

This matter came on for hearing before a panel of the Discipline Committee on April 25, 2005, at the offices of the Association of Professional Engineers of Ontario in Toronto. The association was represented by Neil Perrier of Perrier Law Professional Corporation. William C. Wong, P.Eng., and Construction Testing Laboratories Limited were represented by Amar P. Singh of Singh Lynn LLP.

The Allegations

The allegations against the member, William C. Wong, P.Eng., and Construction Testing Laboratories Limited, as stated in the Fresh Notice of Hearing dated April 22, 2005, were as follows:

It is alleged that William C. Wong, P.Eng., (hereinafter "Wong") and Construction Testing Laboratories Limited (hereinafter "CTLL") are guilty of professional misconduct, the particulars of which are as follows:

1. Wong was at all material times a member of the Association of Professional Engineers of Ontario.
2. CTLL was at all material times the holder of a Certificate of Authorization to offer and provide to the public services within the practice of professional engineering. Wong was the professional engineer responsible for the services provided by CTLL.
3. In 1992, Fero Corporation (hereinafter "Fero"), a masonry tie manufacturer located in Edmonton, Alberta, issued a product brochure for Slotted Block-Ties (Type I), which contained performance and dimensional data for that product.
4. On July 27, 1998, Wong, then manager of CTLL in Mississauga, received a verbal request from Blok-Lok Ltd. (hereinafter "Blok-Lok") to perform laboratory testing of Blok-Lok masonry ties in order to determine working loads and serv-

Decision and Reasons

In the matter of a discipline hearing under the *Professional Engineers Act*, and in the matter of a complaint regarding the conduct of:

William C. Wong, P.Eng.

a member of the Association of Professional Engineers of Ontario, and

Construction Testing Laboratories Limited

a holder of a Certificate of Authorization.

iceability parameters (free play and deflection) associated with the masonry ties.

5. CTLL issued report SF98-03 to Blok-Lok dated August 4, 1998, which was sealed and signed by Wong on February 23, 1999 (hereinafter "SF98-03, Version 1"). Wong reported that all testing of masonry ties was performed according to CSA Standard A370-94, *Connectors for Masonry* (hereinafter the "CSA Standard"). Wong further concluded that the assembled Blok-Lok "tie system" met load, deflection and free play requirements of the CSA Standard.
6. CTLL Report SF98-03, Version 1, contained a "Materials List" that stipulated under "Structural Backing" that "L" brackets were fastened to a 2" x 2" x 0.125" hollow steel section with 1/4" bolts as opposed to the requirements of the CSA Standard clause 12.2.1.
7. CTLL Report SF98-03, Version 1, included tables for load test data

where failures were identified as follows: "L" brackets that buckled under compression tests and the slots in the "L" brackets that deformed under tensile tests. CTLL Report SF98-03, Version 1, failed to include measured Maximum Displacement Values as required by the CSA Standard.

8. Table No. 1 of CTLL Report SF98-03, Version 1, *Recommended Design Loads and Deflections of Slotted Ties Manufactured by Blok-Lok Ltd.*, established values for free play, deflection, design load and design load deflection. The notes in Table No. 1 represent that a safety factor value of 3.0 was used when there is no basis for application of a safety factor value of 3.0 in the relevant CSA Standard.
9. In Note iv of Table No. 1 of CTLL Report SF98-03, Version 1, it was asserted that the design values contained in Table No. 1 were "based on test results utilizing 16 GA. T304 ST. STL slotted L-Plate two steel self-tapping screw fasteners, measuring 0.211" in diameter with 1.5" long shanks for

