

## RECI News

### Qualified Certifier

The qualified certifier requirement comes into force on the 1st July 2012.

After this date it will not be possible to have certificates processed for connection by the ESB unless the certificate contains a valid qualified certifier number. This applies to both paper and electronic users.

Qualified certifier numbers have been issued by RECI to all those who attended the Verification & Certification course over the past number of years. The QC numbers issued at these courses were valid for 3 years from date of issue.

If a contractor has completed a Verification & Certification course with any other body, or private provider the details should be forwarded to RECI to enable us to issue you with an appropriate QC number.

At this point in time the next planned courses by RECI are in the Autumn. If circumstances change and there is a demand during the summer for this course, we would facilitate those wishing to do it.

In view of the fact that this has been highlighted for the last number of years we would envisage that there would be a smooth transition of this process.

### CER News

The Commission for Energy Regulation has received ministerial consent to designate Restricted Electrical Works. The Safety Supervision team within CER will work towards completing all associated tasks (including drafting the associated Statutory Instrument which will have to be passed by both House of the Oireachtas) in due course. It is hoped to have this legislation in place by early 2013.

## RECI Director Profiles



### New Chairman - Jerry O'Dwyer

Jerry took over as Chairman from Cormac Madden at our AGM on 26th May 2012. He is an ETCI nominee to the board. Jerry is a senior lecturer in the Dept of Electrical Engineering at UCD. Jerry has been on the board of RECI for over 10 years.



### New Director - Martin Hand

Martin was nominated to the board by ESB at our AGM in the Green Isle Hotel. Martin is the Operations Policy and Safety Engineer for ESB Networks.



### Retiring Director - Cormac Madden

Cormac retired from the board of RECI after 13 years at our recent AGM. Cormac held the post of Chairman for the past two years. The board thanked Cormac for his long service & commitment to RECI and wished him well for the future.



Cormac Madden making a presentation to Frank Byrne on his retirement at the end of March this year.

Frank Byrne joined RECI in 1992 as an inspector and prior to this he worked with ESB for 20 years. Frank was accompanied by his wife Nora and family at the retirement celebration. Contractors from Frank's area can contact Kevin Kelly on 086 6038230 if they have any technical queries.

# Inspections of Contractors: Most Frequent/Common Non-Conformances and Breaches

Audit and Inspections of contractors are carried out under the Common Performance Evaluation Scheme (CPES) since 1 January 2011. Under this scheme Non-Conformances (NCs) to the CER Criteria Document CER 08/071 and to the Common Procedures No 1 to 5, and breaches of the ET101 National Rules are recorded in the Audit and Inspection report. The following shows



the most frequent/common NCs and breaches found by our inspectors since January 2012:

**Most frequent Non-Conformances:**

- Calibration records of test equipment is not available
- Calibration of test equipment is overdue
- Test record sheets are not available

**10 MOST COMMON BREACHES**

Rule No	Rule Description	Examples of Breaches found
533.3.5	Main over-current device	<ul style="list-style-type: none"> <li>• No main protective device fitted at main supply point</li> <li>• Incorrect over-current device fitted</li> </ul>
701.416.1	Location containing a Bath or shower basin: Additional basic protection by RCDs	<ul style="list-style-type: none"> <li>• Dedicated 30mA RCD not fitted for bathroom circuits</li> <li>• Bathroom fan circuit has no RCD protection</li> </ul>
514.3.1	Identification of conductors: General requirements	<ul style="list-style-type: none"> <li>• Black colour used as neutral</li> <li>• Incorrect colour codes of heating systems – 2 earths used as switch-wires</li> </ul>
554.3.5	Socket outlets for general purposes indoors and in domestic and similar locations: Isolation of not readily accessible socket outlets	<ul style="list-style-type: none"> <li>• Missing isolation for inaccessible socket-outlets</li> <li>• Isolators required for fridge and washing machine</li> </ul>
555.1.2	Electrical appliances: Separate isolating switch for permanently-connected electrical appliances	<ul style="list-style-type: none"> <li>• Local isolation required for oil burner</li> <li>• Local isolation required for heating equipment and whirlpool bath</li> </ul>
530.5.3	Distribution boards: To be mounted at height not exceeding 2.25m	<ul style="list-style-type: none"> <li>• Distribution board mounted over 2.25m</li> </ul>
544.2.8	Equipotential bonding conductors: supplementary bonding of extraneous conductive parts in kitchens and utility rooms.	<ul style="list-style-type: none"> <li>• Metal sink not bonded</li> <li>• Kitchen sink requires supplementary bonding conductor</li> </ul>
554.1.3	Plugs, socket-outlets and cable couplers: Mounting of sockets in suitable metal boxes or other non-inflammable material.	<ul style="list-style-type: none"> <li>• Flush socket boxes mounted too far back from outlet face</li> </ul>
531.2.2.2	Residual-current protective devices (RCDs): Accessibility of test-device and notice label to test device.	<ul style="list-style-type: none"> <li>• Notice required at distribution board to test RCD</li> </ul>
554.1.6	General requirements for the installation of plugs and socket-outlets: connection of earthing contact and metal enclosure to protective conductor.	<ul style="list-style-type: none"> <li>• Metal socket boxes have no fly-leads</li> <li>• Socket/switch boxes require earthing</li> </ul>

