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Since issue 21 of ELECTRON the Board commenced a new publicity programme which continues to deliver the message to the public of the need to employ licensed electrical workers who issue certification for their work. The programme forms part of one of the Boards strategic initiatives which commenced in 2002.

The publicity programme has been made possible through the support of Contact Energy Limited, Energy Online Limited, Genesis Energy Limited, Trustpower Limited, Mercury Energy Limited and Meridian Energy Limited.

The Board would like to thank the Companies for their valued support and for their commitment to electrical safety.

Further details of the publicity programme are included in this issue of ELECTRON.

The Board has recently issued revised draft teaching guidelines for electrician level examinations and further detail of the guidelines are included in this issue of ELECTRON.

The series of information on accidents which commenced in issue 21 of ELECTRON continues in this issue and while there is a tendency in the industry to accept that electric shocks are "just a part of the job" the number of accidents which have serious ramifications to both electrical workers and families is a concern.

The Board has continued with the hearing of a large number of complaints against registered people and the eleven cases reported in this issue of ELECTRON are indicative of the type of complaints being heard by the Board.

A new on line pilot "Bookshop" facility has been introduced and further detail is included in this issue of ELECTRON.



John Sickels

Registrar/Group Manager EWLG

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Safety • Competency

ELECTRON is published by the Electrical Workers Licensing Group, the service unit of the Ministry of Economic Development for the Electrical Workers Registration Board. If you have any enquiries or comments on this newsletter please contact:

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Publicity programme

The Board in conjunction with six electricity retailers has commenced a publicity programme which will result in an electrical compliance brochure being delivered to in excess of 1.4 million households throughout the country.

The brochure has been designed to continue the message the Board has been promoting to the public about the need to employ licensed electrical workers who issue either Certificates of Compliance or the voluntary Electrical Safety Certificates for prescribed electrical work which is carried out. The brochure also gives details on the availability of a complaints process for unsafe or unsatisfactory electrical work.

The delivery of the brochure throughout the country has been

made possible by the generous contribution of Contact Energy Limited, Energy Online Limited, Genesis Energy Limited and Trustpower Limited who have included the brochure in electricity accounts.

In addition Mercury Energy Limited and Meridian Energy Limited have supported the programme by carrying the key messages from the brochure in their newsletters.

The Board would like to acknowledge and thank the electricity retailers for their valued support and for their commitment to electrical safety.

A copy of the brochure is attached to this issue of ELECTRON.

Teaching guidelines

During August 2005 new draft teaching guidelines, which the Board had approved for electrician level examinations, were sent to people and organisations on the Board's mailing lists for comment.

Copy of the draft teaching guidelines are available from Janine Anderson, Executive Assistant and Board Liaison Officer telephone 0800 66 1000 or 04 4702 256.

If any person would like to comment on the draft teaching guidelines please address correspondence to the Registrar, Electrical Workers Registration Board, PO Box 10156, Wellington. The closing date for comments has been extended to 31 October 2005.

Complaints Assessment Committee Presiding Members

The appointments have been announced of three new Complaints Assessment Committee Presiding Members.

Gail Lewin, Mark Beech and Mel Orange who are from Auckland, Tauranga and Christchurch respectively are all Solicitors and will commence their duties as Presiding Members in the near future.

Insulation around down lights

The Board has in recent times considered a number of complaints relating to downlights and the Board would like to draw the industry's attention to the hazards that can be created through the use of insulation around such lights.

The following article has been reproduced with the permission of the Sunshine Coast Newspaper Company, Maroochydore, Queensland and demonstrates the measures that are being taken to improve electrical safety in Queensland.

A Bli Bli home installation installer has been fined \$10,000 in the Maroochy Industrial Magistrate's Court for failing to ensure his work was electrically safe.

The Electrical Safety Office prosecuted the man after it received

complaints about an insulation company that installed cellulose in the roof space of a Kuluin residence.

Troy Adam McEwan also known as the "Insulation Man" pleaded guilty to breaching the Electrical Safety Act 2002 by covering the downlights and transformers in a home's roof space with blow-in type thermal insulation.

As well as the \$10,000 fine, he was ordered to pay court costs of \$3,048. No conviction was recorded.

Investigations by the Electrical Safety Office revealed that the application of the thermal insulation prevented heat generated by the downlights from escaping and the build-up of heat caused the timber roof trusses to ignite.