- the 1/4" diameter holes on the slotted L-plate, and a 3/16" diameter T304 ST. STL V-tie. The fasteners were screwed into an 18 gauge 6" steel stud with 1/2" Dens-Glass Gold Drywall sheathing between the stud (steel channel) and slotted L-plate." While the above noted wall construction is of poor design, the test procedures noted are otherwise generally consistent with the CSA Standard.
10. Another version of CTLL Report SF98-03, Version 1, also dated August 4, 1998 (hereinafter "SF98-03, Version 2"), was distributed by Blok-Lok within the masonry construction industry, along with its product brochure featuring BL-407 masonry ties. These ties were depicted in the Blok-Lok brochure as having a vertical adjustability of 1 1/2". CTLL Report SF98-03, Version 2, also bearing Wong's seal, included data tables that differed from those of CTLL Report SF98-03, Version 1. These differences included a factor of safety, reported measurements, recommended design load and deflection, and a different test configuration. CTLL Report SF98-03, Version 2, further included a data table that contained unrealistic measured maximum deflection values for such materials, thereby suggesting an error in testing.
 11. Note iv of Table No. 1 of CTLL Report SF98-03, Version 2, asserted that the design values contained were "based on test results utilizing 16 GA. T304 ST. STL slotted L-Bracket, and a T304 stainless steel brick tie measuring 4.76 mm in diameter, 80 mm long with 40 mm long embedment legs. The L-Bracket was mounted onto a 2" x 2" x 0.125" thick hollow steel section using 1/4" steel bolts, in order to simulate an incompressible backing." The above noted testing by Wong and CTLL, as set out in Note iv of CTLL Report SF98-03, Version 2, is not in compliance with the CSA Standard.
 12. Note iv of CTLL Report SF98-03, Version 2, represents that different testing and methodology was utilized by Wong and CTLL to arrive at the same values as those contained in CTLL Report SF98-03, Version 1 (as particularized in paragraphs 6 to 9 above).
 13. Blok-Lok distributed copies of CTLL Report SF98-03, Version 2, and related product information to, amongst others, designers of wall systems in Ontario.
 14. On August 25, 1998, Wong and CTLL issued a signed and sealed report BL98-05 for Blok-Lok's 8" Corrugated Block Ties (hereinafter "BL98-05"). Blok-Lok distributed CTLL Report BL98-05, accompanying its brochure for BL-507 masonry ties having a 50 mm vertical adjustment length. As in the two versions of CTLL Report SF98-03, CTLL Report BL98-05 included a conclusion, indicating that the assembled Blok-Lok "tie system" met load, deflection and freeplay requirements of the CSA Standard.
 15. On April 8, 1999, Blok-Lok requested that Wong and CTLL provide a comparison of design and physical tests between the corrugated/slotted block ties made by Blok-Lok and those made by Fero.
 16. In a sealed and signed report BL99-01 to Blok-Lok dated April 8, 1999 (hereinafter "BL99-01"), Wong and CTLL concluded that "the two ties should provide equivalent field performance and service life." The comparison parameters used included: free play, deflection, design load, thickness of certain sections, height, embedment length and overall length of the ties. CTLL Report BL99-01 was subsequently made available to the industry by Blok-Lok.
 17. In a letter to Wong dated September 8, 1999, Michael Hatzinikolas, P.Eng. (hereinafter "Hatzinikolas"), president of Fero, made comments regarding CTLL Reports SF98-03 and BL99-01, which included:
 - (a) Fero connectors were "superior for both field performance and service life," and each component and each feature on the component were engineered not only to have met the CSA Standard, but also exceeded its minimum requirements in most instances;
 - (b) one of the Fero connector features missed in the evaluation by Wong was the opening holes on the connectors, which were engineered to minimize thermal bridging;
 - (c) if Wong were more familiar with masonry connectors, he would have recognized that the reduction in thermal bridging was to minimize condensation on the connection to the backup structure that lies inside the insulation. Such condensation could leave the connection vulnerable to deterioration with a consequence of significant reduction in service life. Hatzinikolas contended that this one feature alone invalidated Wong's conclusion of equivalent service life;
 - (d) Fero connectors had been tested with masonry assemblies by modelling the testing arrangements as suggested by the CSA Standard. By contrast, CTLL's testing was very limited; and
 - (e) that load capacity of connectors related to the assembly and not to the individual pieces and that the governing mechanism of failure was at times the pull-out strength from the masonry assembly at the critical location within the wall.
 18. In the same letter of September 8, 1999, Fero requested that Wong and CTLL advise Blok-Lok by September 20, 1999, in writing, that he was withdrawing his certification of equivalence and that CTLL's tests on Blok-Lok connectors met only certain minimum CSA Standard requirements and did not compare with the superior features of Fero connectors. Furthermore, Fero required CTLL to obtain a listing of industry persons and companies that

received the equivalency certification report and to write to each by registered mail by the end of October 1999, withdrawing that certification. Wong and CTLL failed or refused to comply with Fero's requests.

