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In-Plant Quality Control & Third Party Inspection Agencies: Working Together to Raise the Bar on Quality by Tony Piek

Did you know that third party inspections do not equal in-plant quality control programs?

Quality is no small matter. Its many facets always seem to help quality make its way onto a short list of buzz words and hot topics for running a business. In terms of a product, quality could be defined many ways: how well it performs, its value, the extent it satisfies the customers' needs, or as its conformance to specifications.

With good quality, you will spend fewer resources on wasted material, person-hours making repairs, dealing with jobsite issues, the risk due to jobsite problems, etc. You will put yourself in position to grow your customer base and market share. The bottom line: if you improve your quality, you will improve your business.

So how do you improve manufacturing quality? Many plants have third party inspection programs in place. Many operations have in-plant programs in place and staff dedicated at least part time to inspecting and working on continuous improvement of the finished product. Some plants have both a third party and an in-plant program in place. Many plants have no formal inspection program in place, but would animatedly state that they strive to make quality a priority and that they manufacture a quality product.

Take a moment to consider your plant. How is your quality? Are you in a position to confidently answer? Do you have confidence in your quality? Would you be able to throw out a list of proactive steps you are taking to improve or ensure it? Is your plant doing enough to be "quality confident"? When asked why he uses an in-plant program in addition to quarterly third-party inspections, WTCA Past President Dan Holland answered, "Do you know how often plates and lumber are being upsized? I do because I use In-Plant WTCA QC." The following are a few common points of view that are heard in the marketplace quite often and some thoughts surrounding these.

RESPONSE #1: Our quality is a high priority; we have a third party inspection agency visit our plant monthly. We are meeting the requirement of our building code.

Having a third party inspection program is an awesome step and does show that the manufacturer is concerned with quality. But meeting the building code requirement does not necessarily mean you have good quality. Quality control means taking steps to manage and improve your quality. Are you able to put your plant in a position to properly troubleshoot the issues controlling your quality with third party inspections alone? Quality assurance is the degree

of confidence you have in your quality. Are you able to have confidence based on an external organization coming in to visit your plant on a quarterly or monthly basis? Would you view your quality differently if third party agencies visited your plant every day? Would the third party? Would this change the quality of the product you produce? If you visit some of the major third party agency web sites, they are consistent in saying that third party inspections are only part of a truss manufacturer's quality program.

Truss Plate Institute: The licensee agrees to monitor quality via an in-plant check list for each structural set-up (gable ends, open jacks, step down hips, bobtail trusses are exempt), or it may implement an in-plant process control monitoring system such as one promulgated by the WTCA QC program.

Timber Products Inspection: Timber Products Inspection, Inc. (TP) provides a comprehensive quality monitoring program to truss fabricators. This program places special emphasis on "in-plant" quality and process controls to assure that the finished products meet Industry Recognized Standards. The effectiveness of the "in-plant" quality program is verified with unannounced inspections by TP personnel.

Given that third party agencies are only involved in your manufacturing process quarterly or monthly, there is good reason for the third party agencies to believe that their services are only part of an ongoing in-plant quality control program. It has often been said that for those companies that have a solid in-plant quality assurance process, there is in fact no real need to have a third party agency inspecting their operations, because they know what is wrong and have fixed it long before any third party could tell, no matter how good the third party is. To expect the third party process alone to be a quality management system for any operation is most likely expecting too much.

RESPONSE #2: Our track record speaks for itself. Quality is a high priority; we manufacture good trusses and have been for many years.

This is a common answer. The challenge is to think of a manufacturing process that does not have a quality control program. For example, chemical companies have extremely rigorous programs checking tolerances. This is due to the dangerous compounds and tiny mixture increments they work with. If they are not careful up front, it could spell disaster downstream.

Manufacturing plants are no different: if you manufacture coils for air conditioners, cylinders for engines or metal plate connected wood trusses for residential or commercial structures, it is key to have quality checks in place. They allow you to check if the tolerances are conforming so the product will perform for its service life as expected. They also help to ensure that the product is being built in a way that will meet customer needs. Having an in-plant program in place gives responsibility to someone to do inspections on your finished product. They measure, examine, test and gauge your process and product. They help to ensure the product goes out the door meeting company and customer expectations. Furthermore, how would a plant know that they have good quality unless they have inspection data or evidence to back it up? An added bonus is that this person can also stimulate plant personnel to take more pride and care in their jobs and train assemblers to improve techniques which will continuously improve the manufacturing process.

You might be thinking that this is going to slow down production. WTCA Engineering and Technology Chairman Clyde Bartlett stated just the opposite, “[In-Plant WTCA QC] has not slowed down production. Actually, I think it has sped up the process because our fabricators now know what good quality means.” The key here is to build quality into the process using the findings and data of the in-plant inspection program.

RESPONSE #3: We are trying to improve our quality every day. We have the In-Plant WTCA QC program in place, and a part-time employee who performs inspections daily who also trains assemblers and works with field quality issues. And we have a third party agency come in quarterly to verify our quality and in-plant program is doing the trick.

Implementing an in-plant quality control program to work in conjunction with third party inspections adds tremendous value and has many benefits. Ideally, the in-plant program and third party should provide the one-two punch. The in-plant program helps the plant prepare and study; the third party comes in to conduct that test or audit that verifies with a fresh set of eyes that manufacturing is under control. If you are looking to bring on a third party inspection agency, you can contact any of the above mentioned, or you can contact WTCA for additional references.

So how important is the quality at your plant? Are your actions showing evidence of that importance? Are you taking steps to evaluate your current manufacturing to position your plant to build quality into the existing process?

Contact wtcaqc@woodtruss.com for more information on how you can raise your bar of quality today!

Suggestions for Increasing Your “Quality Confidence”

- Visit www.woodtruss.com and download the free inspection forms. Try out the inspection forms and do a few inspections.
- Truss design software has the ability to print Joint QC Details to strategically inspect critical joints on the truss. Print out some details and get a snapshot of your quality.
- WTCA has a software database program (In-Plant WTCA QC 4.1) into which you can enter and store inspection data. Then you can use that data to analyze your quality control. You can set up a baseline or benchmark of the data, and then look for ways to improve your quality.
- Work for In-Plant WTCA QC certification. This means using the database previously mentioned, performing the required inspection frequency, and sending your data to WTCA for review quarterly as another check.
- WTCA has Pocket PC QC software as a companion to the database program. This kills two birds with one stone; rather than recording the inspection on paper and entering it into the database, users can enter the inspection onto the handheld computer and synchronize with the database which uploads all inspection information right into the database. This saves a great deal of time.

- WTCA is working with truss design software companies to integrate software programs so general truss and joint data is automatically downloaded into the database. When this becomes functional, the inspector will know exactly what they need to inspect and this will save a great deal of time in not having to record the truss information.
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