

***Design Documentation Quality.***

Throughout 2004-05, the QISD was part of the industry-wide task force to the Quality Panel group of "Engineers Australia" working to produce a plan to reverse declining standards in project design documentation within the construction industry entitled "Getting it right the first time". This publication examines an industry problem as it applies to Queensland and provides recommendations for solutions and actions.

If you have seen it yet, check out the link below.

[http://www.warren.usyd.edu.au/Framing\\_the\\_Future/Qld%20IEAust,%20Documentation%20%20&%20Detailin%20g-Final%20Report%20-%20Nov%202005.pdf](http://www.warren.usyd.edu.au/Framing_the_Future/Qld%20IEAust,%20Documentation%20%20&%20Detailin%20g-Final%20Report%20-%20Nov%202005.pdf)

***Technology Integration.***

The QISD management committee is currently working with representatives from steel fabrication, steel distribution and roll forming sectors to discuss the topic of Technology Integration in the steel construction industry. In response to the forum initiated by the Australian Steel Institute, the QISD has produced the Technology Benchmark Categories document. A draft copy of this document was distributed to the membership for comment in February and a final has been released to the industry this month. Check the web site for the final copy.

***Steel – Framing the Future.***

In Australia approximately 7% of new multi-story buildings employ steel framing, compared with 70% in the UK and 50% in the USA. A project is currently underway to identify why Australia trails other countries in this regard, to recommend changes to correct this imbalance and then facilitate the adoption of these changes to the steel construction industry. The Warren Centre is the leading Australian forum for advanced engineering issues. Based at the Sydney University, The Warren Centre has been acting as a think-tank for the Australian Engineering Industry for over 20 years. One of their current projects titled "Steel – Framing the Future" hopes to deliver the results necessary to raise the steel framing content in today's multi-story construction market. This project has the backing of Blue Scope Steel and One Steel with many industry participants providing in-kind support. This topic presents some tough questions to the steel industry and some of the answers may prove difficult for some to accept.

QISD committee members, Geoff Graham & Clayton Roxborough, on their own undertaking, have attended sessions convened by the Warren Centre to provide steel detailer input to these discussions. The latest forum was held in Sydney, on Thursday 23<sup>rd</sup> of March. The following is Clayton's report on the event.

Of the 20 or so participants at this forum, I was the only steel detailer. In the main, attendees represented steel suppliers, builders, fabricators and academics with engineers making up the bulk of the group. The day-long forum was held in two sittings, the morning was an update of work in progress with the various task group leaders reporting to the forum and the afternoon session being open discussion.

The morning session was something of a revelation to me. Hearing engineers speak about the problems they see with steel construction, drove home some of the perceptions that exist within the industry. For instance one, apparently highly regarded, engineer stated that because steel detailing is such a bottle-neck in the flow of documentation, it would be easier and quicker for engineering consultants to prepare the shop detail drawings themselves, thus eliminating a costly and time consuming step in the process. Another engineer argued that design documentation quality is as good now as it ever was, if not better.

I responded to both of these comments by describing some of my own experiences and those of other members of the QISD. In short, I explained that the notion for design draftsmen to prepare shop detail drawings was openly derided by those people unfortunate enough to have to deal with their product and that the standard of design drawing quality has been on a downward spiral since the mid 1980's. I remain uncertain as to whether or not my comments made any difference to the opinions of the individuals concerned. Being a Queenslanders attending a design forum in Sydney, I can't help but feel that had I been able to refer to a National Steel Detailer body, my input may have been given more weight.

The other issue topical to steel detailers at the moment was technology and its application. On this subject there was some very sensible discussion. Points raised included Contractual Change, Added Value, Design Team Uptake, Interoperability and Design Freezes.



### ***Steel – Framing the Future Continued..***

This represents the other side of the coin to the Technology Integration Categories released by the QISD earlier this month. The QISD document dealt with down-stream applications of detailer deliverables where as the Warren Centre forum investigated the benefits of upstream integration of the steelwork model.

It will be interesting to see where this leads. A draft report on “Steel – Framing the Future” is due out in June this year. Can’t wait for that one.

For more information, check out the Warren Centre at [www.warren.usyd.edu.au/cp\\_frames.html](http://www.warren.usyd.edu.au/cp_frames.html) then click on Steel – Framing the Future.

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### ***Letter to the Editor*** ***Technology Integration***

I’ve seen the Technology Integration Categories that the QISD has produced and strongly support the move to get this information out to the industry at large. I agree that the Technology Integration Forum will have to investigate and understand the technology used by the various sectors of the steel industry before they develop any plans to progress the matter any further. I also believe detailing companies need to gather an understanding of the possible future requirements of the steel construction industry so they can establish appropriate business plans.