19. On January 6, 2000, upon another verbal request by Blok-Lok, Wong and CTLL agreed to provide testing and evaluation services for another of its non-conventional adjustable box tie products.
20. In a sealed report BL00-03 to Blok-Lok dated January 17, 2000 (hereinafter "BL00-03"), Wong included comments with respect to testing and test results, such as:
 - (a) The testing was performed according to the CSA Standard;
 - (b) The adjustable box "tie system" as assembled met the "load deflection requirements of CSA 370-94;" and
 - (c) All of the ties tested exceeded the ultimate tensile strength requirement of 1000 N.
21. CTLL Report BL00-03 listed the following materials for the test assemblies: six brick box ties, three sets of "L" hook connectors, and a concrete slab used to anchor the ties in order to "realistically simulate" the loads acting on the "tie connector system."
22. In CTLL Report BL00-03, Wong provided performance test tables with a "34 mm Leg Length" notation. Wong also included the type of failure noted for compression tested ties as "L-hook Buckled," along with incremental load and maximum load and displacement data for the ties tested in tension and the ties tested in compression. CTLL Report BL00-03 went into circulation together with the System 2000 brochure issued by Blok-Lok.
23. In or about April 2000, Hatzinikolas requested that Gary R. Sturgeon, P.Eng. (hereinafter "Sturgeon"), a code development engineer for Masonry Canada in Alberta, provide comments on CTLL Report BL00-03.
24. By letter dated April 19, 2000, Sturgeon concluded that CTLL's test did not satisfy the CSA Standard and that it was not appropriate for Wong to conclude that the non-conventional adjustable box ties satisfied the requirements of the CSA Standard. Non-compliance with the CSA Standard noted by Sturgeon included:
 - (a) The sampling size taken by Wong and CTLL in their load and free play tests was inadequate (CSA Standard clauses 12.1.3 and 12.4.2);
 - (b) Wong did not clearly state if the position of maximum adjustment was tested nor indicate if the requirements of CSA Standard clause 8.3.2.4 were met; and
 - (c) Cavity width, having an effect on stiffness and strength of the ties under compression, was unavailable.
25. In summary, it appears that Wong, and CTLL:
 - (a) with respect to CTLL Report SF98-03, Versions 1 and 2:
 - (i) did not correctly load the test specimen as the surcharge load was omitted and without an explanation,
 - (ii) failed to test the specimens at the required number of positions of adjustability, thus failing to test for different modes of failure,
 - (iii) utilized a test configuration that did not reflect as-built conditions or closely simulate loading under service conditions,
 - (iv) represented that it utilized different testing and methodology to arrive at the exact same values for free play, deflection, design load and design load deflection in the two versions of CTLL Report SF98-03,
 - (v) stated that the factor of safety utilized in Version 1 of CTLL Report SF98-03 was 3.0, a factor of safety that is unrecognized by, and non-compliant with, the CSA Standard,
 - (vi) did not clearly report the mode of failure for compression tests as "Material Failure" or "Elastic Buckling," resulting in confusion regarding the appropriate factor of safety to be applied (i.e. 2.0 versus 4.0),
 - (vii) while utilizing a factor of safety of 2.0 in CTLL Report SF98-03, Version 2, have not made it clear how they calculated a load design value of 0.79 kN,
 - (viii) in Table 2 of CTLL Report SF98-03, Version 2, the deflection at maximum load is either not reported or reported incorrectly,
 - (ix) the two versions of CTLL Report SF98-03 exclude a statement cautioning the user against attachment of the "L" bracket to steel stud walls, and
 - (x) the reports are incomplete, potentially misleading and contain errors that could result in walls that are under-designed and not safe;
- (b) with respect to CTLL Report BL98-05:
 - (i) failed to correctly load the sample as no surcharge note was noted to be applied to the brick wall without any rationale being provided for the omission,
 - (ii) failed to test the specimens at the required number of positions representing the full range of adjustability, resulting in incomplete testing,
 - (iii) failed to report the cavity width,
 - (iv) did not clearly report the mode of failure for compression tests as "Material Failure" or "Elastic Buckling," resulting in confusion regarding the appropriate factor of safety to be applied (i.e. 2.0 versus 4.0),
 - (v) while utilizing a factor of safety of 2.0, have not made it clear how they calculated a recommended load design value of 1.0 kN, and
 - (vi) the report is incomplete, potentially misleading and contains

errors that could result in walls that are under-designed and not safe;

