AUSTRALIAN STEEL INSTITUTE

4 November 2015

House Standing Committee on Agriculture and Industry
PO Box 6021
Parliament House
CANBERRA ACT 2601

Email: agind.reps@aph.gov.au

Re: ASI submission to Building Ministers Forum (BMF) Committee

Dear Chairman, Secretary and Committee;

The Australian Steel Institute (ASI) supports the BMF Committee's work into non-conforming product and was happy to contribute to the BMF meeting in July. The prevalence of steel product and materials not meeting relevant Australian standards has increased significantly since the move to global sourcing and purchasing practice in recent years.

The effect of this is loss of jobs through assessment of tenders on upfront costs rather than all of life cost, value for money, unproductive rework and inefficiencies in construction practice.

The ASI is suggesting that the main contributors to this are:

- A regulatory system that allows for easy passing off of fraudulent materials or supply of non-conforming product (NCP).
- Ineffective surveillance for NCP.
- A lack of, or lack of engagement with existing third party certification systems.
- A lack of effective reporting and enforcement of existing standards requirements.
- An uneven playing field for importers compared with local producers on non-compliant product requirements that substantially disadvantages local supply.

The ASI in this submission seeks to inform the Inquiry that whilst the National Construction Code (NCC) and Australian Standards are effective building blocks to support construction, for our industry the conformity assessment component of this is broken. Our Industry is cognisant of a need to reduce regulation and therefore is taking the lead to fix the problem by introducing compliance schemes and educating the market as illustrated in the report.

However, it cannot succeed on its own and needs government support. This requested support is covered in the following recommendations.

Yours sincerely,

Tony Dixon
Chief Executive

Ian Cairns
National Manager – Industry Development
and Government Relations

Australian Steel Institute submission

The ASI recommends that the Federal and State governments establish a clearly defined framework for product and material conformity based on the National Construction Code (NCC) and Australian Standards. Our recommendations are as follows:

1. That all State and Federal government procurement guidelines fully support and stipulate the use of the 12 principles in the APCC guide for procurement.
2. That all Government contracts stipulate the use of industry backed third party compliance schemes for key structural product areas (e.g; structural steel) where available (refer examples in the APCC Guide).
3. That the State-based Workplace Health and Safety Act be strengthened and clearly articulated to support the enforcement of penalties for unsafe supply of non-conforming product in the building industry and that the Act or guidance documents from the Act provide specific examples relating safety and non-conforming product.
4. That the liability for non-conformance of building products and certification of conformity be available at point of sale. Point-of-sale certification places responsibility on manufacturers or importers to provide appropriate evidence to companies along the supply chain such as fabricators, distributors and end users to be able to satisfy them that the products they are buying comply with relevant standards and fit-for-purpose responsibilities. This is important because of the current inability of the construction industry client to be assured of compliance through existing processes. Point-of-sale product compliance will need to be accompanied by clearly defined regulatory authorities and policies so that all stakeholders are aware of their requirements and what policy enforcement applies to them. This does not abdicate responsibility from the rest of the supply chain who should also be ensuring that their documentation of contract for products they order be required to comply with specifications. If they have not done this then as per other ‘chain of responsibility’ criteria, they should also be held responsible.
5. The ASI believes that the NCC and Australian Standards are good documents, but lack effective conformity assessment support mechanisms. The ASI recognises that industry needs to reduce regulation and ‘red tape’. In the context of conformity assessment it is important that there is a risk categorisation of the project, project component or product that guides the level of assessment. In the case of structural steel the ASI has introduced the concept of ‘construction categories’ to ensure that the industry recognises that low conformity assessment is adequate for low risk items. This is consistent with overseas practice. The Australian steel industry believes that this principle should guide any recommendation to lessen the added burden of industry regulation in assessing compliant product.
6. There needs to be strict enforcement of the compliance to building code processes and penalties for knowingly signing off on NCP. In some states the engineer needs to sign off on the structural soundness of a structure and the ASI is often contacted by members about pressure being applied from the builder to do this where there is evidence of NCP.
7. That all Government building contracts seek to have transparency of non-conformance reporting. This could be through the supply contract (e.g: contractor agrees that any record which is evidence of non-conformity is not kept confidential). This seeks to ensure that NCP is brought to the attention of the client and not repeated in the next project, particularly where safety is involved.
8. That Government support industry to set up a confidential reporting scheme for non-conforming product similar to the UK Structural Safety scheme (previously CROSS) as per the Construction Products Alliance (CPA) recommendations to the Building Ministers conference.

