

ptNEWS

Newsletter 3 - 2013



PRESIDENTS REPORT

Historically the Post-Tensioning Institute of Australia has been limited to a small group of influential Post-Tensioning companies and suppliers. The current Board of Directors is looking to change this status. We believe it is important for our industry to have an influential and powerful industry body support the post-tensioning industry. We believe we can only achieve this if we have the support of a large number of post-tensioning companies and suppliers, actively participating as Members.

As mentioned in the last couple of reports, the Post-Tensioning Institute of Australia has achieved substantial outcomes in areas such as green star rating and on-site training over the past year. The PTIA has moved to become an industry body seen to be achieving results in the industry. This is why we would like to encourage all appropriate companies related to the industry to support this body.

The Board is so dedicated to this outcome, that PTIA is currently offering substantial discounts on fees for the first year of membership for new members. In order to find out about these discounts, please contact our administration office for further details.

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The Board is also pleased to announce that in order to create a more united industry body, a series of networking events is being planned. The first of these events will be on the Gold Coast, at a drinks and catch up session, following our Annual General Meeting on 15 October. We encourage as many members as possible to attend both the AGM then stay for this networking event. This event will be the first of potentially many such events, with a current desire to work up to several events a year and a possible annual conference.

These are new and exciting times for the Post-Tensioning Institute of Australia and we would like to invite you to join us on this journey to becoming a stronger, more widely representative industry body.

Andrew Castle
PRESIDENT



PTIA 7TH ANNUAL GENERAL MEETING GOLD COAST, TUESDAY 15 OCTOBER

Members and friends of PTIA are invited to our 7th AGM. As the Concrete Institute's Biennial Conference will be held on the Gold Coast from 16 to 18 October, PTIA has decided to hold its AGM in that location on the day prior to the Conference.

The AGM will commence at 4pm, and will include election of Directors. Member organisations are invited to submit nominees for election to the PTIA Board. Following the AGM, we will be hosting a networking function for members and friends to meet with PTIA Directors in a relaxed environment.

To register interest in attending, please email: info@ptia.org.au. Notice of meeting and venue will be sent later in September.

At its meeting on 27 August, the PTIA Board elected the following office bearers for 2014/2016 :

President:

Andrew Castle, ABC Consultants

Vice-President:

Craig Kilpatrick, Australian Prestressing Services, Queensland

Company Secretary:

Max Schweiger, Structural Systems Limited

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Freight cost from the Brisbane manufacturing plant to Perth has been reduced by two thirds utilising this method and coastal freight.

REFOBAR'S - ROLL ON ROLL OFF CONTAINER SYSTEM INSTRUMENTAL IN CUTTING COST AND IMPROVING HEALTH AND SAFETY OF PRODUCT HANDLING

Sea freight using shipping containers is still the cheapest freight option to many destinations in Australia, as well as being the only real option for export markets. Shipping of Post-tensioning components from the Refobar manufacturing site in Queensland to Western Australia, the remote north and to its export customers in South Africa, New Zealand and the Middle East has always been expensive and difficult.

There are some real disadvantages in terms of labour required to load and unload the containers, and the inherent health and safety risk associated with handling sharp steel at both ends can often outweigh the advantages of containerisation. Another problem is that at the receiver's end they need a system to contain and transport the duct after unloading it from the container. Again, this is labour intensive and has a high risk of injury through handling sharp steel.

Refobar have designed a new roll on roll off system that eliminates nearly all these issues, and reduces both the labour requirement and the Health and Safety risk. One forklift operator can load a container from scratch in about two hours maximum. And with some experience, a single forklift driver can unload a container in less than an hour.

This system eliminates the need for manual handling, and eliminates the hazards involved with manual handling sharp steel. The quick container turnaround time eliminates the demurrage cost associated with the length of time it would normally take to unload a container. In fact the truck delivering the container can wait for the container to be emptied and then pick up the container within an hour of delivery.

Refobar supplies the receiving company with a set of unloading rails and a set of trestles that allow the packed duct to be transferred to certified lifting crates if required. If the duct is to be used for slab on ground then the wood crate is sufficient on its own.

The ducting is loaded onto a "train" and pushed into the container. The train is packed at the front to prevent movement during transport. When the container arrives at its destination the collapsible rails are put in place and the load is pulled out by forklift or any heavy vehicle.

The 8 packs of duct are forked off the train and the train is quickly disassembled and packed on a pallet for later collection by Refobar.