# Danish field test on 30 mA RCDs 2011

As a follow up on our RCD report from 2009 which was based on a study in 2003, we (the Danish Safety Technology Authority) have made a new study on installed RCDs.

The principle was the same as stated in the 2009 report.

The new investigation was made in 1700 installations in residential areas and flats. The installations were chosen at random so that they were evenly distributed within Denmark.

The old study showed an overall failure rate for 30 mA RCDs of 7%, with a big difference between RCDs of the type AC and RCDs of the type A. The failure rate for 30 mA RCDs type AC was 11% and for 30 mA RCDs type A it was approx. 2%.

The new study showed that the overall failure rate for 30 mA RCDs was 9,4%. The study confirmed the big difference between type AC and type A. 30 mA RCDs of type AC had a failure rate of 13,6 % and for 30 mA RCDs of type A it was 4,9%. The reason for

the increase of the failure rate is probably linked to the increase of the age of the RCDs. The average age of the type A had a relatively higher increase than for the type AC. At the first study the type AC had an age of more than 10 years. Whereas the type A maximum was 10 years old.

The study also included a check test of the test button. It showed that of the 156 RCDs that did not trip when exposed to a test current during the test with a leakage current, 95 could still be tripped by the activation of the test button.

In other words there were 60% of the defect RCDs, where the consumer was misled to believe that the RCD was operating correctly, as it tripped when the test button was activated.

The main difference between the two surveys is the increase of the failure rate in general and a very high increase of the failure rate for the 30 mA RCD type A. The reason for this is believed to be that the average age of the type A has increased relatively more than for the type AC.

Furthermore both studies have shown that some 60% of defective RCDs can not be detected by a test using the test button.

	30 mA RCD type AC	30 mA RCD type A
No of tested samples	868	832
No of defect samples	118	41
Estimated failure rate Uncertainty interval (95 % )	13,9 % (11,6 – 16,2 %)	4,9 % (3,4 – 6,4 %)
Previous survey	10,9 % (8,3 - 13,5 %) (560 samples)	2,0 % (0,6 - 3,4 %) (400 samples)

Table SEQ Tabel \\* ARABIC 1. Failure rate for 30 mA RCD type AC and type A.

	Sum	Test button trips the RCD	Test button do not trip the RCD
RCD passing the test	1.542	1.533	9
RCD do not pass the test	156	95	61
Sum	1.698	1.628	70

Table SEQ Tabel \\* ARABIC 2. Overview of the result of the test of the test button, on the 1.698 RCDs where the result was registered. Two tests are omitted because of missing test results.

## RECI comment re RCD survey

In view of the results of the above survey it would be in the interest of those responsible for installations with RCDs to have them electrically checked at least once a year.

# Periodic Inspection Report

Many contractors find themselves in the situation where their customer requests them to “inspect / test” their electrical installation. Examples of this type of request might be a landlord requesting an inspection / test of an apartment/ apartments, or for instance a fire officer requesting a “certificate” for a premises that may require a licence to conduct a particular type of business such as a public house, night club etc.

Oftentimes the electrical contractor responds to these type of requests by giving the customer an ETCI completion certificate having tested the electrical installation which in a lot of cases may be many years old and in some situations could require urgent remedial electrical work. In situations such as this the correct course of action would be to inspect and test

the installation and then furnish the customer with an “ETCI periodic inspection report” (see annex 62A ETCI National Rules for Electrical Installations). It is important to remember that this is not a certificate, it is a report which gives the recipient a clear indication of the “state of health” of the electrical installation and whether or not there are minor or worse still serious defects present.

The bottom line is that an ETCI completion certificate should not be used in these situations unless the installation is compliant with the present day requirements.

*Jim Keogh, Chairman,  
Irish National Wiring Rules Committee TC2, Electro  
Technical Council of Ireland*

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