

CSA Goes Global

"The first priority in harmonization is to maintain the high Canadian standards"

Phil Cooper, Canadian Standards Association



By Mark Neath

At the EIA General Meeting of February 24, Phil Cooper of the Canadian Standards Association (CSA), made a presentation on the initiative underway to harmonize standards, existing and future, with the standards of other nations. Phil outlined the objectives of harmonization and binational standards explaining both the terms and processes which make up harmonization.

Standards or the strict interpretation of standards has long been a formidable barrier to the import and export of equipment. The idea that exactly the same tests and test criteria must be observed for equipment or apparatus to be acceptable in a particular country is restrictive. This idea has limited the ability of many manufacturers, our own included, to participate in export markets. The pressures brought to bear on all players of an import/export marketplace has made coordinated standards an essential and attractive feature of the industry we work in. These pressures include GATT (General Agreement on Tariffs and Trade) 7 rounds since 1945, the FTA (Free Trade Agreement) with the intent that standards shall not be a

barrier to trade and Industries anxious to reduce the maze of technical standards that they are forced to comply with.

Harmonization refers to standards in which the technical requirements have been made the same. In a harmonized standard both performance and safety



Phil Cooper, CSA

issues have been equally addressed to achieve a workable standard. There are two manners of harmonization: Technically Compatible (TC), the tests performed are different however the safety and performance issues have been

addressed, and Technically Equivalent (TE), the words used to describe a test differ however, the test evaluates the same safety and performance properties. CSA's objective is to ensure that national standards are harmonized to international standards but only in-so-far as Canadian practices and conditions permit. Phil indicated that several standards have already been harmonized and many standards are in the process of being harmonized.

When harmonization is not practical CSA will develop either

binational standards or national standards that are harmonized to the existing national standards of other countries. Finally if none of these avenues are open to CSA they will develop CSA or national standards.

The only difference in a binational standard between CSA and UL is the cover. A binational standard is a joint publication that serves to augment previous CSA and UL standards or requirements. At the outset, CSA or UL shall be identified as the lead organization for the project. The lead organization will be responsible for producing the finished draft and the camera ready copy of the binational standard. Then CSA or UL, in their respective countries, will publish the standard under their own cover and standard number. Except for the cover, the text and substance of the standard will be the same in each country and equipment tested under that standard will be acceptable in either country.

What can we expect from this initiative? For one, standards that

NEXT MEETING





Wednesday, May 5, 1993

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The Inspector

are consistent with the needs of Canadian society and CSA's Canadian and International customers. Secondly, the most obvious change will be the new CSA marks appearing in the field. The CSA marks which will identify equipment tested under harmonized standards are shown on the right. Not all these marks are meant to be used in Canada. Only the two marks identified as certified to both Canadian and U.S. standards will be acceptable in the field.

We would like to thank Phil for taking the time to address the members at the general meeting on this informative and important undertaking on the part of CSA. Please call Phil Cooper at 244-6540 or Solomon Ko at 244-6577, both of CSA, for further information about harmonization and binational standards.

 <p>NRTL</p>	Products certified to U.S. Standards only, within the scope of CSA's OSHA accreditation.	 <p>NRTL/C</p>	Products certified to both Canadian and U.S. Standards, within OSHA accreditation.
 <p>ASME A-112</p>	Products certified to U.S. Standards only, outside the scope of CSA's OSHA accreditation.	 <p>D113.2/Z90.4</p>	Products certified to both Canadian and U.S. Standards, outside OSHA accreditation.

Note: The additional indicator, i.e. NRTL, may appear in any location adjacent to the CSA mark.

CSA certification marks

Inspectors tour Andres Winery

Just in time to place their orders for the festive season, members of the E.I.A. toured Andres Winery in Port Moody.

Andres has wineries across Canada, in Alberta, Ontario, Quebec and Nova Scotia as well as British Columbia. From these wineries flows almost three million gallons of wine a year, made from domestic and imported grapes. Their research laboratory in Ontario is the biggest wine lab in North America.

Many of the most popular wines in British Columbia are made by Andres. We recognized the labels of Domaine d'Or and Hochtaler, as well as some interesting wines imported from Australia and bottled in British Columbia. Andres has several wines that qualify for the special Vintners Quality Alliance designation.