Steel Detailers have to make the best use of resources available which means individual enterprises will need to determine a commercial value of technology to the firm. Companies, which recognise and respect technology, should then build technology development and acquisition into their business plans.

I feel certain that there will always be a place in the market for detailers using drawing boards and 2D software, however the benefits of 3D technology are gradually being sought by more and more industry participants both upstream & downstream of the detailer.

For technology up-take to be effective, the steel detailing industry as a whole must “want” technology. Detailing companies that want to make the change to high-end software packages will have to examine how competitors have handled the question of moving a small business in a mature industry onto a new technological level and then develop their own best practice model for application.

It’s my opinion that for the major part of the industry this will involve a dramatic and intimidating change that will not occur overnight but a strong technology base with ongoing training and development will become essential to remain competitive, in a local sense but also on a global scale. Implementation of new technology, especially for smaller firms, requires a strong link between the detailer, the software developer and the end user of their deliverables, be that a fabricator, merchant or builder etc. The adoption of this new technology will depend on whether the firm has available to it appropriate equipment, (such as computers, printers, and internet access), personnel to enable its effective use and sufficient capital with which to make the leap of faith.

The Queensland Institute of Steel Detailers has Company members that have made this leap and some of these, I’m sure, would be willing to discuss some of the ups & downs of such a move with other like-minded members of the QISD. So if you’re a small business looking into this issue, please contact the QISD for feed back that that may assist in the decision making process.

Best Regards

Clayton Roxborough  
Manager  
Steelcad Drafting Pty.Ltd



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## *Letter to the Editor Continued..*

### *Don't give up your day job..*

Recently a challenging project came my way. But this was no ordinary project, it was an exercise in patience and understanding where even a Tibetan Monk may curse. An Engineering draftsman (at least that was the description offered to me) had a shot at the pinnacle of all drafting disciplines, Steel Detailing.

The project was originally sold to me as a relatively simple structure that required detailing of purlins, girts and a bolt list to finish things off. Sounds easy enough right, so in an attempt to appease my customer I cheerfully accepted to undertake this offer (without witnessing documents), which I did not expect to exceed much more than a days work. Three weeks later I had my doubts about the decision made on the phone that fateful day. In fact soon into this project the problems were all to clear. Base plates did not match HD's, bracing plates missing, rafter lengths wrong, girt spacing's incorrect, material lists wrong, missing dimensions, and it went on and on. Essentially the job should have become a complete redraw except repairing seemed the best option at the beginning. I could not have guessed the level of incompetence that unfolded.

Whilst I was compensated for this process one question kept bugging me. Why? Why do some similar but different professions attempt such things? Is it for money? Is it for fame? Is it the thrill of potential legal action? Is it simply to make professional Detailers look good? We may never know.

Happy Detailing  
Tony Dwyer

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## *News and Events....*

### *Chit Chat*

#### *Millennium Arts site visit*

On Monday the 20<sup>th</sup> March I took the opportunity to go and visit the still under construction Millennium Arts building. For those that aren't aware this is Brisbane's new Modern Art gallery and the only modern art gallery in Australia so I was informed.

The QISD was invited by the ASI to attend and there was a total of about 30 people, apparently they had 85 people through that day. We were broken up into three groups and were given a comprehensive tour by Bovis Lend Lease representatives that knew the building inside and out.

We were told about the structural design of the concrete floor beams on the first floor, apparently the method for the pour was quite tricky! The roof structure was quite interesting and was all steel. The steel beam sections were quite large and there was a trial assembly of the roof corners prior to erection. The roof is like a sandwich effect with the soffit and roof sheeting hugging the faces of the structural steelwork, it looks very impressive.

The artistic impressions of the final product are very appealing and the building looks great along the riverfront. It's something to be very proud of and its great to see Brisbane's skyline transforming into the future.

Thanks to ASI for the opportunity.



## **News and Events Continued...**

### ***Database Update***

This year saw the greatest response to QISD membership to date with existing members and new members showing their commitment & interest in the institute by signing up early. 90% of all membership was paid in October 2005, which is great to see.

The QISD member database has played a vital role in streamlining the subscription process, which in previous years has been a tedious task. With all of the data collected in 2004- 2005 we were able to issue membership subscriptions at the push of a button.

We now have the strongest membership base yet, with 16 company members and 44 employee members, this is great to see!

With a growing interest in the forum from members as well as non-members this may also spark some new interest in the QISD in the future, giving the QISD a stronger voice in the steel industry.