In summary we feel that urgent steps have to be taken as imported Non-conforming Products (NCP) impact on industries and the Australian people in the following ways:

- Increase risk to public safety (refer to ASI and AiG examples).
- Lack of a 'uniform quality benchmark' set at the level of Australian Standards. Structures built to Australian Standards incur a quality cost whilst clearly NCP does not and can cut costs accordingly. This impacts the demand for conforming quality products at the expense of ongoing viability of conforming quality producers.
- Value for money (especially taxpayers' money) is not being fully realised with NCPs accepted or reworked and repaired. The client is not getting the design or value being paid for.

We look forward to the BMF Committee's response to industry's comments and recommendations toward mitigating building and construction risks across vital supply chains.

Full and further information can be found in the ASI's submission to the Senate enquiry into Non-Conforming Products.

Please find attached four case studies of further NCP for your consideration.

1. **Non-compliant imported steel fabrication for a glass sound barrier bridge truss for a NSW housing estate project**
2. **Non-compliant imported steel fabrication for a major shopping centre project in Brisbane**
3. **Non-compliant imported steel fabrication for a series of pedestrian bridges in Busselton WA**
4. **Quality problems with imported steel fabrication for the Brisbane City Council (BCC) Ferry Terminals**

For further information or clarification on this submission please contact:

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Further information on the ASI can be found at:

www.steel.org.au

CASE STUDY 1

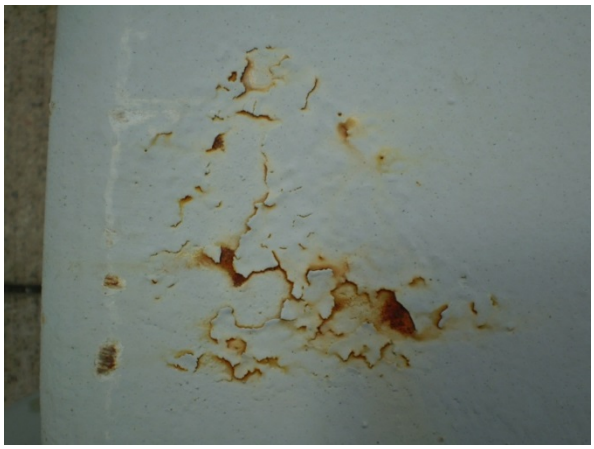
Non-compliant imported steel fabrication for a glass sound barrier bridge truss for a NSW housing estate project

Project: A glass acoustic noise barrier alongside a Sydney roadway, comprising a 62m span triangular tubular truss fabricated from up to 250mm square tubular steel sections.

Details of the failure: The truss structure shown below was tendered locally but fabricated overseas and imported against this contract. The fabricator responsible for importation of the truss structure went into insolvency. The construction illustrated significant defects. The builder undertook significant repairs onsite, including reinforcing the areas where cracking occurred in the junction between cross beams and main truss beams and welding reinforcing tubing alongside sections of the cross beams that had split. The bridge truss still failed in service.

Issues:

- Steel was well below specified strength. Independently measured by a NATA certified laboratory at 338MPa versus the 450MPa specified.
- The joins indicated weld cracking.
- The workmanship of the tube and fabricated structure was non-compliant to Australian Standards.
- The cross chords were filled with water, presumably to increase component weight to that specified. Suspected fraud.
- The protective coating was non-compliant. Independently verified by a NACE certified inspector the top urethane coat was missing and signs of rusting evident.



CASE STUDY 2

Non-compliant imported steel fabrication for major retail centres in Brisbane

Project: Imported fabricated steel is often containerised and used in major retail centre projects in Brisbane. These are examples of a number of substandard commercial store projects being imported and erected into the Brisbane area for major stores. Some photos and comments have been received from qualified and experienced ASI members regarding these retail centres.

Details: A number of major commercial retail stores have been imported and erected into Brisbane in recent years. This short report compiles comments and photos as received from ASI members.

Case 1 – 2011 Retail Distribution Centre

This building was a retail products distribution centre for a large company. It is a commercial building and would involve use by large numbers of the public. The steelwork was imported and needed local rectification.

