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Welcome to ELECTRON July 2003.

"Technical Corner" returns in this issue of ELECTRON. The technical material for the feature has been produced in a continued combined effort between the Board, Energy Safety Service and Standards New Zealand.



We have made every endeavour to make the technical material topical. However, it is appreciated that there are many questions from the industry that may not be automatically raised in "Technical Corner". If you have a technical question relating to the areas under the jurisdiction of the Board, Energy Safety Service or Standards New Zealand, please let me know and we will make every effort to provide an answer.

The Board receives a number of letters and telephone calls each year from practitioners. As many of these relate to similar questions the Board would welcome your letters for a "Letters to the Registrar" section of ELECTRON. If you would like your letter published in ELECTRON please make that aspect clear when writing and try to keep your letter to under 150 words.

The Board has recently approved a registration category for people who undertake the installation of security systems. Further details are in this edition of ELECTRON.

Also in this ELECTRON is information on amendments to AS/NZS 3000:2000 and proposed amendments to the Electricity Regulations 1997.

Finally, remember the maxim for all competent electrical workers: Test before starting work...Test while working...Test when finished to prove your work is electrically safe.

John Sickels
Registrar

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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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TECHNICAL CORNER

Technical corner has been jointly produced by the Board, Energy Safety Service and Standards NZ

Q Can an RCD be used as a main switch?

A Yes, but please remember the following:

First, the RCD must be capable of handling the duties of being an isolator. This means that the RCD has to have an adequate “gap” when open to provide a safe isolation rather than just a switching operation.

The RCD supplier should be able to advise whether the RCD is “isolation” rated.

Second, unless the RCD is an RCBO type (which also acts as a circuit breaker), it should be remembered that the RCD will not provide overcurrent protection.

Third, as the RCD will also be protecting the stove, water heater and any other permanently connected units, tripping can occur. This is because of the sum of the leakage currents involved. In addition, tripping can occur if there is a pilot wire for the water heater.

Fourth, care must be taken that the MEN system is retained. That is a link between the supply neutral and the earth electrode is present.

The neutral/earth link has to be established before the RCD (otherwise the RCD will trip). This may require two segments of neutral bar to be installed.

Fifth, you need to consider whether using an RCD as a main switch is in the best interests of your client. Any fault that causes the RCD to trip will disconnect the entire installation (including all the lights) rather than just one or two circuits. Splitting the installation over at least two RCDs may well be a better solution.

Finally, remember that it is permissible to have more than one main switch in an installation provided

appropriate labelling is used. One or both of the main switches can also be a circuit breaker.

Q Is retrospective installation of RCDs required in domestic installations?

A No. The Electricity Regulations 1997 do not require retrospective installation of RCDs. However it must be remembered that when there is a change in use of an area (e.g., a change to a damp area) or a new final sub-circuit is being installed an RCD is required to be fitted.

The RCD may be installed either on the switchboard or on the first socket outlet. (See Amendment A to AS/NZS 3000).

Q Why is the sleeving of green wire restricted?

A The restriction in AS/NZS 3000:2000 is because of a number of electrical accidents that occurred in Australia when a cable run was broken in mid-span and re-terminated. The main safety outcome of this provision is to ensure that green coloured conductors of fixed wiring are always earth conductors.

Q What are the requirements for new distribution switchboard neutral to earth linking?

A From January 2003 where AS/NZS 3000:2000 is used as a means of compliance on an installation, distribution switchboard neutral to earth linking is not permitted. Note that the main (MEN) switchboard MUST have a link.

Technical advice service for electrical workers

In line with the Board's overall strategy to make all information available to practitioners through a "one stop shop" service the Electrical Workers Licensing Group is now staffing up to provide this with staff experienced in the electrical/electronic industries.

Watch for a further announcement in ELECTRON.

SITUATIONS VACANT

The Electrical Workers Licensing Group requires a Senior Technical Advisor and a Technical Advisor to join the EWLG in our Wellington office.

The main functions of the Group are to provide administrative, technical and professional services to the Electrical Workers Registration Board and the Complaints Assessment Committees.

The Group is also responsible for carrying out functions for the Chief Executive of the Ministry of Commerce.

Preferred applicants for both positions will have demonstrated practical knowledge and understanding of the electrical/electronic industries with particular expertise in the "general electrical wiring" and "electronic/electrical servicing" areas.

SENIOR TECHNICAL ADVISOR

Preferred applicants for this full time position will also have demonstrated abilities in issue analysis and report writing. Also essential to this role are strong communication and mediation skills so that a diverse range of people can be effectively communicated with.

TECHNICAL ADVISOR

This is a three day per week fixed term eighteen-month contract position.

Preferred applicants will have strong communication and writing skills and the ability to effectively provide technical assistance to a wide range of people.

If you would like more information on either of these positions please telephone John Sickels (04) 470 2250 or email to john.sickels@med.govt.nz



2003 Board telephone audit report

Recently a phone audit was carried out on behalf of the Board on all electrical workers recorded on the Board's databases as not having a 2002-2003 practising licence. The following is a summary of the audit results:

43.5% of electrical workers audited could not be contacted by phone. A letter will be sent to these electrical workers requesting the same information as the phone audit. If no reply is received from these electrical workers they will be placed on the high risk level for audit purposes. This is in keeping with the Board's stronger stance towards registered electrical workers who practice without a current practising licence.

19.1% of those audited were sent practising licence application forms and these were processed for the 2002-2003 year as they were returned.