Accidents

As reported in issue 21 of ELECTRON the Energy Safety Service recently published its summary of reported accidents.

As part of its strategic goal to make all information available the Board is reproducing the summary of reported accidents that relate to registered electrical workers and trainees in this and future issues of ELECTRON.

The Board wishes to advise that any conclusions relating to the accidents reported are conclusions of the Energy Safety Service.

The following reported accidents are the second in the series.

Accident 6 – Damaged pillar boxes

A service pillar box had to be replaced after being struck by a car. A line mechanic was removing the cover from the pillar box when an electrical flashover inside the pillar box caused minor burns to the line mechanics face and hands.

The company reviewed procedures for isolating damaged pillar boxes.

Accident 7 – Low voltage jointing

A line mechanic was carrying a live low voltage joint on a 400 volt paper insulated lead-sheathed cable. The line mechanic received a flash burn to the face when a screwdriver shorted a phase conductor to the cables lead sheath.

Accident 8 – Electric shock to trainee

During a power station 220kv busbar upgrade project, several electricians were in the switchyard replacing busbars and disconnectors.

A trainee electrician received an electric shock from induction current after disconnecting a CVT dropper instead of the line trap terminal connections.

The trainee was lowered from his ladder and hospitalized with burns to the hands.

It was found that once the CVT dropper was disconnected, there were no working portable earths to protect the trainee from line charging current and as such an electric shock and burns were sustained.

Accident 9 – Working with capacitors

During a network project to upgrade 33,000 volt load controls at a substation, a line crew was removing a capacitor bank.

After two hours, the switching sequence had been completed, earths applied, and one phase capacitor disconnected and lowered to the ground.

Two line mechanics were aloft disconnecting the second phase capacitor, when one received an electric shock from its stored charge. The line crew added more portable earths and checked that the remaining capacitors were fully discharged before disconnecting them.

The company had no written procedure for work with capacitors, and no one consulted the safety rules before starting work.

Staff incorrectly believed that closing an earth link to the capacitor would discharge it and complete earthing.

Portable earths were placed to prevent accidental reliving of switches, but did not short out the capacitors. The shortening out could have been achieved by applying an extra set of earths between the capacitor bank and the line isolator switch or amending the switching plan to close both.

A procedure was implemented, hazard logs updated and staff trained for work with capacitors.

Accident 10 – Arc containment failure

An electrical superintendent received burns as a result of the failure of an 11kv circuit breaker.

Electrical staff were in the switch room of a mill, fault finding on equipment beside the starter cell for a large motor.

When the motor was started remotely as usual, the starter exploded through the protection covers. The circuit breaker had failed catastrophically seconds after opening.

Three people were injured, particularly the superintendent who received burns to the face and one hand.

Secondary fires were extinguished by staff and some production was lost over a three week period.

The cause was determined to be failure of the arc containment to adequately extinguish the arc, resulting in phase-to-phase and phase-to-earth faults.

Worn insulation may have permitted an incorrect route for the arc to form.

Results of Disciplinary Hearings

Furnished a false return

A complaint was lodged against an electrician from Auckland by a homeowner from Auckland. The complaint alleged the electrician installed a distribution pillar in close proximity to the complainant's home which has dangerous.

The complaint further alleged that the electrician furnished a false return by failing to have the reticulation work to the distribution pillar inspected and by certifying non-complying electrical work.

The Board considered the complaint and found the electrician guilty of issuing a false return.

Due to the circumstances of the case the Board made no order against the electrician.

The Board directed the Registrar not to publish the electrician's name.

Defective work

A complaint was lodged against Mr Suresh Chandra (E11988), an electrician from Auckland by an electrician from Auckland. The complaint alleged that Mr Chandra, while connecting a new motor on hydraulic equipment in a factory was responsible for non compliant prescribed electrical work.

The Board considered the complaint and found Mr Chandra guilty of a disciplinary offence in that he:

- Contravened regulation 34(1) of the Electricity Regulations 1997 by leaving uncompleted work that was not disconnected and did not have any warning notices to safeguard against unintentional connection, and
- Contravened regulation 38 of the Electricity Regulations 1997 by failing to ensure prescribed electrical work was electrically safe before releasing it from his control, and
- Contravened regulation 69 of the Electricity Regulations 1997 by virtue of regulation 76A(1)(b), by having a trainee connect a three pin plug to each end of a single phase flexible cord, and
- Contravened regulation 69 of the Electricity Regulations 1997 by virtue of regulation 76A(2)(c), by installing a motor without an earth conductor, and
- Contravened regulation 69 of the Electricity Regulations 1997 by virtue of regulation 87(1)(c) by installing unclamped flexible cable between a starter and a motor and failing to connect the cable in a safe and reliable manner, and
- Contravened regulation 70(2) of the Electricity Regulations 1997 by failing to adequately identify conductors, and
- Contravened regulation 84 of the Electricity Regulations 1997 by failing to provide a motor with an earth conductor thus leaving unearthed metal which was able to be touched, and