The system was key to the successful winning of the supply contract with Freyssinet Australia for spiral duct to the Gorgon project in W.A. The trains were specially constructed to provide a very versatile storage option, in addition to the roll on roll off system. Refobar was also required to fumigate and seal the containers ready for direct shipment. 12 x 40 foot containers were shipped this way.

Freight cost from the Brisbane manufacturing plant to Perth has been reduced by two thirds utilising this method and coastal freight.

Construction Techniques in New Zealand have been using the system for over a year now and are very happy with it. Recently Grouting Services New Zealand also started receiving shipments this way. They were delighted with the ease of unloading and the fact that the duct arrived undamaged for the first time since they have been importing duct.

A video showing a load being rolled into the container can be viewed at the following YouTube link.

www.youtube.com/watch?v=UEF4w6eOdkU

Refobar are the Australian "One Stop Shop" for post tensioning and can supply a full range of certified post tensioning products. Refobar is constantly looking for ways to make doing business easy and to add value to its products... this is just one such innovation. Being a small and Lean operation they are very flexible and the team at Refobar are happy to talk about any situation and work with its customers to provide innovative, customised and smart solutions.

GROUTING OF BONDED MONO STRAND TENDONS

Grouting is the practice of injecting a highly fluid cement based grout throughout a post-tensioned tendon following the completion of stressing activities.

It is a critically important practice for bonded post-tensioned structures and is fundamentally related to the long term strength and durability of the structure.

The PTIA recognise that there have been instances worldwide where poor work practices in relation to grouting have compromised the service life of post-tensioned structures. In more severe cases, such practices have contributed to premature demolition and even structural failure.

Why do we grout?

Bonded post-tensioning, as is commonplace in Australia, relies on the fact that the strands in the post-tensioned tendons are effectively bonded to the surrounding concrete. By accomplishing this with a cement based grout we also simultaneously provide a high level of corrosion protection to the tendon itself throughout its service life.

It is relatively well understood by most that grouting provides the primary corrosion protection mechanism for the post-tensioned tendons, the concept of an alkaline cementitious matrix protecting embedded carbon steel mirrors the protection afforded to conventional reinforcement in concrete.

Less comprehensively understood is the tendon grout's contribution to strength and crack control. The design provisions in the Australian Concrete Structures Code, AS3600-2009, are wholly based on the tendon and surrounding concrete behaving monolithically.

As a result, the quality of the grout provided can directly affect both the strength and serviceability of the structure, and unless the entire grouting process is performed correctly the structure may not be able to resist the full design load.

PTIA encourages post-tensioning contractors to:

- Ensure grout mixes are prepared in accordance with approved mix designs;
- Ensure site based QC testing is performed in accordance with project specifications;
- Employ rigorous QA regimes which are able to identify and confirm the grouting of every individual tendon in a structure;
- Above all, ensure all personnel are appropriately trained for the tasks being performed.

PTIA accredited training

The PTIA offers Nationally Accredited Training and Assessment courses for post-tensioning that covers installation, stressing and grouting of tendons. For further information or to book a course, visit the web site www.ptia.org.au

The PTIA will be soon be releasing a current best practice document in relation to grouting of bonded mono strand tendons, refer to www.ptia.org.au for updates.



SEMINARS AND EVENTS 2013

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 details about these seminars, and to register to attend, go to the Concrete Institute of Australia website – www.concreteinstitute.com.au. PTIA Members receive discounts on the registration fee.

We also remind Members that the Concrete Institute's Biennial Conference will be held on the Gold Coast from 16 to 18 October. To register, go to the Conference website - <http://www.concrete2013.com.au/>



MEMBER COMPANIES

Corporate Members

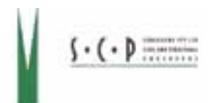
Australian Post-Tensioning Pty Ltd
Australian Prestressing Services Pty Ltd
(founding member)
Structural Systems Pty Ltd
(founding member)

Associate Members – suppliers

Ancon Building Products
OneSteel Wire Pty Ltd
RefoBar Australia
Severs Technical Systems Pty Ltd

Associate Members – consulting engineers

ABC Consultants
Arup
Bornhorst + Ward Pty Ltd
Costin Roe Consulting Pty Ltd
Hyder Consulting Pty Ltd
McVeigh Consultants Pty Ltd
SCP Consulting Pty Ltd
Taylor Thomson Whitting



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