- (c) with respect to CTLL Report BL99-01, reported that corrugated/slotted block ties made by Blok-Lok and those made by Fero should provide equivalent field performance and service life, despite the fact that several design values were different and Wong and CTLL had not assessed “field performance” but, instead, only assessed a limited set of loading conditions;
- (d) with respect to CTLL Report BL00-03:
 - (i) reported that tests had been conducted in accordance with CSA Standard A370 despite the following:
 - (a) having calculated a variance factor (psi) for free play, compression and tension after performing only six test samples when the CSA Standard requires that 10 samples be used, and
 - (b) not having loaded the sample in compliance with the CSA Standard in that no wall assembly was constructed, no test of embedment was made, and only the metal components of the required wall assembly were tested,
 - (ii) failed to calculate recommended design load in accordance with the CSA Standard, but reported a material failure load only, resulting in an overstatement of compliance of the tie with the standard,
 - (iii) failed to clearly report the mode of failure for compression tests as “Material Failure” or “Elastic Buckling,” resulting in confusion regarding the appropriate factor of safety to be applied (i.e. 2.0 versus 4.0),
 - (iv) failed to test the specimens at the required number of positions of adjustability thus failing to test for different modes of failure, and
 - (v) the report is incomplete, potentially misleading and contains

errors that could result in walls that are under-designed and not safe;

- (e) incorrectly reported that the tie products met the requirements of the CSA Standard, when they knew, or ought to have known, that neither the testing nor the design requirements of the CSA Standard were met in full;
 - (f) failed to comply with the CSA Standard by improperly and inaccurately performing tests and reporting incomplete results that they knew, or ought to have known, would be relied upon by designers for masonry wall design;
 - (g) inappropriately issued two versions of SF98-03, which provided different sets of design and test data, without indicating a revision;
 - (h) concluded that Fero and the Blok-Lok ties were equivalent without considering such factors as differences in reported safe loads, thermal bridging and failure behaviour; and
 - (i) acted in an unprofessional manner. By reason of the aforesaid, the Association of Professional Engineers of Ontario alleged that Wong and CTLL were guilty of professional misconduct as defined in section 28(2)(b) of the *Professional Engineers Act*, R.S.O. 1990, Chapter P.28.
26. “Professional misconduct” is defined in section 28(2)(b) as:
“The member or holder has been guilty in the opinion of the Discipline Committee of professional misconduct as defined in the regulations.”
27. The sections of Regulation 941 made under the said Act and relevant to this misconduct are:
- (a) *Section 72(2)(a)*: negligence as defined at section 72(1): In this section “negligence” means an act or an omission in the carrying out of the work of a practitioner that constitutes a failure to maintain the standards that a reasonable and prudent practitioner would maintain in the circumstances;

- (b) *Section 72(2)(b)*: failure to make reasonable provision for the safeguarding of life, health or property of a person who may be affected by the work for which the practitioner is responsible;
- (c) *Section 72(2)(d)*: failure to make reasonable provision for complying with applicable statutes, regulations, standards, codes, by-laws and rules in connection with work being undertaken by or under the responsibility of a practitioner;
- (d) *Section 72(2)(h)*: undertaking work the practitioner is not competent to perform by virtue of the practitioner’s training and experience; and
- (e) *Section 72(2)(j)*: conduct or an act relevant to the practice of professional engineering that, having regard to all the circumstances, would reasonably be regarded by the engineering profession as disgraceful, dishonourable or unprofessional.

Counsel for the association advised that the association was not seeking a finding with respect to section 72(2)(h).