Issues:

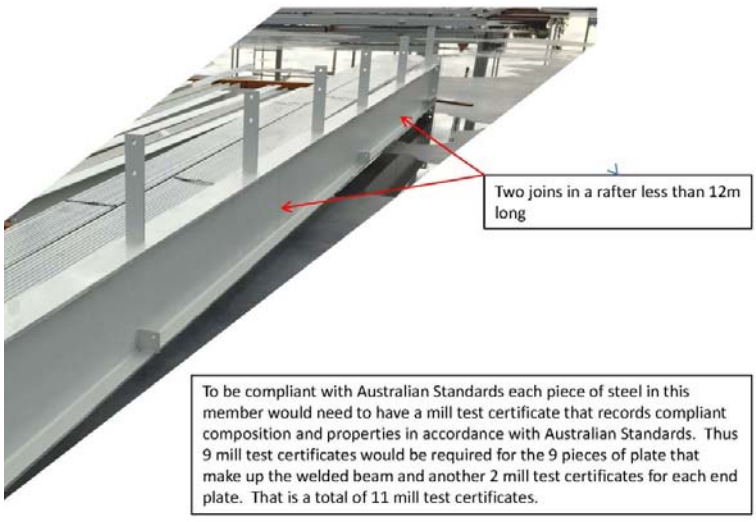
1. The engineer's drawings and workshop drawings were in Chinese. This meant that the builder, engineers on site and the erectors could not read or understand them. From a riggers point of view they could not identify which members went where.
2. Upon weld testing the majority of the welds failed to meet the Australian welding standard AS/NZS 1554 requirements. The steelwork was taken to a local fabricator where the welds were re-done.
3. The end plates to columns and rafters were not welded on square. A local fabricator cut the plates off and re-welded them on square.

Case 2 – 2015 Retail Hardware Centre

Retail store with unnecessary joins in most members, poorly welded. Multiple other defects

Issues:

1. There are unnecessary joins in the steel beams and columns.
2. Some steel appears to have lamination faults
3. The welds vary in size and quality – it is clear that the Asian workshop is not meeting the requirements of the welding standard AS/NZS 1554.1



CASE STUDY 3

Non-compliant imported steel fabrication for a series of pedestrian bridges in Busselton WA

Project: The Busselton Council commissioned three pedestrian bridges across creek beds to provide access to the local community including schools. These bridges were fabricated in China.

Details: Based on information provided by an ASI fabricator and engineering members, the Welding Technology Institute of Australia (WTIA) and the Galvanizers Association of Australia (GAA) in reports provided, the ASI has reason to believe that the Busselton Bridges show serious evidence of non-conforming product (NCP).

Issues:

The non-compliances indicated from the WTIA and GAA reports may be summarized into three fundamental areas:

1. **Very poor welding practice:** There are numerous instances of lack of weld finishing (surface lumpiness, weld spatter, porosity etc.) These welds are non-compliant and may lead to premature failure.
2. **Very poor galvanizing practice:** This will result in increased maintenance costs and most are not consistent with accepted practice as defined in the relevant Standards. Many instances of rusted areas already present after only a short time in service speak to the ongoing significant maintenance issues.
3. **Structural issues:** The poor quality of the welding brings into question the actual capacity of the welds, which most engineers would expect to be 100 percent over their full length (one weld appears to be cracked) bring into question the capacity of the structure to take the design load.

CASE STUDY 4

Quality problems with imported steel fabrication for the Brisbane City Council (BCC) Ferry Terminals

Project: Replacement of some of the Brisbane City Council Ferry Terminals, destroyed in the Brisbane Floods, by fabricated product produced overseas. The BCC were under price pressure with this project and discussions were held with the ASI, who provided warnings on NCP and the need for an effective compliance program.

Details: The January 2011 floods damaged all of Brisbane City Council's CityCat and City Ferry terminals. Council received $70 million from the Federal and State Governments through the Natural Disaster Relief and Recovery Arrangements (NDRRA) to replace seven temporary terminals with permanent facilities with improved flood resilience. A decision was made to source steelwork for some of the terminals from overseas. A full report on non - compliant material for this project is not available; however it was referred to at a recent Engineers Australia presentation on NCP. Photos have become available from various sources.

Issues:

- Poor workmanship on the steelwork fabrication
- Failures on the steelwork in particular welding