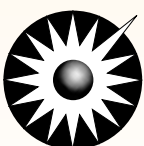




# electrical focus

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Office of **Energy**

## Awards of Excellence 2000

Gold Awards of Excellence were the focus of the electrical contracting industry's attention at the 2000 Awards of Excellence held in Perth on 16 September 2000.

The night was hosted by the Electrical Contractors Association of WA and generously sponsored by MM Electrical Merchandising for the Excellence Awards, Gerard Industries for the Apprentice of the Year and the Office of Energy for the Safety Awards. Ten companies and three apprentices received Awards and the recognition of their peers for achievement and commitment to excellence.

### Electrical Apprentice of the Year

Derren Bessen  
from Electrical Group Training Ltd

### Small Enterprise Division

Bon Electrics

### Medium Contracting Division

Leader Cabling Systems Pty Ltd

### General Contracting Division

Ralph M Lee Pty Ltd

### Industrial Project Division

O'Donnell Griffin

### Specialist Division

Kilpatrick Green Pty Ltd

### Voice & Data Communications Division

ABB Industry Pty Ltd

### International Division

Southern Cross Electrical Engineering Pty Ltd

### Vision in Technology Division

Stork Electrical Pty Ltd

### Electrical Safety Award Small Enterprise

Total Cabling Solutions

### Electrical Safety Award General Contracting

Stork Electrical Pty Ltd

### Certificates of Commendation

Two other companies, Nilsen Electric and Everett Smith & Co, were recognised for their achievements.

### National Awards for Excellence

Three of the West Australian winners went on to win their respective categories at the National Awards for Excellence:

- Southern Cross Electrical Engineering
- Kilpatrick Green
- Ralph M Lee.



*Garry Itzstein of Stork Electrical P/L acknowledges winning the Electrical Safety Award General Contracting at the Awards of Excellence 2000*



*Pictured at the Awards of Excellence 2000 (from left to right) Rod Hale, Executive Director, Electrical Contractors Association, Brad Giles and Damon Hegarty of Total Cabling Solutions (winners of the Electrical Safety Award Small Enterprise) and Kevan McGill, Deputy Director Energy Safety, Office of Energy*

## Advice to Industry on VIR Wiring

The Office of Energy is concerned that some electrical contractors and workers are either unaware of the hazards associated with VIR (a form of wiring using vulcanized India rubber as the insulant) wiring or are unsure as to what approach to take when adding to or altering an installation containing VIR wiring. The following guidelines are provided to enable appropriate decisions to be made by the contractor/worker.

Installations wired before 1960 could be expected to contain VIR cable of some form. VIR wiring was initially installed as an "open wiring" system where single insulated cables were installed through wooden or porcelain cleats on top of the ceiling joists under the roof. (Note that single insulated accessible open wiring systems are no longer permitted in installations in Western Australia). These cables were installed

without mechanical protection and in locations where they could be easily accessed. Connections to the open wiring system were made using unenclosed joints anywhere along the cable. The wiring to switches, socket outlets etc was installed inside steel conduits located in the walls. Consumer's mains were also enclosed in steel conduit. Early wiring standards did not require earthing conductors to be insulated.

Anecdotal evidence suggests that VIR insulation has a service life of no more than 30 years. This maximum service life takes into account the deterioration due to natural aging of the rubber and to the exposure of relatively high ambient temperatures in roof spaces. This deterioration of the cable insulation will result in bare live conductors in the roof space and possibly bare live conductors in wall conduits and behind fittings.

Electricians who report on or

carry out wiring additions and alterations in premises containing VIR wiring need to be aware that the existing wiring may be in a poor condition and dangerous.

Therefore, careful evaluation of the condition of the existing wiring must be carried out before any attempt is made to add or connect any wiring or fittings to the existing VIR wiring. Should the existing wiring show any of the conditions of deterioration, there should be no attempt to add to or alter the existing wiring.

All additions carried out to the existing installation must comply with the current edition of the Wiring Rules (AS/NZS 3000).

Entering a roof space or removing fittings and switchboard panels should only be done with the electricity supply isolated.