Plea by Member and Holder

Wong and CTLL admitted all of the allegations set out in paragraphs 1 to 27 in the Fresh Notice of Hearing. The panel conducted a plea inquiry and was satisfied that their admission was voluntary, informed and unequivocal.

Decision

The panel deliberated and found that the facts support a finding of professional misconduct and, in particular, found that Wong and CTLL committed an act of professional misconduct as alleged in the Fresh Notice of Hearing. Specifically, the panel found that Wong and CTLL were guilty of professional misconduct as set out in sections 72(2)(a), 72(2)(b), 72(2)(d) and 72(2)(j) of Regulation 941. The panel made no finding as to section 72(2)(h).

Reasons for Decision

The panel accepted Wong’s and CTLL’s plea and admission of the facts as set out

in the Fresh Notice of Hearing, which substantiated the panel's findings of professional misconduct. In particular, the panel's finding of professional misconduct as set out in section 72(2)(a), section 72(2)(b) and section 72(2)(d), are based upon the facts set out in:

- (a) paragraph 25(a) of the Fresh Notice of Hearing and, in particular, paragraph 25(a)(x);
- (b) paragraph 25(b) of the Fresh Notice of Hearing and, in particular, paragraph 25(b)(vi);
- (c) paragraph 25(d) of the Fresh Notice of Hearing and, in particular, paragraph 25(d)(v); and
- (d) paragraphs 25(e), 25(f), 25(g), 25(h) and 25(i).

The panel's finding of professional misconduct as set out in section 72(2)(j) is based upon the facts set out in paragraph 25 and, in particular, paragraph 25(i) of the Fresh Notice of Hearing.

Joint Submission on Penalty

Counsel for the association advised the panel that a Joint Submission as to Penalty ("JSP") had been agreed upon. The panel confirmed that the JSP was accepted by Wong and CTLL. The JSP provides as follows:

1. a reprimand of both the member, Wong, and the Certificate of Authorization holder, CTLL, and that the reprimand be recorded on the Register;
2. that Wong shall write and successfully complete the Professional Practice Examinations, Parts A and B (the "examinations") within 12 months of the date of the order;
3. that in the event Wong fails to write and successfully complete the examinations within the 12-month period commencing on the date of the order of the Discipline Committee, that the licence of Wong shall be

suspended until such time as he writes and passes the examinations;

4. that Wong's designation of "Consulting Engineer," and the permission of CTLL to use the consulting engineer's title, shall be suspended until Wong has written and successfully completed the examinations;
5. that in the event Wong fails to write and successfully complete the examinations within 24 months from the date of the order, his licence to engage in the practice of professional engineering shall be revoked; and
6. that Wong and CTLL shall pay costs of the disciplinary proceeding fixed in the sum of \$4,000 within 12 months of the date of the hearing (April 25, 2005).

Neither counsel for the association nor counsel for Wong and CTLL submitted further evidence.

Counsel for the association noted that the panel should accept the JSP without change and submitted that the facts of the matter supported such a decision. Furthermore, counsel for the association submitted that the misconduct by Wong and CTLL was significant in scope, involved a number of reports over time that fell below the standards for such reports, which may have resulted in under-designed walls being constructed. Counsel for the association submitted that the penalty was within the appropriate range and took into account the mitigating circumstances whereby Wong admitted the allegations and cooperated with the investigators for the association (thereby reducing the costs to investigate and prosecute this matter). Counsel for the association submitted that Wong's behaviour demonstrated a level of understanding of the seriousness and acknowledgement of the misconduct.

Counsel for the association submitted that a reprimand is a serious penalty that will significantly impact Wong and CTLL, in particular since

the findings will be published with names in accordance with the guidelines for the Discipline Committee. Counsel for the association noted that this was the first time Wong and CTLL had been before a panel.

Counsel for the association cited the applicable case law that sets out the approach for the panel to consider the JSP. In particular, to reject the JSP the panel would have to believe that the penalty would be contrary to the administration of justice to the point that it would bring it into disrepute or would create a miscarriage of justice. Counsel for the association noted that accepting the JSP would benefit the potential victims, the witnesses and the association. In addition, Counsel submitted that this included even minor changes to the JSP.