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### ***QISD 5<sup>th</sup> Anniversary Celebration***

This year marks the 5<sup>th</sup> anniversary for the QISD. To help celebrate this significant occasion the QISD will be holding a special competition.

The prize on offer is; 2 tickets (Total approx value \$250) to attend the ASI Steel awards dinner to be held on the 25<sup>th</sup> of August at the Brisbane Convention Centre. The tickets include dinner, drinks and entertainment.

The QISD will have a table at this event so the lucky winner and partner will be in very familiar company. This is a very good chance to network with others in the steel industry or just an opportunity kick up your heels and enjoy a great night of fun.

All you have to do is be a current financial member of the QISD, go to the website, click Feedback and submit a feedback email offering one constructive suggestion. Very easy and very simple!

Entries for this competition will close Friday 16<sup>th</sup> of June with the winner drawn at the General Meeting to be held on 21/June/06 at the East Carina Junior Rugby League Club. All suggestions will be tabled at the general meeting for further discussion.

The submitted suggestions will not be assessed as part of the competition selection process. The winner will simply be drawn from all those members who participated and by using the first name out of the hat method. Note: The current QISD committee members are not eligible to participate in this competition however are still welcome to submit suggestions. The judge's decision will be considered final and no discussion will be entered into.

Come on; *Have a GO!!*



### ***QISD AWARDS – 2006***

The *QISD “Excellence in Design Documentation Quality” Awards* will be presented once again this year in conjunction with the ASI Steel Awards which are being held at the Brisbane Convention and Exhibition Centre on Friday 25<sup>th</sup> August.

The ASI Steel Awards generally attract in excess of 300 attendees to the dinner function from all disciplines of the Engineering, Fabrication and Construction Industry. Consequently it is an excellent opportunity for the QISD and our members to mix socially with customers and other players who influence our industry.

The QISD Awards were developed to recognize Engineers and Architects who have endeavoured to produce a good quality set of documents as judged by QISD members. This is a positive step in the process of improving the general quality of documentation that we work with every day and has been well acknowledged by the ASI.

In past years, the winners have certainly appreciated their success and the QISD has received excellent exposure at the event and in subsequent publications.

### ***AWARD ENTRIES***

The QISD awards also give members the opportunity to promote their business, particularly if your nominated entry is the winner. As such, it is now the time when you should be considering submitting entries.

Entry forms and conditions can be obtained from the QISD website.

Dates to remember:

- Entries close 9<sup>th</sup> of June, 2006
- Judging panel selected at General Meeting on 21<sup>st</sup> of June, 2006
- Nominees of winning entries notified 21<sup>st</sup> of July, 2006
- ASI awards night 25<sup>th</sup> of August, 2006 at Brisbane Convention Centre

Nominees of the winning entries receive free tickets to the award night as guests of the QISD so it is worthwhile taking the time to review your past and present projects.

### ***QISD Website***

As with all websites they are always in continual development. We advised in the last newsletter the QISD Web Forum is fully operational however activity at this stage is somewhat disappointing. This is a very good vehicle for all detailers to communicate on all sorts of topics whether they are of technical or of a social nature. We encourage all members to take the time to investigate and start using this facility.

## ***STEEL DETAILER TRAINING***

*The Pilot Programme – Certificate IV in Manufacturing Technology – CAD Stream*

*Is this the course we have been waiting for?*

Yeronga TAFE is running a Pilot programme for on-the-job training of Drafting Cadets. This is the first year of the two-year course in which a number of QISD member firms have candidates enrolled.

The two-year programme is divided into two semesters per year. Two days attendance at Yeronga, during March 2006, marked the official start of the training. Cadets will have a further one-day attendance each month at the Tafe – this is combined with work based “projects”, incorporating elements of the Tafe curriculum. The companies employing the Cadets are required to formulate the “projects”, with assistance of the Tafe, and here in lay the challenges for the Steel Detailing companies. The projects will need to be presented in a fashion, which can be assessed by the Tafe, as achieving the required skill levels.

The Q.I.S.D will closely monitor this initiative and give guidance to the Tafe as required. This pilot course may just be the one Steel Detailers have been looking for, to provide relevant and meaningful accreditation for in-house training of Cadets. The Certificate is placed between the successful completion of a trade apprenticeship and an associate diploma in engineering.

The following extracts are from the official paperwork available from the Australian Industry Group (A.I.G). The programme has another stream for what it is called “Manufacturing Operations”; however, it is the CAD/Drafting pathway that the QISD is interested in.