The tour concluded with wine-tasting and some special

pointers from our delightful guide on assessing the characteristics of the various wines.

(Editor's choice: Gold Coast Semillon/Chardonnay, "a smooth, light, dry, wine with a delicate bouquet.")



Andres guide, Crista Lee, giving wine-tasting instructions

Flashback . . .

One hundred years ago, on April 28, 1893, C.F. Hutchings was appointed the first Electrical Inspector in the City of Vancouver.

For his services he was paid the handsome salary of one dollar per year.

When is a Wall not a Wall?

By Jim Barker

For the February 24, 1993 meeting the placement of receptacles in kitchens in accordance with rule 26-702(6) was discussed.

The issue raised was where windows extend down to the counter top (such as the large bay window shown in the diagram) are receptacles required? Would pedestal receptacles be required, or allowed under this rule?

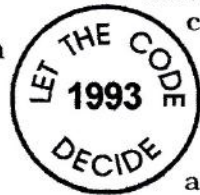
The rule states that the receptacle must be placed:

1. **along the wall** behind the counter work surfaces, and
2. so that no point **along the wall line** is more than 900 mm from a receptacle.

There was considerable discussion at the meeting regarding what constituted a "wall line" and it appeared most agreed the bay window shown was a wall line.

However, the first part of the rule could not be complied with (in the wall behind the counter) unless structural changes were ordered. This was not considered practical by many and not the intent of the rule.

A motion was carried directing the Code Committee to present proposed wording to be considered for a submission to E.W.E.S.C. This wording was to propose that receptacles not be required where a window extends down to the work surfaces as shown.



The Code Committee presents the following options for discussion at the next meeting:

Option 1:

Amend rule 26.702 6 (b) by adding the bolded words:

6(b) A sufficient number of split receptacles along the wall behind counter work surfaces (excluding sinks, built-in equipment, isolated work surfaces less than 300 mm long at the wall line and **areas where less than 150 mm space is available between the work surface and a window**) so that no point along the wall line . . .

Option 2:

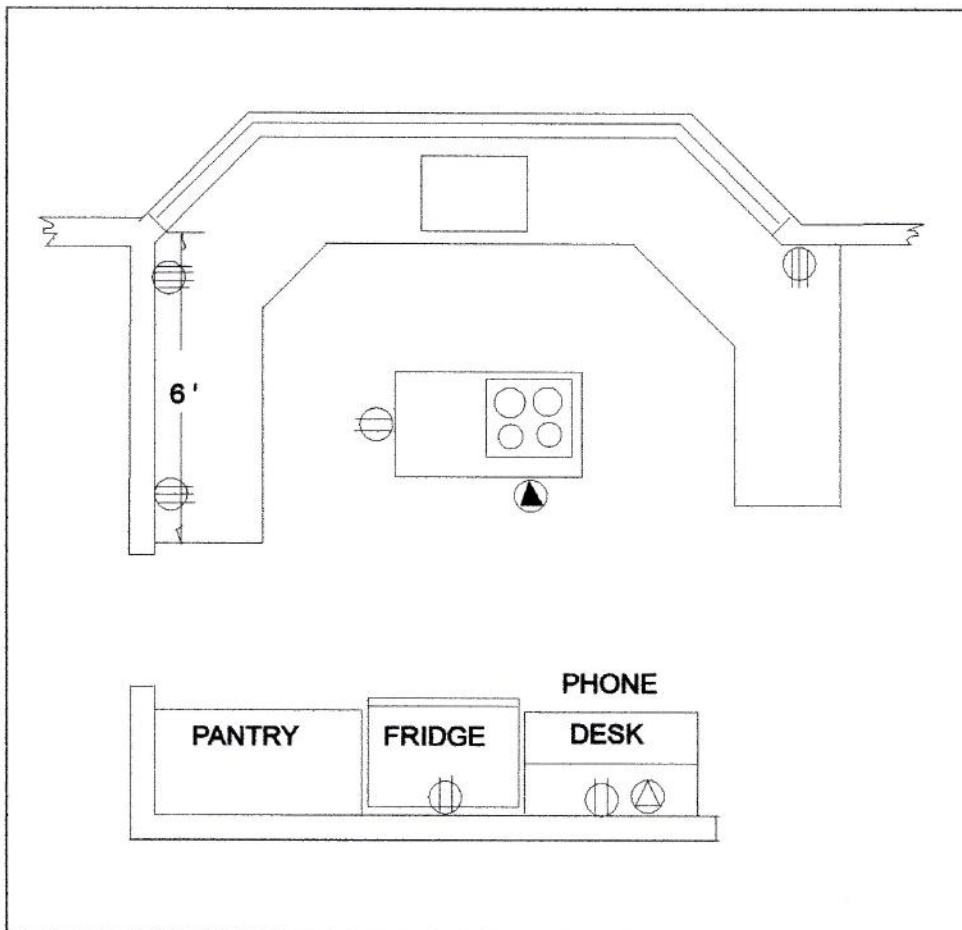
Add new subrule "7" and renumber existing rules:

