The Product Safety Newsletter

IEEE EMC SOCIETY

What's Inside

Vol. 8, No. 3 May-August 1995

Chairman's Message

For some time, we have been discussing the future of the Product Safety Technical Committee in light of the organizational and operational changes requested by the EMC Society. I'm writing this in advance of our Annual Meeting scheduled for Wednesday, August 16th at the International EMC Symposium in Atlanta. At that time, we will attempt to resolve as many of the issues as possible. In the meantime, I would appreciate receiving your comments on the following proposal.

Already we have heard from many of you with your ideas for the best course of action. The considerable majority favored continued affiliation with the IEEE, with most favoring the Technical Council approach over a direct merger with the TAB Environment, Health and Safety Committee. The remainder of the suggestions favored either going independent (forming a new product safety society) or merging with an existing non-IEEE safety group such as the ASSE or the New England Product Safety Society (with whom we have had a long association). What is the approach we will be recommending at the Annual meeting?

After reviewing the various arguments for and against, we are setting a course toward the creation of an IEEE Product Safety Technical

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The Product Safety Newsletter

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Letters To the Editor

We received the following letter from one of our readers since our last publication. Please feel free to contact the PSN either at the return address on this publication, by fax at 408-285-2553 or by e-mail at either emc-pstc@ieee.org (Product Safety email forum) or to volgstadcroger@tandem.com

To: Mr. Rich Nute
June 2, 1995

Your article "Two Measures, Two Levels" appearing in the March/April PSN has several well made points. "Measures" and "Levels" are vague terms in need of better definition.

You made mention of the hazards in Classified Areas and 1 would call your attention to the slightly different approach put in use for such HAZLOC designs. FM and NFPA both, along with the ISA, when considering the hazards of classified areas, use the "two fault" approach .oward protection for safety. The hazard is presumed to exist and then analysis is based upon what two faults may occur that allow ignition of the hazard. Also, that the presence of the hazard where it should not be can be taken as one fault. With emphasis directed toward identification of faults that result in a dangerous condition, whether the hazard is present or not becomes a non-issue. Fhis is another approach toward the double safety protection concept for your consideration.

I have enjoyed your articles and look forward to many more.

Regards,
John H. Rolleston,
Mettler-Toledo, Inc.

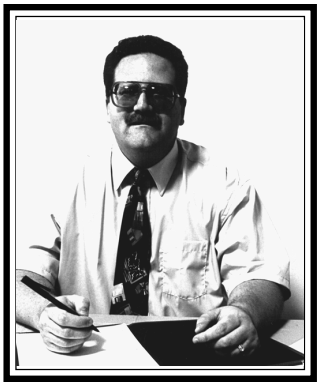
The author's response:

The comment is a good one, and should be published.

Rich Nute
author,
Technically Speaking
tel: (34) 3-582-13-89
fax: (34) 3-582-25-15
e-mail: richn@hpbpq6.bpo.hp.com ■

The Product Safety Newsletter Committee is looking for someone interested in writing the Area Activities column. If interested contact Roger Volgstadt, Editor, at (408) 285-2540.

Area Activities



by John Reynolds
voice: (408) 526-8364; fax: (408) 626-8348
e-mail: < 73771.1225@compuserve.com> or jreynolds@cisco.com

Santa Clara Valley Chapter

The February 28,1995 meeting of the Santa Clara Valley PSTC featured a talk by Mr. Dennis Ward of CKC Laboratories. Mr. Ward discussed the "CEMarking-EMC Directive" and the several routes to obtaining compliance with CE mark for emissions and immunity testing ofITE which are mandatory on January 1, 1996.

The March 28, 1995 meeting featured a talk by Mr. Glenn Koehler, P.E. of Lockheed Missiles & Space Co. Mr. Koehler made a presentation on "Applying System Safety to Products." His talk covered the value of applying system safety engineering techniques to product facilities for the explicit purpose of protecting products from damage during testing operations.

The April 25, 1995 speaker was Ms. Shannon McElyea of NetCom who spoke on the Internet and services available through NetCom.

Our May 23, 1995 speaker spoke on Field. Evaluation Procedures.

June 20: Wayne Menuz of Underwriters Laboratories, Inc., spoke on Mexico certification O(NOM marking).

Northeast Product Safety Society

The March 22 meeting featured Mr. Nick Maalouf CSA's VPofOperations US & Europe.

Mr. Maalouf answered some of the groups questions about CSA services. Answers included response to such questions as

- Why is CSA Category Test Data not acceptable for NRTL approval?
- Will it ever be acceptable for NRTL approvals?
- What can CSA do to ease and improve UL's acceptance ofCSA Certified Components?
- When does CSA plan to have e-mail access to all engineers?
- Is Internet access planned? If so, when?