- Contravened section 2 of the Electricity Act 1992 by failing, while supervising a trainee, to provide such control and direction as was sufficient to ensure that the trainee performed prescribed electrical work competently and that the completed work complied with the requirements of the Electricity Regulations 1997.

The Board also found Mr Chandra guilty of another disciplinary offence in that he

- Negligently created a risk to life and limb by being having a trainee connect a three pin plug to each end of a single phase flexible cord, and for failing to earth a motor.

The Board fined Mr Chandra \$2,750 and ordered him to pay costs of \$1,500. The Board also censured Mr Chandra. The Board further ordered that a notice stating the effect of the Boards order be published in the Gazette.

Comment

The Board noted that a trainee working under Mr Chandra's supervision, did some of the above work nonetheless, a trainee can only assist in carrying out prescribed electrical work, and as such the work is deemed to have been carried out by Mr Chandra.

Shocks in damp area

A complaint was laid against an electrician from Marton by homeowners from Waikanae. The complaint alleged that the electrician, who carried out work on a home that was subsequently relocated, caused the homeowners to receive electric shocks while using a bath tub/shower.

The Board considered the complaint and found the electrician guilty of a disciplinary offence in that the electrician:

- Contravened regulation 69A of the Electricity Regulations 1997 by failing to place an earth-link on a MEN switchboard, and
- Contravened regulation 69 of the Electricity Regulations 1997 by failing to re-install a MEN link which the electrician had removed, and
- Contravened regulation 86(1)(e) of the Electricity Regulations 1997 by failing to provide a removable link between the earth continuity bar and the neutral bus bar on an earthing system of a MEN electrical installation, and
- Contravened regulation 69A(3) of the Electricity Regulations 1997 by failing to provide RCD protection for lighting sub circuits, and
- Carried out prescribed electrical work in an unsatisfactory manner by failing to provide isolation for a range hood.

The Board also found the electrician guilty of another disciplinary offence in that the electrician:

- Negligently created a risk to life and limb by failing to protect persons from electric shocks.

The Board fined the electrician \$1,600 and ordered the electrician to pay costs of \$1,500.

The Board directed the Registrar not to publish the electrician's name.

No practising licence

A complaint was laid against Mr Anthony John Page (E13483), an electrician from Kaiapoi, by an electrical inspector from Christchurch. The complaint alleged that Mr Page, for a period of approximately sixteen years carried out defective and dangerous electrical work at a factory.

The complaint further alleged that Mr Page was not the holder of a current practising licence at the time he carried out the work.

The Board considered the complaint and found Mr Page guilty of a disciplinary offence in that he:

- Contravened section 95 of the Electricity act 1992 by failing to be the holder of a current practicing license for eleven months while he carried out prescribed electrical work.

The Board fined Mr Page \$750 and ordered Mr Page to pay costs of \$1,500.

Furnished a false return

A complaint was lodged against an electrician from Auckland by a homeowner from Auckland. The complaint alleged that the electrician failed to supervise a trainee and carried out non compliant prescribed electrical work.

The Board considered the complaint and found the electrician guilty of a disciplinary offence in that the electrician:

- Contravened regulation 39 of the Electricity Regulations 1997 by furnishing a false return for prescribed electrical work carried out.

The Board censured the electrician and ordered the electrician to pay costs of \$1,500.

The Board directed the Registrar not to publish the electrician's name.

Defective work

A complaint was lodged against Mr Sanmogam Mudaliar (E242173) an electrician from Auckland by an electrical inspector from Auckland. The complaint alleged that Mr Mudaliar carried out non compliant prescribed electrical work and failed to issue a Certificate of Compliance.

The Board considered the complaint and found Mr Mudaliar guilty a disciplinary offence in that he:

- Contravened regulation 70(1)(a) of the Electricity regulations 1997 by installing cables that were not located or provided with mechanical protection, and
- Contravened regulation 84(2)(a) of the Electricity Regulations 1997 by failing to bond a metal, and
- Contravened regulation 39 of the Electricity Regulations 1997 by neglecting to furnish a return.

