

ptNEWS

Newsletter 2 - 2013



PRESIDENTS REPORT

The Post-Tensioning Institute of Australia has continued to progress its objective of ensuring the industry has a well trained workforce. Some Directors from PTIA met with CFMEU officials and were pleased to report on significant support and encouragement for the program. While the industry take-up of the E-learning facility has been slower than expected, a number of PT contractors have now enrolled parts of their workforce in this training program. More about this program is discussed on page 3 of this newsletter.

I am pleased to report that our seminar held in Sydney, jointly with Concrete Institute of Australia was a great success and the subjects covered in the course were informative and interesting. I am looking forward to our next seminar to be held in Melbourne on 18 June.

On the board of directors, we are particularly encouraged that the industry as a whole is taking note of the training that we have been offering over the past several months, and as the industry seems to be turning a corner and starting to pick up a little pace, we believe this training will be put to good use in the upcoming months.

PTIA is presently engaged on several technical topics, including:

- guidelines for grouting of PT ducts
- more reliable methods for assessing early age in-situ concrete strength
- production of a series of Guidance Notes on a range of technical and construction related matters, and;
- acceptance of the contribution of PT construction towards reducing the carbon footprint of building construction

The board of directors is currently looking forward to where the PTIA may increase its influence in the future, and as always, is keen to hear from the industry as to the areas on which we should focus.

Andrew Castle
PRESIDENT



ANNUAL GENERAL MEETING

PTIA Seventh Annual General Meeting to be held in the Gold Coast, Queensland.

PTIA members are advised that the next AGM will be held on the Gold Coast on 15 October – the day prior to the Concrete Institute of Australia’s Biennial Conference Understanding Concrete (16 – 18 October).

This major Australian Conference is the only one of its kind, dedicated to concrete.

As the PTIA AGM is to be held in October, the Directors thought it appropriate to hold the meeting in the same location as the CIA’s Biennial Conference. As many PTIA members may be attending the Conference, they will be most welcome to attend the PTIA AGM on the day prior.

Our Directors also look forward to the opportunity to meet with PTIA members, and others with an interest in post-tensioning during the three days of the Conference, and at the Awards for Excellence gala dinner on the evening of 17 October.

This AGM requires the election of new, or re-election of existing Directors. The PTIA Board welcomes nominations from among its membership. Notices and nomination forms will be distributed in September.

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For some time now structural engineers have specified that the design of the slab is to be to the Post-tensioning contractors details. Whilst this is fine and the Post-tensioning companies are equipped with engineers to undertake this role, there is still a minimum level of expectation on the documents provided by the consulting engineer to ensure the whole process is a success. This article will attempt to discuss the appropriate role of the consulting engineer.

The first and possibly most important role for the consulting engineer is to appropriately co-ordinate the structural requirements with the architect. This is most commonly completed prior to the involvement of the post-tensioning contractor and their engineers.

During this stage, it is imperative that appropriate zones are allowed for the slab structure, in addition it is imperative that supporting structure is placed in appropriate locations.

In order to appropriately determine the required slab thicknesses, it is important for the consulting engineer to undertake an appropriate level of slab design at this stage. The purpose of this slab design is to determine if there will be any problems in the length of slab spans or cantilevers. If problem areas are determined up front, then discussions can be held with the architect to determine the suitable outcome prior to all the consultants' drawings being locked in.

During this stage it is also important the consulting engineer closely analyse any transfer zones to ensure there is sufficient depth in these areas. There are two important issues to consider when determining the initial concrete depth for the transfer zones. Firstly will the zone work for strength and deflections, and secondly can the transfer be effectively and economically constructed. If not appropriately analysed, and co-ordinated up front, it is often difficult to adjust the depth of such transfers at a later date.

Often the comment has been made, "that is all the depth that you can have due to architectural constraints". This indicates that the consulting engineer has not done their job properly in co-ordinating the projects structural requirements with the project architect. The end result is often that the design then produced is not economical or practical to build. In a case recently, the consulting engineer suggested that to overcome lack of concrete depth, 80MPa concrete be used in a particular transfer slab.



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There are obvious problems with using this strength concrete in slabs and a more carefully designed and co-ordinated project would have avoided the use of this.

A second and equally important role for the consulting engineer is to clearly identify the design requirement and criteria. Generally the post-tensioning contractor is appointed close to the time of construction, therefore in order to undertake their design effectively, required design information is required to be at hand.