7. Where the spacing requirements of 6(b) cannot be met due to a window extending to within 150 mm of the work surface, the receptacle(s) shall be placed in the first available wall space adjacent to the window and the spacing requirements shall continue from that point.

These options are for discussion at the next general meeting along with a new subject: "**GFCI protection of receptacles in bathrooms where the bathroom is part of a master bedroom without separation.**"

Code Standing Committee

Jim Barker, Chairman
 Ken Hoyem
 Denis Lessard
 Sal Pilato



Fuse and Breaker Manufacturers Team-Up

by Dave Jackson

The Agenda for our November meeting included representation from a fuse manufacturer and a breaker manufacturer. Surprisingly, the potentially controversial forum was a team effort by Tony Flood of Gould Shawmeel and Jim Muir of Westinghouse, both encouraging us to change our views on the way we deal with the protection of electrical equipment from short circuit energies.

On the subject of fault current, the future holds a lot of change. For a start, many of the electrical equipment manufacturing standards will be or have been changed, e.g.,

- CAN/CSA C22.2 #106-M92 - HRC Fuses (standardizing peak let through currents and thermal damage during faults)
- CSA-C22.2 #5 - Moulded Case Circuit Breakers (series rating application)
- CSA - C22.2 #29 - Panelboards (series rating application)

Also, changes to the Canadian Electrical Code, Part 1 (14-072) may be included in the 1994 edition (recognition of series ratings).

In addition to changing standards, the methods presently used to calculate short circuit let through current may be changing (i.e., up-over-and-down method). Both these manufacturers promote the use of testing to evaluate the performance of electrical equipment (including fuses and breakers) under fault conditions.

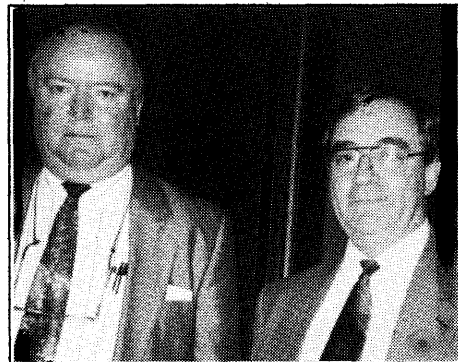
Westinghouse has already published its "Integrated Equipment Ratings" application handbook based on testing of series application of breakers, panelboards and meter centres. A word of explanation (for those who need it):

Fully rated system - current practice of installing short circuit protective devices that are rated to withstand the full available fault current at the location they are installed in the distribution system.

Series rated system - the use of fully rated upstream short circuit protective devices (SCPD) tested in series with downstream SCPDs that by themselves are not fully rated to withstand the available fault current (but the combination passes the test).

Integrated equipment rated - the application of series rated breaker/breaker, or fuse/breaker combinations to assembled products such as panelboards, meter centres, etc. fully tested to safely operate under fault conditions.

Although BC has led the way in Canada in accepting series rated breaker installations, I don't see us suddenly jumping to abandon the short circuit calculation methods taught to us by Jack Mills of G.L.E. Inc., who, over the past 20+ years spent endless hours ensuring that



Jim Muir of Westinghouse and Tony Flood of Gould Shawmeel

we all understood the application of current limiting fuses to protect both life and property. However, as new testing standards are adopted and testing is done by Standards Council of Canada recognized testing agencies, we will be well prepared for the changes ahead thanks to the presentation from Jim Muir and Tony Flood.