Regulation 62 of the *Electricity (Licensing) Regulations 1991* requires that where there is a defect that renders the installation unsafe or dangerous, the matter shall be reported to the owner/operator of the installation, the relevant supply authority and the Director of Energy Safety at the Office of Energy. Where **unsafe** VIR wiring is found, the matter must be brought to the attention of the owner/occupier of the installation immediately. This action may result in:

1. The owner deciding to have the additions carried out but not authorising rectification of the defective wiring. In this case the electrical contractor must report the matter immediately to the relevant supply authority

and to the Director of Energy Safety. Also, the electrical worker must ensure that the equipment and wiring he/she has installed is safe. If it is not safe, it must not be connected to the electricity supply.

2. The owner authorising replacement of the defective wiring. The defective wiring should then be reported, noting on the Notice of Completion that the defective wiring has been replaced.
3. The owner deciding not to have any work carried out (either additions or rectification). The electrical contractor must immediately report the matter to the relevant supply authority and the Director of Energy Safety.

***It is not acceptable, under any circumstances, for a licensed electrical worker or contractor to carry out the work or provide a report on the wiring and walk away from the installation, hoping that nothing will go wrong.***

## Electrical Equipment in Hazardous Areas

The following details are provided as a guide to the requirements of the Office of Energy and electrical inspectors to ensure electrical equipment is suitable for installation in hazardous areas. The installation of such equipment is subject to the relevant network operator's inspection process.

As well as mandating AS/NZS 3000:2000 "Australian/New Zealand Wiring Rules", the

*Electricity (Licensing) Regulations 1991* also specify that electrical work must be carried out in accordance with AS/NZS 2381 "Electrical equipment for explosive atmospheres – selection, installation and maintenance" and AS 2430 "Classification of hazardous areas" where relevant.

Clause 2.6 of AS/NZS 2381.1:1999 requires that the equipment must be certified in accordance with the AUS Ex or IEC Ex certification schemes. In addition, a verification dossier that contains evidence of compliance with Certification and Standards shall be kept either on the premises or at another location in accordance with the requirements of Clause 1.6 of AS/NZS 2381.1:1999.

In the absence of AUS Ex or IEC Ex certification, the Office of Energy and inspectors will accept a declaration from a body such as QAS or SIMTARS, or other competent authority, that any alternative certification on the equipment is equivalent to AUS Ex or IEC Ex. If equivalence does not exist, then the declaration must include details which demonstrate that safety is not compromised by the difference between the Standards of the alternative certification and that of AS/NZS Standards.

It is also useful to note that hazardous area standards are progressively being replaced by their IEC equivalents. For example, AS 2430.2 – 1996 is superseded by AS/NZS 61241:1999.

Electrical contractors and in-house electrical installers need to be aware of these requirements, particularly when carrying out additions or alterations to existing installations.

## Dangerous Practice – Unearthed Exposed Metal of Switchboard Din Rail Kits and Switchboard Covers

There has been a considerable increase in instances of retro fitted din kits and associated metallic switchboard covers being installed into existing wooden switchboard enclosures without being earthed.

This practice is not in accordance with the AS/NZS 3000:2000 Wiring Rules and it leaves the installation incomplete and potentially dangerous (should an earth fault occur in the switchboard).

Exposed metal must be earthed in accordance with Clauses 5.4 & 5.7 of AS/NZS 3000:2000 Wiring Rules.

## Notice for Permit Holders

From time to time, it is necessary for Western Power inspectors to contact permit holders (ie. electricians wiring their own premises under the authority of a special permit issued by the Electrical Licensing Board) to discuss work standards and progress of their work.

To assist in that process, Western Power requests that permit holders advise their work hours contact phone number on the Preliminary Notice and Notice of Completion.

