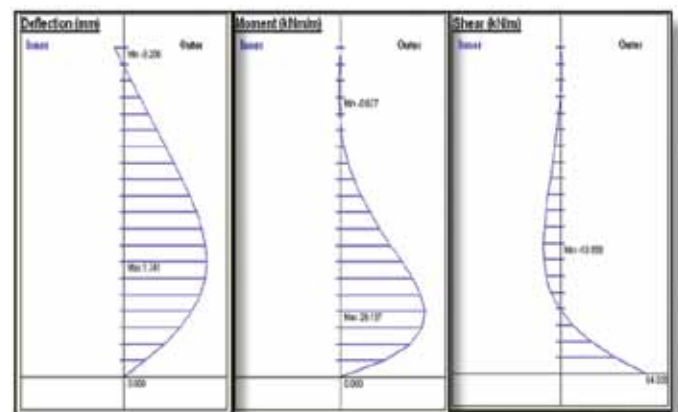
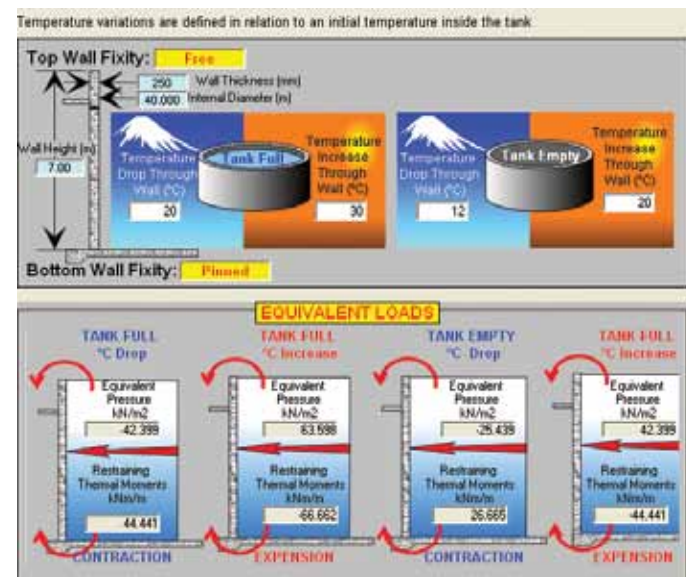


POST TENSIONED CONCRETE TANKS DESIGN WORKSHOP (using PTtanks Software)

OUTLINE

This full day workshop is primarily aimed at design engineers and anyone with a technical background who needs to design post-tensioned concrete tanks quickly and easily.

The presenter will provide a step by step process of designing a PT tank by means of the PTtanks software. The program designs for a multitude of load cases including tank full, tank empty, temperature differentials, earthquake loading, soil pressures, swelling and shrinking. It carries out Fourier Series calculations as well as determining losses, hoop stresses, vertical bending moments, short and long term effects. The program also designs the ring beam and the tank slab (taking into account post loads, UDL's and wheel loads).



CALCULATORS REQUIRED

PROGRAMME

8.30 - 9.00 Registration

9.00 - 10.30 Session 1 - Materials used for PT tank design

This session addresses the materials used in the PT tank design process eg 12.7mm and 15.2 mm PT strands, grouts, live and dead ends, ducts, concrete grades and 500 MPa steel reinforcement. It also looks at the appropriate Standards for use in PT design, eg AS3600, AS1170.4, NZ3106 and AS3735.

10.30 - 11.00 Morning Tea

11.00 - 12.30 Session 2 - Basic PT Input data and design assumptions

This session looks at the input information required to make the program work effectively eg choice of wall construction Precast vs Insitu Walls, position of live ends and dead ends, reinforcing or prestressing walls vertically, location of hoop steel (ie outside or inside vertical reinforcement), thermal loads on the wall, degree of shrinkage and swell in the tank, stressing arrangement in the wall ie stressing from two points, four points or six points on the circumference of the wall.

12.30 - 1.30 Lunch (Provided at venue)

1.30 - 3.00 Session 3 - Structural Design of the PT Tank

This session guides the attendees through all the load cases and the analysis steps required to achieve a correct and cost effective design. The program then determines the bending moments, shears, deflections, stresses and strains for Tank full vs Empty, Extremes of Temperature (according to AS3735), Effects of Shrinkage and Swelling in the concrete, Losses in strand, Earthquake loading eg Inertial, convective and for vertical acceleration, plus more.

3.00 - 3.30 Afternoon Tea

3.30 - 5.00 Session 4 - Concluding PT tank design processes

In this session the presenter guides the attendees through the design of the tank base including ring beam design and PT locations and spacings. In conclusion the final results and print out diagrams (which include the Quantity take off and the Final Report) are analysed.

