

Lifting confidence that supply upholds design

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One of the greatest enablers of increasing integration in the construction supply chain is the sort of quality assurance that instills confidence that what was originally designed is ultimately what is built. This is about one of the greatest drivers in the building industry ‘Minimising Risk’

As design solutions become ever more adventurous to optimise available space and meet more rigorous environmental demands, it becomes even more crucial that industry standards not only mandate, but encourage compliance. This has started to occur.

All steel structures in Australia are covered by the Design Standard AS 4100, into which an array of local material standards feed. These standards have been calibrated based on known Australian steels, testing statistics and work practices.

It is therefore of particular concern that any substitution of an overseas steel or welding standard risks undermining the basis of the standard and the level of assurance it can provide that has been designed is ultimately what is erected.

But this is changing as the purview shifts across the wider supply and especially the role of engineers in policing compliance. As a recent comment from one of our senior engineering members Mark Sheldon, Director, Aurecon illustrates:

“The increase in recent years of imported steel on projects in Australia is a major change, and the quality of imported steel, including bolts, is a concern to most practising structural engineers. Good reliable documentation verifying the steel’s compliance with what the designer has assumed is probably an area that needs to be tightened up. Some engineers rely too heavily on someone else’s QA system to pick up any potential non-conformances, and then for someone else to fix it! “

Our industry consent authorities have recognized this. An instructive example is the recent revision of the AS 1163 standard covering steel hollow sections suitable for welding and used for structural purposes.

Driven by market concerns, Standards Australia has mandated more stringent test certification and product marking requirements to improve product identification, certification and traceability. The revised standard AS/NZS 1163-2009 is intended to further lift confidence that construction is in line with intended design by increasing mandatory compliance measures.

The response from members of the design community (approximately 3000 members) of the Australian Steel Institute (ASI) as peak industry body has been very positive toward this tightening of the required practice and the ASI encourages engineers to exercise due diligence to ensure materials supplied for design comply with the standards listed in AS 4100.

The issue of getting the design that you paid for is only going to be assured if designers get what they have designed and also take responsibility for policing this. The improvement in determining compliance in our Australian specifications is a good step toward this quality assurance.