Further Information is available at the A.I.G website:

[www.aigroup.asn.au/scripts/cgiip.exe/Wservice=aiigroup/ccms.r?Roxy=0x0001034b&PageId=1927](http://www.aigroup.asn.au/scripts/cgiip.exe/Wservice=aiigroup/ccms.r?Roxy=0x0001034b&PageId=1927)

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### **Certificate IV in Manufacturing Technology – CAD Stream Pilot Programme 2006 - 2007**

The Technology Cadetship Initiative has been endorsed by the Australian Industry Group National Executive and the Queensland Government’s Department of Employment and Training. The pilot Manufacturing Technology Cadetship was developed to be delivered as a Certificate IV in Manufacturing Technology.

The Cadetship is aimed at school leavers who are looking to take their first steps towards a rewarding career in modern manufacturing industry.

#### **What is the Technology Cadetship?**

The Technology Cadetship is a new initiative developed by the Australian Industry Group to provide more efficient pathways for school leavers to enter technical occupations in a modern manufacturing industry.

The Technology Cadetship is a set of entry-level qualifications linked to on and off the job training. The Cadetship arrangements are set out in a contract of training and employment like those used for traineeships or apprenticeships.

#### **What training does it involve?**

The Technology Cadetship will initially be available at AQF Certificate Level IV, which will take approximately two years from start to finish. During this time, formal training will be undertaken through a Registered Training Organisation, with the remaining time spent training on the job.

These programs will result in a Nationally Recognised Certificate IV in Manufacturing Technology.

#### **CAD/ Drafting Programme**

*For a career as a drafting officer in an enterprise.* It covers both CAD and traditional drafting principles as well as information technology and manufacturing processes and operations. On finishing, the Cadet could be employed in a range of roles such as Detail Draftsperson or CAD Operator.



### *Point of View from the Secretary*

This is my second year running as secretary for the QISD and I thought it was about time I gave an opinion from and employees perspective, of what I think I have been the achievements of the QISD in the time of my involvement on the committee.

It has been pointed out to me in the past that the management committee of the QISD is made up mostly of a bunch of company members all pushing their own agenda and I would like to point out this is not that case.

Once a month the committee of nine get together and discuss topics of interest to the detailing fraternity, topics such as Benefits of QISD membership, Contract Document check lists and even a proposed standard for an RFI document, all of which are yours to view and download from the website.

Its comforting to see these people getting together once a month and giving up their time to discuss issues that affect detailers. The discussions are intelligent and informative and its interesting to hear the opinions from different levels of the detailing community, no one goes unheard and all ideas are discussed until a unanimous decision is made.

Without doubt the most positive thing that the QISD has done is the design documentation award that is awarded to designers every year at the ASI awards night. It's a real positive reaction to a problem that plagues us all and that is obviously bad documentation. The feedback from the industry has been positive and we are very fortunate to have the backing of the ASI.

We have had expressions of interest in the QISD checklists from other states as well, its good to see that other detailers from around the country see this as a positive move an wanting to adopt it for themselves.

I would like to express my thanks to those that have been involved in the committee over the years, you have all put in a lot of hard work after hours which sometimes goes unnoticed.

As an employee of a drafting firm I can see the benefits of having an institute such as the QISD and believe that the hard work is slowly paying off.

Keep up the good work!!

Philip Shanks  
QISD Secretary



### ODE TO THE DRAFTSMAN

*They gave me a job to draw today  
with a hole and a couple of grooves.  
It's only a cleat that goes under the door  
to restrain it whenever it moves.  
I could sketch it up with a couple of lines  
and put in a size or two.  
But that wouldn't show just how much I know  
so I'm sure that would never do.*

*So I'll cut it all up into sections  
with a symbol beside every part  
And I want to ensure that I make it obscure  
As to where the machining will start.  
Then it's the time to put on the dimensions  
and here's where I really unload  
For I'll mark all the lines with mysterious signs  
That an Einstein could never decode.*

*Now my drawing is finished and printed  
and I'm proud of it's hazy design.  
For I know there'll be chaos and ulcers  
when it finally comes out on the line  
And a feeling of a pride starts stirring inside  
as my tracing is filled on the shelf  
For my quest has been solved with a print so involved  
That I can't even read it myself.*





**Feedback....**

As requested in previous newsletters for the Institute to know what issues are really concerning its members we need to get constructive feedback. If you have any specific issues or ideas please find the time to write them down and send them through to the committee for due consideration.

**Feedback Form**

This is **your** QISD so please take the time to let us know what you think.

**Fax to QISD:** (07) 3844 9477  
**Email to QISD:** [feedback@qisd.org.au](mailto:feedback@qisd.org.au)  
**Post to QISD:** QISD  
PO Box 8250  
Woolloongabba  
Brisbane Qld, 4102

Comments:

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***Thank you for your input,  
Queensland Institute of Steel Detailers***