For a response to these and other questions, request a copy of the last two issues of the North East Product Safety Society newsletter by contacting Art Michael at (203) 344-1651. The

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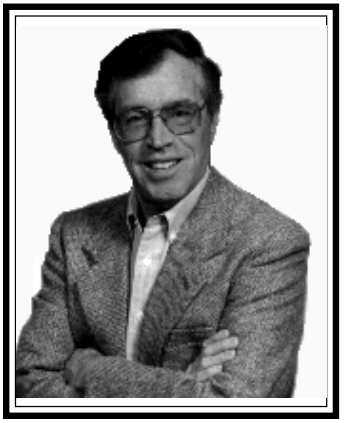
Technically Speaking

Operational Insulation in IEC 950



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Normally, this column addresses technical issues in the field of safety. Usually, it does not address issues in safety standards. This issue's topic is rather unique because this column addresses safety requirements for a non-safety critical device, "operational" or "functional" insulation.

IEC 950 specifies requirements for insulation in ALL circuits, including extra-low-voltage, and SELV circuits.

These requirements are of interest because the principal purpose of insulation is protection gainst electric shock.

(A secondary safety purpose of insulation is protection against short circuits which could lead to conductor or component overheating and fire.)

The insulations which are critical to protection against electric shock are defined as "basic," "supplementary," and "reinforced." (In this article, I refer to these as safety insulations.)

IEC 950 includes a fourth insulation, "operational insulation."

"Operational insulation" is defined as the insulation needed for the correct operation of the equipment. A note accompanying the definition states that operational insulation by definition does not protect against electric shock. The note continues by saying that operational insulation may serve to minimize exposure to ignition and fire.

Examples of "operational insulation" would be all of the spacings and solid insulations in primary and secondary circuit that are not safety insulations, and all of the insulations within EL V and SEL V circuits.

IEC 950 specifies spacings (clearances and creepage distances) for all four insulations (basic, supplementary, reinforced, and operational) for both primary and secondary circuits.

Therefore, for IEC 950, you must consider every spacing and every solid insulation in every circuit throughout the entire product.

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News and Notes

by Roger Volgstadt
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ANOTHER VERSION OF ELECTRONIC STANDARDS

UL has introduced a new version for all of its standards that permits Highlighting, Bookmarking, Searching and Hypertext Link. Windows 3.1 or higher and 8MB RAM is recommended. No other software is needed. Prices vary according to the standard; UL 1950 costs $ 425.00 for companies with UL Listing/Recogntion and $ 530.00 for non-clients. Included is a 3 year subscription to UL's subscription service which includes receipt of bulletins and standard updates. Contact Andrea Briesch, phone (708) 272-8800 Ext 42983 for further information and pricing.

JURORS ABSOLVE KEYBOARD

[The following information was extracted from the March 9, 1995 edition of the San Jose Mercury News - Ed.]

A Minnesota jury decided [recently] that IBM was not liable for injuries a former high school secretary said were caused by the design of its computer keyboards. ... The case has been closely watched by makers of office equipment and lawyers around the country for thousands of clerical workers who believe that poorly designed data-processing equipment has led to an epidemic of neck, shoulder, arm and hand ailments collectively known as repetitive stress injuries, or RSI.

This was the first case against IBM or Apple to reach a jury. "The jury rejected every argument they advanced, including their claims that the keyboard design was defective, that we had a duty to warn users and even that the plaintiff had any injuries associated with keyboard work," said Michael Cerussi, IBM's lead attorney in the RSI case.

The plaintiff, Nancy Urbanski, 30, claimed that any act requiring modest hand strength, from brushing her hair to opening jars, had become unbearably painful as a result of her work on IBM and Apple computers from 1989 to 1991 as a secretary and registrar at the school in Eagan, Minn.

IBM argued that there is no credible scientific link between keyboard injuries and keyboard design. RSI studies show that regular rest breaks and careful placement of keyboards can prevent some injuries, but injury rates also appear to depend on a wide variety of factors, from the health habits of workers to their attitudes toward their jobs.

IBM charged that Urbanski was a disgruntled employee.

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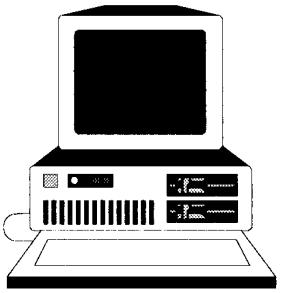
News from the Internet



You may recall reading in the January /February issue of the Product Safety Newsletter that the IEEE is sponsoring an on-line product safety forum. Those with questions, comments or news of general interest about product safety can post their messages to over 175 product safety professionals world-wide and, when requested, receive back valuable comments and advice. Anyone with access to e-mail over the Internet can participate (See instructions on page 20). Great product safety news and advice are available.