The Board also found Mr Mudaliar guilty of another disciplinary offence in that he:

- Permitted an unauthorised person to carry out prescribed electrical work.

The Board fined Mr Mudaliar \$1,750 and ordered him to pay costs of \$2,000.

No practising licence, no Certificate of Compliance

A complaint was lodged against an electrician from Taupo by a homeowner from Taupo. The complaint alleged that the electrician carried out non complaint prescribed electrical work and failed to issue a certificate of compliance.

The Board considered the complaint and found the electrician guilty of a disciplinary offence in that the electrician:

- Contravened section 95 of the Electricity Act 1997 by failing to be the holder of a current practicing licence at the time the work in question was carried out, and
- Contravened regulation 41 of the Electricity Regulations 1997 by failing to have prescribed electrical work inspected, and
- Contravened regulation 39 of the Electricity Regulations 1997 by neglecting to furnish a return.

The Board fined the electrician \$1,250 and ordered the electrician to pay costs of \$1,250.

The Board directed the Registrar not to publish the electrician's name.

No practising licence and failure to test

A complaint was lodged against Mr George Melvyn Hall (E9101) an electrician from Christchurch by a homeowner from Christchurch. The complaint alleged that Mr Hall carried out non compliant prescribed electrical work, failed to have work inspected and worked without a practicing licence.

The Board considered the complaint and found Mr Hall guilty of a disciplinary offence in that he:

- Contravened section 95 of the Electricity Act 1992 by failing to be the holder of a practicing licence at the time the prescribed electrical work in question was carried out, and

- Contravened regulation 26(3) of the Electricity Regulations 1997 by carrying out prescribed electrical work when he had not completed a safety tuition refresher course within the previous 24 months of when the prescribed electrical work was carried out, and
- Contravened regulation 37 of the Electricity Regulations 1997 by failing to test prescribed electrical work, and
- Contravened regulation 69 and 74(1) of the Electricity Regulations 1997 by failing to ensure socket outlets had an earth-continuity conductor connected to them, and
- Contravened section 4.3 of NZECP 2 by installing a socket outlet in Zone 1.

The Board ordered that Mr Hall's electricians registration be restricted in that when a Certificate of Compliance is required under the Electricity Regulations 1997 for work carried out Mr Hall must furnish the Registrar with a copy of the certificate (for audit of that work at the Registrar's discretion) and that such certificates are to be supplied to the Registrar on a monthly basis.

The Board also fined Mr Hall \$2,000 and ordered him to pay costs of \$2,000.

The Board declined an application to prohibit publication of Mr Hall's name.

Incorrect termination

A complaint was lodged against an electrical inspector from Lower Hutt by an electrical inspector from Wellington. The complaint alleged that the Lower Hutt electrical inspector created an electric shock hazard, failed to test, failed to issue a Certificate of Compliance and failed to have prescribed electrical work associated with mains independently inspected.

The Board considered the complaint and found the electrical inspector guilty of a disciplinary offence in that the electrical inspector:

- Contravened regulation 69 of the Electricity Regulations 1997 by virtue of regulation 76A by incorrectly terminating a neutral conductor at a neutral bar, and
- Contravened regulation 69A of the Electricity Regulations 1977 by carrying out prescribed electrical work in an unsatisfactory manner.

The Board censured the electrical inspector and ordered the electrical inspector to pay costs of \$1,250.

The Board directed the Registrar not to publish the electrical inspector's name.

Non-compliant work

A complaint was lodged against an electrician from New Plymouth by a homeowner from Hawera. The complaint alleged that the electrician carried out non compliant prescribed electrical work.

The Board considered the complaint and found the electrician guilty of a disciplinary offence in that the electrician:

- Contravened regulation 87(1)(f) of the Electricity Regulations 1997 by failing to clip cables, and
- Contravened regulation 90 by installing an isolator in a position which did not offer protection from the ingress of moisture, and
- Contravened regulation 41 of the Electricity Regulations 1997 by neglecting to furnish a return, and
- Carried out prescribed electrical work in an unsatisfactory manner by installing a heat/light/fan unit contrary to clause 7.1.2.2 of AS/NZS 3000:2000.

The Board fined the electrician \$1,500 and ordered the electrician to pay costs of \$750.

