

Article Misrepresented Committee Concerns Over Chapter N

The authors of “Quality Time” (*MSC* March 2009) present an incomplete and possibly misleading view of the Structural Engineers Association of California, Construction Quality Assurance Committee (SEAOC CQA) concerns regarding the welding inspection provisions in the new Chapter N of AISC 360-10.

SEAOC CQA has been full of praise for Chapter N, particularly its engaging of the fabricator and erector’s QC function, and the excellent list of welding inspection tasks. We continue however to oppose the *IBC* code change proposal that would replace the structural steel special inspection requirements of Chapter 17 with the quality assurance provisions of AISC 360, Chapter N in its present form.

The article makes reference to our “complaint” that Chapter N should have more inspection. In fact, our concerns are with what we see as a *reduction* in the code-required inspection levels for certain welds only (multi-pass fillet welds and all groove welds), which currently require “continuous” special inspection under the 2009 *IBC*.

2009 *IBC* defines “special inspection, continuous” as:

“The full-time observation of work requiring special inspection by an approved special inspector who is present in the area where the work is being performed.”

The article’s discussion of the problems with the term “continuous” is focused on the clause describing the inspector’s presence at the site, rather than an interpretation of the phrase “full-time.” In fact, reference to this part of the definition is never made.

The article states “...*IBC* references other codes, such as AWS D1.1, for requirements associated with ‘continuous’ inspections, and the reference information requires these so-called ‘continuous’ inspections to be performed ‘at suitable intervals.’”

Actually *IBC* references AWS D1.1 for all welding inspection, not just continuous inspection. We have stated clearly that the building code has defined these “suitable intervals” by the use of the terms “continuous” and “periodic” and has assigned the more stringent interval (continuous) to those welds where it is suitable (multi-pass fillet welds and all groove welds).

The article suggests that SEAOC CQA fears “abuse” by the welding inspector for inspection tasks designated O for Observe. Perhaps the authors are referring to our concern that, under Chapter N, once the inspector has verified the materials, WPSs,

welder qualifications and skills, etc., at the beginning of a project, complete penetration groove weld joints could be started (fit-up and root pass) and completed (filler passes) without any of the steps being observed by the welding inspector (either QA or QC). This would not be an abuse by the welding inspector—the inspector would be simply following the intent of Chapter N. Our contention is that this represents a substantial decrease in scrutiny over the continuous inspection currently required for this type of weld, regardless of how loosely one interprets the term continuous.

Lastly, we would like to make it clear that, in our discussions with AISC, we only suggested that *certain* (not all) observe tasks be changed to perform in the task lists for “before” and “during” welding, and *only* for multipass fillet welds and all groove welds. The article’s contention that such a proposal would represent a “massive increase” in inspection, is simply not supportable.

We have proposed alternate language for the inspection provisions for multipass fillet welds and groove welds that, if adopted, would allow us to support the incorporation of AISC 360 Chapter N into the *IBC*. However, AISC has to date declined to accommodate our proposal. The reduction in special inspection represented by Chapter N for multipass fillet welds and all groove welds has not been adequately justified by reliability studies to permit this to become part of the building code.

Structural Engineers Association of CA Construction Quality Assurance Committee

Authors of the article respond:

Thank you for clarifying the views of SEAOC CQA, and affirming that you like Chapter N in AISC 360-10.

To be clear, though, this attempt to reinstate a “continuous” inspection requirement for multipass fillet welds and groove welds at the last moment in the ICC process through a public comment is a fallback. The original request SEAOC CQA made to AISC and others was that all observe-level inspection tasks for welding in Chapter N should be changed to the perform-level. When your recommendations were questioned, you explicitly clarified that you want hold points for inspection after every step in the process of preparing and making groove welds and multi-pass fillets welds. Were it accepted, this proposal for change would result in a massive increase in inspection require-

ments over what is done now, as we stated.

SEAOC CQA recommendations, which were submitted as a public comment on AISC 341-10, were heard and not accepted by the ANSI-accredited AISC Committee on Specifications. Additionally, these recommendations have, so far, not been accepted by any other national group that you have approached, including the NCSEA Code Advisory Committee Quality Assurance/Special Inspection Subcommittee, the Building Seismic Safety Council’s Code Resource Support Committee, and the ICC Structural Code Committee. We believe your arguments keep meeting with rejection because nobody agrees with your interpretation of the current *IBC* requirements for “continuous” inspection.

The provisions in AISC 360-10 Chapter N (and AISC 341-10 Chapter J) provide a complete, coordinated quality plan with specific requirements that are better structured and less prone to abuse or misunderstanding than the current *IBC* Chapter 17 provisions. Our balanced, consensus committee process has succeeded in clarifying when perform-level inspection—100% inspection—is required, and when observe-level inspection can be used. Note that the observe label does not make inspection optional as you seem to suggest. Rather, it requires purposeful, regular, random inspection with a frequency that is appropriate to assure that the process is being performed correctly. It also is combined with non-destructive examination requirements we’ve added in Chapter N that do not exist in the current *IBC*. Ultimately, we believe our specific plan actually will be used, and that will be a marked improvement over the common current practice of just ignoring the confusing requirements for “continuous” and “periodic” inspection that you seem to prefer.

Although your ICC public comment has receded from your original request to AISC, we believe that it still cherry-picks inappropriately. Unfortunately, despite significant feedback from a broad spectrum of knowledgeable experts who have heard and attempted to address your concerns, you are unwilling to change your position. We strongly believe that AISC 360-10 Chapter N provides a solution that enhances quality in the constructed project and resolves the well-known problems with varying interpretations of what “continuous” and “periodic” mean. Respectfully, we must assert that, if adopted, your public comment would only serve to cast these productive and beneficial solutions back into a morass of confusion.