Electrical Safety Regulation

Jack Ball, the EIA representative on the ESAC Task Force to Review the Proposed New Electrical Safety Regulations, reports that the proposal has been forwarded to the Attorney General's Office for

legal work prior to presentation to ESAC.

Legislation is expected in three to four months and implementation of the new regulations should begin at the end of July.

Why not invite a friend to the next meeting?

New Members

A warm welcome to the following new members: **Richard Evans**, Warnock Hersey, (Associate), **Jack Marsh**, Maple Ridge (Inspector), **John McMahon**, Vancouver (District Inspector), **Jack Mills**, Bussmann (Associate), **Julian Modrzejewski**, Julian Electric (Associate), and **Len Young**, Bond Electric (Associate).

Sad Departing

The members of the Electrical Inspectors' Association of British Columbia extend their sympathy to the family of Denis Lessard who passed away suddenly on March 22, 1993. Denis's long-standing support and involvement in our Association will be truly missed.

Next General Meeting

Wednesday, May 5, 1993

**DIEGOS
(SEVERINS)**
6669 Kingsway, Burnaby, BC

5:15 Social Hour
6:00 Dinner
7:00 Meeting

A G E N D A

**1. Technical Presentation - Electro-magnetic Fields--
A Risk we can Reduce**

Speaker: Claire Alston, Coalition to Reduce
Electro-Polution

**2. Code and Standards Issues: (See Page 3)
Resolution re Rule 26.702 6(b)**

Contact re attendance:

Arlene MacLean, Phone: 244-6595
FAX: 244-6505
Alfie Pietracupa, FAX: 521-3895
Phone: 521-3711 Local 230

Karl Retires in Style

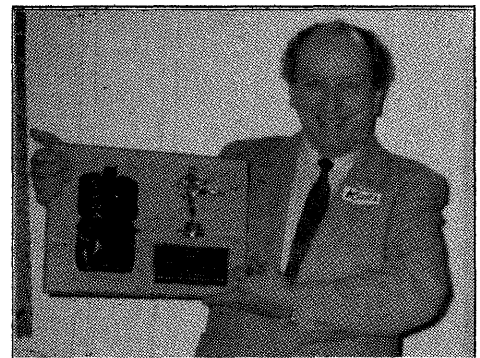
Karl Jessen, past-President of the E.I.A. celebrated his 22 years of service with the British Columbia Government, at a special retirement party in February.

Karl has been an Electrical Inspector since June, 1974.

Karl is seen here with the special plaque presented to him by

Rick Porcina on behalf of the EIA as a token of appreciation for the work he has done for the Association and to commemorate his years of service as an Electrical Inspector.

We wish Karl and very happy and healthy retirement.



Karl displaying the handsome plaque presented to him by the E.I.A.

EIA EXECUTIVE

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Dave Jackson
City of Vancouver
873-7601

VICE PRESIDENT

Mike Krygier
Electrical Safety Branch
660-9435

IMMEDIATE PAST PRESIDENT

Karl Jesson, 921-7483

RECORDING SECRETARY

Arlene MacLean
Canadian Standards Assoc.
244-6595

MEMBERSHIP SECRETARY

Jack Marsh
Maple Ridge
467-7313

TREASURER

Len Rhodes, Corp. of
West Vancouver, 922-1211

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Jim Barker, Municipality of
Surrey, 591-4240
Ken Hoyem, BC Tel Electrical
Services, 293-3816
Alfie Pietracupa, City of
New Westminster, 521-3711
Sal Pilato, Electrical Safety
Branch, 660-8657
Bill Simpson, Canadian
Standards Association
273-4581

EDITORIAL BOARD

Pat Maertz, Editor
525-7322
Jim Barker
Dave Jackson
Ken Hoyem
Sal Pilato



The 1993 EIA Executive: (standing) Alfie Pietracupa, Ken Hoyem, Bill Simpson, Karl Jesson, Mike Krygier, Len Rhodes, Dave Jackson, Jim Barker, Jack Marsh and Sal Pilato; (seated) Pat Maertz and Arlene MacLean.