**PROSECUTIONS FOR BREACHES OF THE ELECTRICITY ACT 1945,  
ELECTRICITY REGULATIONS 1947 AND  
ELECTRICITY (LICENSING) REGULATIONS 1991  
1 July 2000 to 31 October 2000**

<i>Breach</i>	<i>Name (and suburb of residence at time of offence)</i>	<i>Licence No.</i>	<i>Fine &amp; Court Cost (\$)</i>
<i>Unlicensed electrical work Regulation 19 E(L)R 1991</i>	<i>Bryne Bartholumew (Woodvale)</i>	<i>NLH</i>	<i>1 345.70</i>
<i>Exposed for sale appliances that were not approved Section 33(B) EA 1945</i>	<i>Supreme Vision Australia Pty Ltd (Cannington) (four offences)</i>	<i>NLH</i>	<i>2 849.70</i>
	<i>Moongem Holdings Pty Ltd T/A Warehouse Discount Furniture (O'Connor)</i>	<i>NLH</i>	<i>1 057.70</i>
<i>Failed to ensure electrical contractor's number appeared in advertisement Regulation 45 E(L)R 1991</i>	<i>John French Electrical (Geraldton)</i>	<i>EC 002556</i>	<i>457.70</i>
<i>Carried out substandard electrical work Regulation 49 E(L)R 1991</i>	<i>S Egan (Willetton)</i>	<i>EW 130065</i>	<i>800.00</i>
	<i>Damon Diletti (Mt Hawthorn)</i>	<i>EW 123812</i>	<i>625.20</i>
	<i>Mark Edwards (Waikiki)</i>	<i>EW 122363</i>	<i>499.70</i>
	<i>Elvis Krajancic (Thornlie)</i>	<i>EW 129088</i>	<i>657.70</i>
	<i>Troy Perrie (Leeming)</i>	<i>EW 130087</i>	<i>513.00</i>
	<i>Mervyn Ross (Sawyers Valley)</i>	<i>EW 104663</i>	<i>1 187.70</i>
	<i>Phillip Donnelly (Gingin)</i>	<i>EW 125844</i>	<i>2 743.70</i>
	<i>Michael MacGuire (Innaloo)</i>	<i>EW 123227</i>	<i>736.70</i>
	<i>Michael MacGuire (Innaloo)</i>	<i>EW 123227</i>	<i>795.70</i>
	<i>Santo Serraino (Balcatta)</i>	<i>EW 126323</i>	<i>829.70</i>
	<i>Roger Frisina (Carine)</i>	<i>EW 103033</i>	<i>845.70</i>
	<i>Peter Gee (Northampton)</i>	<i>EW 115048</i>	<i>1 557.70</i>
	<i>Gavin Hoath (Gingin West)</i>	<i>EW 107814</i>	<i>737.70</i>
	<i>Leonard Twigg (Guildford)</i>	<i>EW 105291</i>	<i>1 305.20</i>
<i>Steven Vause (Geraldton)</i>	<i>EW 105081</i>	<i>1 557.70</i>	
<i>Caused or permitted unsafe wiring/equipment to remain connected Regulation 50A E(L)R 1991</i>	<i>P Cook (Kalgoorlie)</i>	<i>EW 102565</i>	<i>1 169.70</i>
	<i>Jeremy Owen (Kalgoorlie)</i>	<i>EW 134552</i>	<i>1 007.50</i>
<i>Submitted a Notice of Completion when the work was not complete Regulation 52 E(L)R 1991</i>	<i>CB Electrics (Wangara)</i>	<i>EC 000412</i>	<i>1 295.70</i>
	<i>D'Adamo Nominees Pty Ltd T/A L&amp;A Electrics (Mt Lawley)</i>	<i>EC 003836</i>	<i>2 786.20</i>
	<i>L Wellsted Electrics (Hillarys)</i>	<i>EC 001414</i>	<i>587.70</i>
	<i>Safe as Houses Electrical (Clarkson)</i>	<i>EC 003608</i>	<i>837.70</i>
<i>Failed to ensure that all service apparatus supplying electricity to a premise was installed and maintained in a safe condition Regulation 242 ER 1947</i>	<i>Electricity Corporation T/A Western Power Corporation (Perth)</i>	<i>NLH</i>	<i>7 457.70</i>

## Legend:

NLH No Licence Held  
E(L)R 1991 Electricity (Licensing) Regulations 1991  
ER 1947 Electricity Regulations 1947  
EA 1945 Electricity Act 1945

Note: There was one other prosecution finalised in this period. The details of this prosecution are not included above as it resulted in a spent conviction order being issued.