5.00 - 5.15 Feedback sheets and Certificate of Attendance



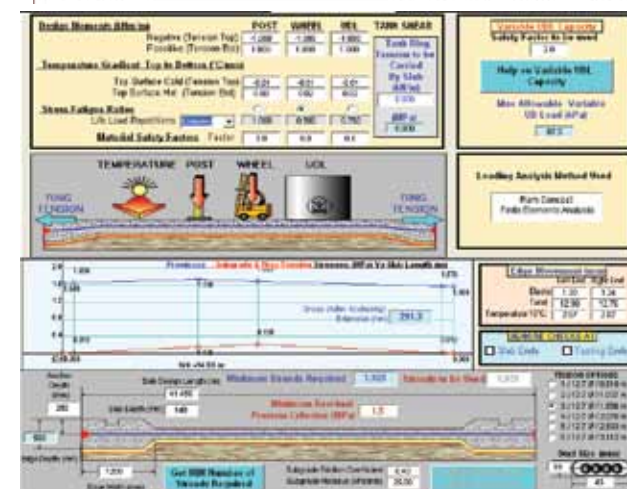
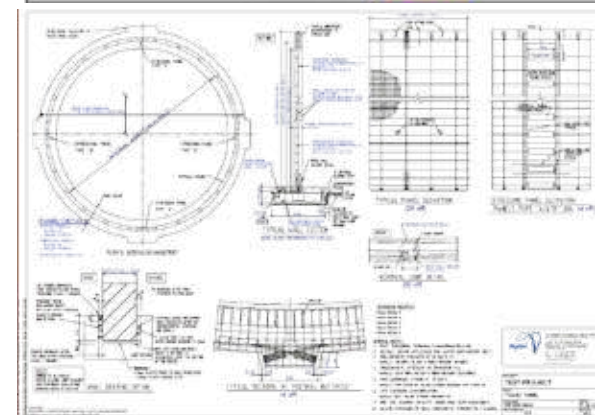
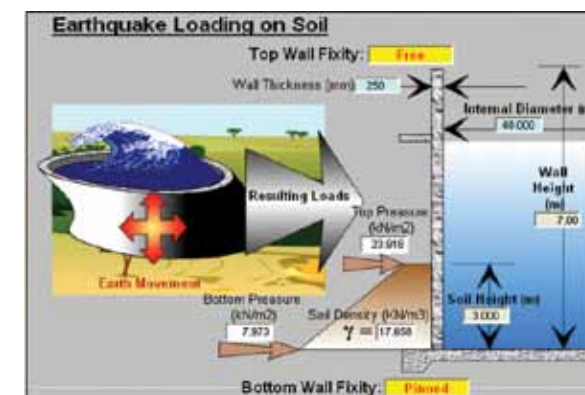
SPEAKER

Steven S. Gikas

BE MEngSc MIE(Aust) NPER

Director - Steven S. Gikas & Associates

Steven Gikas has been designing post tensioned structures including PT liquid retaining structures for over 25 years. He was the Senior Design Engineer for VSL from 1985 to 1996 before starting his own consulting firm specialising in this area. Steven has written the PTtanks program based upon his many years of design experience in PT. He has also written PT slab on ground programs as well as programs that design for Punching Shear in Reinforced and PT structures as well as programs that take quantities off drawings.



Professional Development

Attendees may be credited towards IEAust Continuing Professional Development (CPD) requirements. Members of IEAust are required to undertake a minimum of 150 hours of equivalent CPD every 3 years.

VENUES

- * Sydney Stamford Grand cnr Herring & Epping Rd, North Ryde NSW (02) 9888-1077
- * Melbourne Hotel Grand Chancellor, 131 Lonsdale St, Melbourne VIC (03) 9656-4000
- * Brisbane Mercure Hotel, cnr North Quay and Anne St Brisbane QLD (07) 3237 2300

REGISTRATION FORM

Please return to:

Cement & Concrete Services (Attn: Vincent)

PO Box 913 Baulkham Hills NSW 1755

Phone (02) 9899 7447 Fax (02) 9899 5995 Mobile 0413 998 031

Email: registrations@cementandconcrete.com

I / We wish to attend the **PT Tanks Software Design Workshop** at

- Sydney NSW Thu 26 September 2013
- Melbourne VIC Tue 22 October 2013
- Brisbane QLD Thu 7 November 2013

tick
☐
☐
☐

One Day Course @ \$440

(Includes Handouts & Meals)

Total Payment ☐ Cheque \$

[Cheques payable to 'Cement & Concrete Services' note GST already included]

Name

Name

Company

Street / PO Box

Suburb Postcode

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Email

Person Handling Payment (please print)

VISA ☐ M.CARD ☐ AMEX ☐ 3 or 4 DIGIT ID#

Cardholders Name

Expiry Date / Signature

NB: Cancellations made more than 5 working days prior to a course will incur a 20% processing fee of the full registration amount. Cancellations made 5 working days or less will incur forfeiture of the full registration fee.