AISC Certification
Hang On Tight, And Don't Let Go!

By Brian Raff

In the building industry, everyone talks about total quality. But, due to construction's dynamic nature, nobody knows how to define it clearly. Many would say that they don't know exactly what quality is, but would know it when they see it. Others would argue that quality is not just freedom from defects, but can be seen as the consistent achievement of owner requirements. So, with such an elusive objective, how can specifiers meet the demands of their clients while achieving their own design-related goals? If we try to define what quality is from an engineer's perspective, it would mean bringing a construction project to close on time and under budget, while realizing all accurate plans and details in the field without deviation. The question we should all be asking ourselves is:

As structural engineers, do our responsibilities end with the completion of design drawings?

It's All About Accountability

Engineers have always been evaluated on the efficiency and completeness of their drawings, as well as the accuracy of their analysis and design. Nevertheless, it is important to remember that an engineer's active role with respect to quality does not have to end once these drawings leave the office.

In an ideal world, structural engineers would have control of all structural subcontractors, and would be able to exercise this control over a prospective bid pool. AISC Certification provides designers the opportunity to "pre-qualify" bidders on their projects, essentially limiting the bid pool to companies that have already proven themselves as capable of providing good quality fabricated and erected steel. Unfortunately, in the real world, designers only have control over their specifications and contract documents. And too often designers are pressured to waive this requirement for Certification.

> *"Managing quality into a project rather than inspecting for it afterwards can add a major financial advantage..."*

Once the specification requirement is waived, it allows any fabricator (even the ones without documented procedures, experience, etc.) to bid on your project, low-ball the competition and potentially botch the job that you have worked so hard on. Since owners' decisions can be predominantly dollar driven in today's market, their "bottom line" approach can lead to increased project costs in the long run due to errors in fabrication that would have been avoided by using a certified company. Managing quality into a project rather than inspecting for it afterwards can add a major financial advantage to a project of any size. Often times, owners are mistaken to believe that Certified companies are more expensive. The typical fee for a company to become Certified is about $5000 annually, which equates to be less than half-a-percent of total annual revenue for a mid-sized fabricator. Therefore, a good Quality Management System, when implemented correctly, can make a fabricator or erector more efficient, which can often result in a more competitive bid.

As designers, we want to make sure that our plans and details are realized in the field without deviation from the contract documents. So, you've done your part in designing an efficient structure, and have approved the appropriate shop drawings. It takes a giant leap of faith to assume that everything will go according to plan. No designer has the time or resources to visit each fabrication shop bidding on a project and inspect their procedures and qualifications. And, even if the time existed, are we really qualified to make that determination? AISC has developed and implemented its certification program to perform this reconnaissance — so you as the designer don't have to.

To put things in perspective, why is it that every state in the U.S. requires a Professional Engineer or Structural Engineer license in order to practice structural engineering? Should states allow just anyone claiming to be an engineer to stamp drawings without proving that they are capable of the work?

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The answer is no! By passing a rigorous examination, the engineering licensure demonstrates that an engineer has the knowledge, technical expertise, and experience to perform at a level of quality that is expected within the industry. AISC Certification acts in the same exact way, allowing Certified companies the opportunity to demonstrate that they can fabricate and erect steel at a level of quality that is expected within the industry. Why would you want an unproven fabricator or erector to work on your project?

"…defend against waiving the Certification requirements on your project."

Certification Information Is Just One Click Away

There are many resources available to aid specifiers in making educated decisions when it comes to the AISC Certification program. The Certification portion of the AISC website contains a wealth of information organized into four main sections that represent our four major user groups shown at left. This separation of interest allows users from all facets of the construction industry to find information more quickly and easily. The Designers, Contractors, and Owners page allows engineers to find a Certified company in their area, learn the differences between AISC Certification categories, as well as what actions can be taken to defend against waiving the Certification requirements on your project. It is also important to note that on January 1, 2006, the AISC Certification category STD (Standard for Steel Building Structures) replaced both the Complex (Cbd) and Conventional Steel Building (Sbd) categories, so please update your specifications accordingly. For more information, please visit **www.aisc.org/certification**, and download free sample specification language that you may include in section 5120 of your project specifications.

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And, of course, if you find yourself being pressured into waiving the Certification requirements on your job, please visit **www.aisc.org/nomorewaivers** — we can help!

Conclusion

As structural engineers, the safety of many lives rests on our collective shoulders. The completion of thorough drawings and accurate designs may not be enough, because your contract documents will pass through many other hands before quality becomes a reality. So, without quality certification, how do you know that a fabricator or erector is capable of meeting the demands of this important responsibility?▪

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