Counsel for the association summarized that the penalty is within the range for a first offence with an admission of guilt and that it would fulfill all of the requirements for a penalty, in particular, to protect the reputation of the profession, contribute to the specific deterrence and to general deterrence amongst members of the profession, and contribute to the rehabilitation of Wong.

Counsel for Wong and CTLL submitted that Wong expresses remorse for his actions, that Wong has suffered professionally and personally as a result of those actions, and that Wong will continue to bear the consequences in the future.

Counsel for Wong and CTLL submitted that Wong has learned a valuable lesson and Wong pledged that this will be the last time that he is placed in this position. Counsel for Wong and CTLL submitted that Wong agrees to the publication of the decision of the panel with names.

Independent legal counsel for the panel advised the panel that it has the discretion to accept or reject the JSP. Independent legal counsel submitted that the panel should accept it for the following reasons: It is based upon the work of experienced counsel and that it addressed and strikes an appropriate balance between the actions by Wong and CTLL and the consequences of those actions.

In addition, independent legal counsel advised the panel that it must have good cause to reject or vary a JSP and that such good cause must be that the panel believes that accepting it would bring justice into disrepute or otherwise not be in the public interest. Independent legal counsel noted that the benefits of accepting the JSP were to the member, the association and to the public. Independent legal counsel submitted that he considered the penalty to be within the appropriate range.

Counsel for the association agreed with the advice by the independent legal counsel and counsel for Wong and CTLL stated that he had nothing further to add.

Penalty Decision

The panel deliberated and accepted the Joint Submission as to Penalty and accordingly ordered:

1. that both Wong, and the Certificate of Authorization holder, CTLL, be reprimanded, and that the reprimand be recorded on the Register;
2. that Wong shall write and successfully complete the Professional Practice Examinations, Parts A and B (the "Examinations") within 12 months of the date of the order;
3. that in the event Wong fails to write and successfully complete the examinations within the 12-month period commencing on the date of the order of the Discipline Committee, the licence of Wong shall be suspended until such time as he writes and passes the examinations;
4. that Wong's designation of "Consulting Engineer," and the permission of CTLL to use the consulting engineer's title, shall be suspended until Wong has written and successfully completed the examinations;
5. that in the event Wong fails to write and successfully complete the examinations within 24 months from the date of the order, his licence to engage in the practice of professional engineering shall be revoked;
6. that Wong and CTLL shall pay costs of the disciplinary proceeding fixed in the sum of \$4,000 within 12 months of the date of the hearing (April 25, 2005); and
7. that the decision of the panel be published with names.

Reasons for Penalty

The panel concluded that the proposed penalty is reasonable and in the public

interest. Wong has cooperated with the association and, by agreeing to the facts and the proposed penalty, has accepted responsibility for his actions and has avoided unnecessary expense to the association.

Wong waived his and CTLL's right to appeal and, following the hearing, the panel administered an oral reprimand.

The written Decision and Reasons in this matter were dated June 23, 2005, and were signed by the Chair of the panel, David Robinson, P.Eng., on behalf of the other members of the panel, Kam El Guindi, P.Eng., Nick Monsour, P.Eng., Glenn Richardson, P.Eng., and Seimer Tsang, P.Eng.

Summary of Decision and Reasons

In the matter of a discipline hearing under the *Professional Engineers Act*, and in the matter of a complaint regarding the conduct of:

Mohammad R. Panahi, P.Eng.

a member of the Association of Professional Engineers of Ontario, and

Company A

a holder of a Certificate of Authorization.

This matter came on for hearing before a panel of the Discipline Committee on October 14 and 15, 2004, at the offices of the Association of Professional Engineers of Ontario in Toronto. The association was represented by John Abdo of Cassels Brock & Blackwell LLP. Mohammad R. Panahi, P.Eng., and Company A were represented by David Waterhouse of Forbes Chochla LLP.

The Allegations

The allegations of professional misconduct against Mohammed Panahi, P.Eng., ("Panahi") and Company A were stated in the amended Notice of Hearing dated October 14, 2004, and can be summarized as follows:

1. Panahi was first licensed as a professional engineer in the province of Ontario on June 3, 1996, and Com-