants have at this juncture of the year: t-i-m-e. How much time will it take to maintain this program? Would it take more time to maintain a disorganized quality program just to get by or to create a systematic inspection approach that you can use to truly manage quality in all phases of your operations? We have a systematic approach for you that includes an excellent training program to help you implement sound quality management.

Advantage 5: Your Quality Control Program—A Well-Oiled Machine

It will take some time to train and learn the In-Plant WTCA QC program. And no one will deny that taking an employee off the line to inspect may affect your daily production numbers. But if you have several knowledgeable inspectors who can inspect trusses like well-oiled machines, how valuable will that be to you and the rest of your operation? WTCA believes that over time this will be, as the MasterCard® advertisement states, “Priceless.” The following example

outlines our systematic training process:

You will first randomly select a truss to inspect. You will get the Truss Design Drawing and Joint QC Details of those joints that are deemed critical based on their Joint Stress Index (JSI) factor. You will go to the truss in the yard, perform a preliminary inspection to make sure items like lumber, rotation, member-to-member gaps appear to be satisfactory. Then you will either inspect the truss using the faster, more efficient Plate Placement Method (PPM) or the more detailed, precise Tooth Count Method (TCM) to inspect the critical joints on both sides of the truss. You will be inspecting plate size and gauge, plate positioning (is the center of the plate within the tolerance polygon?), plate rotation (is the rotation within ± 10 degrees?), member-to-member gaps (are they less than 1/8"?), plate embedment, lumber characteristics in the plate area and rolled teeth (do they represent more than was accounted for in design?). The information will then be entered into a user-friendly database. You will have the capability to print out that inspection data in a clear and concise format or to create reports based on inspection data you select. WTCA has created the training, the manual, the procedures and the database to help you make all this happen efficiently.

Advantage 6: Your Quality Control Program—A Plant-wide Approach

Why not take full advantage of this program and turn your plant's quality into a company-wide sense of pride and potentially make a game out of it for all your manufacturing crews. A corporate culture that says "Quality!" Case in point, take John Maley of Powell Structural Systems, who purchased T-shirts for the plant employees and banners to hang in the plant with words reading "WTCA QC—Ohio's First Certified." Said Maley of the effect WTCA QC has had on plant culture: "The existence of a quality control program has expanded beyond the scope of improving the quality of the truss. We have a better understanding of the product all around. The guys are really confident about their work and now they know why they're doing it."

Based on the feedback we have received from those using our program, you can really build on the potential and pride that your employees already possess. WTCA's program offers you a tool to methodically implement an organized, strategic approach to truss manufacturing education and quality.

HOW DOES THE IN-PLANT WTCA QC v. 4.0 PROGRAM WORK?

By now, you should have received an email with valuable information regarding the new version of the program. Included in this email will be the inspection forms we have tailored specifically for WTCA QC. You can print these out and use them as you wish. It is our desire to help you develop your in-plant quality program, if it is nothing more than using our forms and inspecting trusses through a consistent paper and filing system based approach.

Also consider our computer database program. The program currently costs \$295 and comes with a detailed manual. It also includes educational presentations on the software and on the new standard. Again, it is a database program that allows you to enter inspection data in an organized, easy-to-use format. It also allows you to program multiple reporting options and analyze your data based on a wide range of criteria.

The last item to address is certification in WTCA QC. You can buy our program, use it and not become certified. Or you can consider taking advantage of the promotional value that certification provides, to say nothing of improved confidence in the reliability of your quality control process. You should also consider educating your insurance company about what you are doing and how this helps to reduce their risk of a downstream claim. This stamp of quality approval can go a long way toward increased market value of your trusses.

We hope this article has given you new insight on the In-Plant WTCA QC program. For more information go to the WTCA QC link on the WTCA web site (www.woodtruss.com). A series of articles and demonstrations are only a few clicks away.

The bottom line is that there is tremendous value in focusing on production quality. Under the guidance of the WTCA Quality Control Committee, we have put in all the research and leg work; the outcome is that you get all the benefits. WTCA is willing to work hand in hand with you to help you implement any level of quality control you desire. All it takes is a call. How about making it today?

The development of improved truss quality control (QC) is the culmination of the direction provided at a May 5, 2000 meeting of 31 WTCA component manufacturer representatives.

It was decided, based on the QC data that we had at our disposal, that it was of the utmost importance for our industry to better understand truss quality and the resulting finished product structural performance. This group guided a change in the way we undertake QC in our industry with the overall goal for this project being to develop an in-plant QC program that:

- Is quick to do in a typical truss plant.
- Is easy to understand and implement by plant personnel.
- Provides us with the assurance that, even when we are doing QC quickly, the result will be the expected, code-mandated structural performance of the trusses that are produced.
- Keeps costs in line, yet recognizes that each of the three parameters above causes the application of truss plates at a joint to be more conservative than a more intensive QC program would require.
- Keeps the in-plant QC inspector as its frame of reference, so that understandability and ease of implementation are assured.

Furthermore, as Kent Pagel wrote in his "Our Legal Reality column" (SBC Magazine, November 2002), "In the absence of a sound quality control program, where quality is a litigated issue, the manufacturer is left with little to respond to criticism and the outcome could very well be ugly. The lawyers opposing you will most certainly use technical consultants to determine what could have been done during the manufacturing process to fabricate a better quality product. These consultants become good at articulating that, for example, 'Any Town Truss Company, Inc. FAILED TO ENSURE that its manufactured products were built to the existing quality standard of the industry (as either no quality control program existed or the existing one was deficient) and that such failure proximately caused the damages sustained by the plaintiff homeowners.'"

We believe that we have achieved the goals and objectives put before by our members listed above and our Board of Directors, and also laid a foundation the enhanced ability of all component manufacturers to more reliably safeguard assets through a sound in-plant quality assurance program.

For the past year, WTCA has been diligently working to upgrade the WTCA QC software and program. We have been working to make it mesh with not only ANSI/TPI 1-2002, but also with all the new truss design software from the plate suppliers and the third party inspection processes (e.g., TPI, Timber Products, SPIB, etc.) in use today.

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