Primary of these requirements are clearly identified loadings for the project. There seems a common trend at present for the consulting engineer to be reluctant to provide building loads, or when they do it is in the form design software output or a set or hand calculations. In one recent instance the consultant went as far as to state that all transfer loads were to be determined by the post-tensioning contractor and not their responsibility.

In order to make the project a success, and ensure no confusion between contractor and consultant, loads should be clearly marked out on the structural drawings. This could be either in the form of a table or marked alongside the specific element, however it needs to be clearly shown and not able to be misinterpreted. It must be remembered that the post-tensioning contractors' engineers will most likely not have as much time as the consultant has spent on the project prior to the first deck design being issued. **Continued page 3.**

PTIA's training initiatives, Certificate III Post-tensioning and the Mono-strand post-tensioning course, are receiving industry wide endorsements. A recent meeting was held with the CFMEU in NSW to present the contents of the PTIA training package. The PTIA initiatives were enthusiastically received and encouraged.

The PTIA's E-learning facility through ACI Global has been operating since April, with over 50 people already undertaking this training. The facility enables training and assessment to be undertaken on-site, and PTIA member organisations can have one of their staff trained and accredited to undertake the training and assessment of their operatives at no additional cost.

Presently, only the Monostrand module is offered, but Multistrand and Stressed Bar modules will be available in the future.

On successful completion of the course, the trainee receives a *Certificate of Competence* meeting the requirements of the National Training Qualification and ISO29990, as well as a wallet sized PTIA card verifying completion.

Training is a significant component of the NSW Post-tensioning EBA and it is expected the demand for this course to increase over the coming months.

The CFMEU and the PTIA have agreed, in principle, to pursue a Traineeship in Post-tensioning with the newly available Cert III Post-tensioning. Currently, through liaison with the Skills Council and ITAB, a submission regarding such traineeship is being prepared. Once approved, this will facilitate applications for funding assistance for training by employers.

These training initiatives, with the support of the PTIA, Principle Contractors and the CFMEU will contribute to a safer work environment on construction sites all over Australia.

To access the Monostrand training course go to the PTIA website's "News and Events" page (www.ptia.org.au/NewsEvents.aspx), or simply [click here](#).



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On top of the nomination of loads, FRL's and covers to reinforcement should be clearly identified. The last part of identifying the design requirements is an appropriate level of sections throughout what is being built. These sections are required for the post-tensioning contractor's engineer to quickly understand what is being proposed as well as the builder being able to easily construct formwork on site. Importantly, these sections should be checked and co-ordinated properly with the project architect prior to issue to the post-tensioning contractor.

It is also important for the consulting engineer to realise the extent that the post tension floor may shrink and careful consideration needs to be paid as to how and what would restrain the slab from shrinkage. Appropriate release at lift cores, concrete walls and shoring walls needs to be considered in order for the project to be a successful project.

Whilst the above may seem obvious to a lot of consulting engineers, it is amazing how often these issues appear on projects. Generally all involved in the project want it to be a success. For this to occur, the appropriate level of consideration needs to be provided in regard to the structure right from the outset. In addition a clearly identified set of design criteria will make it easier for all parties concerned to be on the same page during the final design of the slab structure.



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PTIA is conducting a new series of seminars in conjunction with the Concrete Institute of Australia and Engineers Australia in 2013. Details will be shown on the PTIA and Concrete Institute web sites. The seminar topic is The Direction of Post-Tensioned Building Construction in 2013.

Topics include:

- Post-tensioning Subcontractor Design, ADG Consulting Engineers
- Early age Strength by Concrete Maturity Assessment and sustainable Greenstar concrete in Post -Tensioned applications, Boral Concrete
- Towards an Improved GreenStar Rating Method to recognise the Unique Advantages of PT Construction, Engineered Material Solutions
- PT Project report, local design engineer

Courses completed or planned are:

LOCATION	EVENT	DATES
Sydney	Seminar with Concrete Institute	February 20
Melbourne	Seminar with Concrete Institute	June 18
Brisbane	Seminar with Concrete Institute	November 19

For seminar details and to register: visit the Concrete Institute of Australia website: www.concreteinstitute.com.au.

PTIA Members receive discounts on the registration fee.

MEMBER COMPANIES

Corporate Members

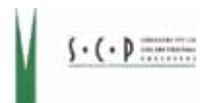
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