New Address for the EIA

The new mailing address for the Association is

Box 434 Maple Ridge, British Columbia V2X 8K9

Express your Concerns

By Sal Pilato

Some time ago, Karl Jesson, Electrical Inspector for Squamish, Whistler area, proposed a change to part one of the Electrical Code to delete rule 62-214(2) so as not to conflict with rule 2-118 (ready access to parts requiring maintenance). Karl's proposal specifically addressed the installation of ceiling heating panels and the difficulty in accessing the connections for maintenance and repairs.

In February 1993, Karl received a copy of the CSA sub-committee

report and the results of the ballot. Karl's proposal was rejected on the basis that field-made panel connections shall be made in such a way that once terminated they shall be fail-proof.

While this particular submission was rejected, submissions from Inspectors, Contractors, and the Electrical Industry at large are an integral part of the process which produces a code that is relevant and up-to date.

President's Message

Our recent Annual General Meeting presented an excellent opportunity to look back over 1992 and look ahead for 1993.

Last year was a very active year for the Executive of the E.I.A. With input from the membership at the 1992 AGM, a year's course was charted to include the establishment of the Constitutional Review Committee, the Code Standing Committee and the appointment of the Association Historian.

After a year of hard work, the Constitutional Review Committee proposed revisions to the Constitution and Bylaws. At the AGM, the vote on the Special Resolution accepting the Constitutional Review Committee report passed unanimously. On behalf of the E.I.A. I would like to thank the members of the committee, Bill Simpson and Michael Krygier, for their thorough and careful review.

The Code Standing Committee is up and humming, providing lively code discussion at our meetings. I would like to express our thanks to Jim Barker, Ken Hoyem, Denis Lessard and Sal Pilato for arranging an interesting program for the Association on current issues relating to interpretation of the Code.

Thanks too, to Alfie Pietracupa for undertaking the role of the Association's Historian. He has already dug up the record of our inaugural meeting and is continuing to research the years in between. The results of his research will appear from time to time in **The Inspector**.

Our other committees and representatives were busy as well, and thanks are due to:

Denis Lessard, E.W.E.S.C.
Jack Ball, E.S.A.C
Alfie Pietracupa, Hospitality

Pat Maertz, Jim Barker, Ken Hoyem, Dave Jackson and Michael Krygier, Editorial Committee

My thanks to the whole Executive for a job well done.

The 1992 Executive Committee was re-elected by acclamation to serve for 1993. It is unchanged except that our Membership Secretary (and Past President), Rick Porcina, has completed his term and has been succeeded by Jack Marsh from Maple Ridge. Thanks to Rick for computerizing our membership lists, meeting notices, and membership applications.

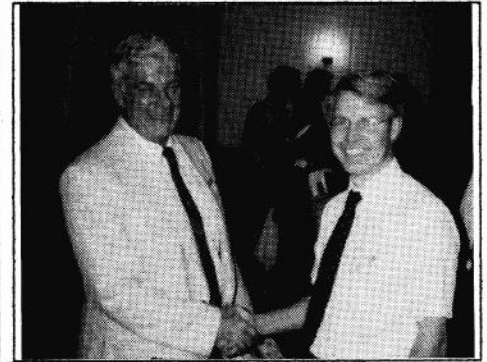
Congratulations and best wishes to our newly-elected Executive. We look forward to another active year with a program that stimulates discussion on a wide range of topics, and opportunities to learn about new directions in the electrical industry. The Executive is organizing the activities for 1993 including meeting programs with a technical and social mix.

Our first activity for the year is to launch a membership drive. The back page of this issue of **The Inspector** has been designed for posting on notice boards or for handing to potential members. I hope you will encourage your associates to join the E.I.A. You might like to introduce them to the E.I.A. by inviting them to attend our meetings. Your Executive will do their best to welcome them and ensure that there is a program that will encourage them to join.

The Executive welcomes your input. If you have any suggestions, please give me a call at 873-7904.

Dave Jackson

Visitors. . .



Dave Jackson welcoming Jim Fowler to the Annual General Meeting, February 24, 1993



Visitors from out-of-town, Ted Gilbert of Kelowna, and John Mcmillan of Prince George, at the AGM, February 24, 1993.

Next Meeting . . .

Wednesday, May 5, 1993

**Diegos (Severins)
6669 Kingsway, Burnaby**

See details on Page 5