The Board directed the Registrar not to publish the electrician's name.

Voltage drop

A complaint was laid against an electrical inspector by a homeowner. The complaint alleged that the electrical inspector certified the defective installation of power lines to the home of the complainant which caused significant voltage drop.

The Board considered the complaint and found the electrical inspector guilty of a disciplinary offence in that the electrical inspector:

- Contravened regulation 88(3) by connecting an installation that had a voltage drop in excess of 5% between the point of supply and socket-outlets and supply terminals, and
- Contravened regulation 69 of the Electricity Regulations 1997 by designing and installing an electrical installation that carries a significant risk of damage to property as the result of the use of the installation.

The Board fined the electrical inspector \$500 and ordered the electrical inspector to pay costs of \$1,750.

The Board directed the Registrar not to publish the name or geographical location of the electrical inspector.

Results of complaints

Since issue 21 of Electron Complaints Assessment Committees have considered eight complaints, which had been laid against eight electricians.

The Committee have referred four of the eight complaints to the Board for disciplinary hearings. One complaint is currently adjourned and the Committees dismissed the other three complaints.

Pilot Service – Bookshop

You may have noticed a new option in the left hand menu of the Electrical Workers Register website (www.ewr.govt.nz <www.ewr.govt.nz>) – the 'Bookshop'. You can now enjoy the convenience of the internet and order Bookshop items via this service. The General Bookshop is for items available to all, whereas the EW Bookshop is for registered Electrical Workers to use (you'll

need your file key). You can pay by direct debit (you'll need an account set up) or all major credit cards.

This service is at the pilot stage and we encourage feedback on it. If you have any questions or feedback please ring the contact centre on **0800 66 1000**.

EMPLOYMENT OPPORTUNITIES

Manager Registration, Licensing & Services

Applications are invited for the position of Manager Registration, Licensing and Services with the Electrical Workers Licensing Group.

The Electrical Workers Licensing Group provides administrative and professional services to the Electrical Workers Licensing Board which is the New Zealand government agency that is responsible for electrical registration services and ensuring the compliance of registered electrical workers.

The primary objectives of this position are to provide and oversee registration, examination, and support services to the Electrical Workers Licensing Group and its stakeholders.

You will take a lead role in systems evaluation, development and change implementation, and will be responsible for information management and technological developments that will improve

access to Electrical Workers Licensing Group information and services.

To be successful in this role you will have a customer service focus, offer strong people leadership and have a proven track record in managing professionals, combined with outstanding communication and relationship building skills.

Experience in office management roles, particularly the provision of financial, human resources, and strategic planning, analysis, and reporting would be an advantage.

This is an excellent opportunity to work in a supportive and intellectually stimulating environment.

For a role description and application form please visit our website <http://www.med.govt.nz/about/jobs>. Please send your current CV, cover letter and application form to **Glen Jones**, Human Resources at recruitment@med.govt.nz. Applications close **Friday 7th October 2005**.

EMPLOYMENT OPPORTUNITIES *continued*

Manager Compliance and Inspection (Deputy Registrar)

Applications are invited for the position of Manager Compliance and Inspection (Deputy Registrar) with the Electrical Workers Licensing Group.

The Electrical Workers Licensing Group provides administrative and professional services to the electrical Workers Registration Board which is the New Zealand government agency that is responsible for electrical registration services and ensuring the compliance of registered electrical workers.

The primary objectives of this position is to provide and oversee investigation, policy, compliance, and audit services to the Electrical Workers Licensing Group and its stakeholders.

You will take a lead role in systems evaluation, development and change implementation, and contribute to the development of the wider regulatory framework affecting electrical workers.

The person sought for this position would have the right mix of technical, commercial, communication and relationship skills.

For a role description and application form please visit our website <http://www.med.govt.nz/about/jobs>.

Please send your current CV, cover letter and application form quoting vacancy number 57757 to

Mike Duncan, Hays New Zealand, PO Box 8099, The Terrace, Wellington,
email mike.duncan@hays-hps.co.nz. **Applications close 17 October 2005.**

The successful applicants will have:

- Registration under the Electricity Act 1992;
- A relevant tertiary qualification, ideally in electrical engineering;
- A minimum of 5 years industry experience;
- A proven ability to work with complex technical content, and in a challenging business and political environment;
- Experience of people and resource management in a corporate or public service environment.

This is an excellent opportunity to work in a supportive and intellectually stimulating environment.



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