The very small number of electrical workers that refused to co-operate will receive a followup interview.

In fairness to the majority of electrical workers who support the practising licence regime, the Board has indicated that little

latitude will be given to those who fail to re-licence and continue to practice.

The Board would like to thank all those people who participated, particularly those that provided valuable feedback and comments. This will help provide a more efficient and effective service in the future.

The following table provides a breakdown of the audit

Breakdown of call outcomes

Result	Number	%
Uncontactable	2645	43.5%
Not in Industry	1294	21.3%
Sent PL Pack	1159	19.0%
Retired/Deceased	397	6.5%
Overseas	185	3.0%
Employers Licence	93	1.5%
PL Issued/Paid	210	3.5%
Refusal to cooperate	101	1.7%
Total	6084	

Inland Revenue strategic partnership

The Electrical Workers Licensing Group has formed a strategic partnership with Inland Revenue. As partners, the Group and Inland Revenue will work together to address tax issues in the electrical industry, and thereby help electrical workers with their tax obligations. Other industry groups have already formed industry partnerships with Inland Revenue.

Inland Revenue have set up a toll-free direct phone line to help electricians with tax matters (e.g., income tax, GST), social policy

matters (e.g., child support, family assistance) or overdue debt or returns.

The number to call is **0800 TAXTALK (0800 829 825)**.

Tax articles will appear in future issues of ELECTRON informing you of your tax obligations and Inland Revenue Services. In the meantime, use the TAXTALK line if you have any tax queries.

Chartered professional engineers

The definition of a "qualified engineer" in the Electricity Act 1992 has been amended with the introduction of Chartered Professional Engineers of New Zealand Act 2002.

A "qualified engineer" is now a person who, by reason of qualifications in electrical engineering:

(a) is registered under the Engineering Associates Act 1961 and was so registered immediately before 1 April 1993, or

(b) was registered under the Engineers Registration Act 1924 immediately before 1 April 1993, and was also so registered immediately before the end of the transitional period (as defined in section 4 of the Chartered Professional Engineers of New Zealand Act 2002).

The transitional period is from 1 July 2002 until 31 December 2003.

New registration category for the installation of security systems

The Board has recently approved a draft qualification presented by the Electrotechnology Industry Training Organisation, which relates to a new National Certificate in Electronic Security (Level 3).

The Board has agreed that holders of the new Certificate will be registered as electricians limited to electronic security installer. The limits on the registration will be that the holder will be entitled to:

- undertake the prescribed electrical work associated with the installation of 230 volt ac security alarm systems and subcircuits in domestic installations
- disconnect, isolate and reconnect subcircuits from switchboards for the purpose of connecting the above systems and subcircuits to the supply
- replace protective devices on switchboards.

Proposed amendments to the Electricity Regulations 1997

The Energy Safety Service is currently progressing an amendment to the regulations which is expected to:

- Reinstate the exemption from certification for revenue meters and associated load control fittings of mains (Regulation 39(2))
- Recognise AS/NZS 3014:2003 Electrical installations – Electric fences
- Update the Standards applying to Medical/Electrical situations (AS/NZS 2500, AS/NZS 3551 and AS/NZS 3003)
- Introduce recognition of the new NZS 3003.1 for inspection of Medical/Electrical installations
- Recognise the latest version to AS/NZS 3012:2003 and AS/NZS 3016
- Remove an incorrect reference under Regulation 90.

The amendment is expected to be published in August/September 2003.

Expressions of interest for examiners and markers

The Board is calling for expressions of interest from people who would like to be considered for contract positions as examiners and markers for the Board's electrical service technician, electrician and electrical inspector examinations.

If you are interested in participating in the electrical registration examination process, please send a copy of your CV to the Registrar, Electrical Workers Registration Board, P.O. Box 10-156, Wellington by 29 August 2003.

Amendments to AS/NZS 3000:2000 - damp zones

AS/NZS 3000 has been amended to change the manner in which damp zone measurements are taken for baths and showers and to address minor technical corrections to sections 1 to 5 of the document.

The damp zone changes are as follows:

- For a shower, or where a shower over a bath is provided, all horizontal measurements must be taken from the fixed plumbing connection of the shower. The measurement must not take into account the length of any flexible shower hose.
- The new maximum height for Zone 1, is the either 2.25 metres from the floor, or the height of the fixed plumbing connection, whichever is the higher.

- The maximum height for Zones 2 and 3 is 2.25 metres from the floor.
- An IPX4 rating is required for luminaries above zones 1 and 2 to a maximum height of 3 metres from the floor.

Under the performance based regulatory system the amendments to AS/NZS 3000 can now be applied.

The Board will provide copy of the amendment to all practising licence holders with a future edition of ELECTRON.

Board examination dates

The Board will be conducting examinations through out the country on the following dates:

23 August 2003

- Electrical service technician levels "A" and "B"
- Tradesperson electrical work certificate.

13 September 2003

- Electrical service technician level "B"
- Tradesperson electrical work certificate.

18 October 2003

- Electrical service technician levels "A" and "B"
- Tradesperson electrical work certificate.

22 November 2003

- Electrician theory.

29 November 2003

- Electrical inspector
- Electrician regulations.

6 December 2003

- Electrical service technician levels "A" and "B"
- Tradesperson electrical work certificate.

If you wish to enrol for tuition courses or enter examinations, please contact your training provider in the first instance, or telephone the Board on **0800 66 1000**.