Since not everyone has access to the Internet, or those who do may not see every message, we'll be featuring highlights from the forum in this and future editions of the PSN. To whet your appetite, please sample the following.

IS SAFETY CERTIFICATION MANDATORY?

Rich [Nute] mentioned the following areas in the United States which legally require NRTL approval:

Suffice it to say that if your product does not have NRTL certification, then it is not "legal" in many markets, including Los Angeles, San Francisco, Oregon, Washington, Chicago, and New York City. If it does have NRTL, then it will likely be "legal" everywhere.

Rich is giving examples of known areas that require NRTL approval.

The following is a response from Tom Castino, President of UL, when asked by the Northeast Product Safety Society (NPSS) at our June 23, 1993 meeting where safety certification is mandatory.

The question was: "Would UL please supply a list of USA states/regions which legally require agency [certification organization] approval. In 1984 UL provided the following list: Oregon, Washington, Pennsylvania, Maryland, Florida, Los Angeles County and for some product categories in Cook County (Illinois/Chicago). .. Please provide an updated list, based on non-commercial categories" .

UL Response (From UL' s February 2, 1994 letter to the NPSS):

"Since 1984, the USA states/regions which legally require agency approval has grown to include all of the above areas plus North Carolina, Rhode Island, and Virginia. However, all of these states also have a legislative or administrative procedure for adopting national building codes or codes such as the National Electric Code (NEC)".

To summarize the list, the areas in the United States which legally require agency approval (NRTLs), according to UL, are:

- Oregon
- Washington
- Pennsylvania

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Chairman's Message, Continued From Page 1

Council. This agrees with the majority response and with previously stated PSTC objectives. As described below, there are considerable challenges ahead of us to make this endeavor successful, since some critical attributes of our existing operation are not an exact fit within the IEEE Technical Council model. However, if we are successful in creating the Technical Council operation that we envision, we will emerge more effective that ever. The challenge that lies ahead is to retain the essential programs of the existing TC-8 while expanding our operations and working within the structure of the IEEE.

What will emerge from all this restructuring will be two separate and distinct entities: a restructured TC-8 and a new Product Safety Technical Council.

EMC TC-8

At the direction of the IEEE Society, EMC TC-8 will be restructured as a traditional technical committee within the EMC Society, focusing on Electrical aspects of product safety. The technical committee will have approximately five to ten EMC Society members and will be devoted to annual Symposium-related events and standards development.

With regard to Symposium activities, the committee will coordinate preparation, review and presentation of technical paper sessions and workshops. Committee members are obligated to meet face-to-face annually at the Symposium with interim coordination and communication as needed. The August 16th meeting will focus on restructuring, goals, membership and leadership selection.

Product Safety Technical Council

The new TC-8 will carry on only a small portion of the activities presently conducted under the existing TC-8. For the rest of these activities to both continue and expand within a Technical Council environment, we will be required to "reinvent" the Technical Council format and scope as it presently exists within the IEEE. As discussed in previous newsletters, technical councils are organizations formed by two or more IEEE Societies to address areas of shared interest, but where there is insufficient critical mass to spawn a new society.

Presently there are two Technical Councils with the IEEE, formed to create publications or sponsoring symposia. The only members of the Technical Council are those appointed by the sponsoring Societies to serve as the "Board of Directors." The beneficiaries of the Technical Council activities are members of the affiliated Societies and others who subscribe to its publications or attend its events.

This structure and scope is quite limited in view of our present organization and activities. Some present attributes not in the scope of a Technical Council include:

1 We have several local groups with ties to local EMC Society chapters and the regional IEEE organizations. We believe it is important both to foster creation of new groups interested in product safety and to improve support for existing ones. We anticipate these groups will have the full support of and cooperation with local chapters of supporting Societies.

2 We publish a product safety newsletter, but many of our newsletter subscribers are not

IEEE EMC Society members (although all officers and chapter leaders are). While publication subscriptions may be made available to non-IEEE members, we expect our other services are of sufficient value to attract many to IEEE membership. Presently, we have over 1200 individuals affiliated with our groups as newsletter subscribers and this number is increasing.

3 We report to a single Society and its leadership, fostering continuity and a more consistent foundation for growth. We believe that there needs to be a core constituency within the Technical Council to ensure continuity as Society-appointed representatives rotate in and out of Council membership.

To proceed with the formation of the Technical Council, a draft proposal will be developed in cooperation with those IEEE Societies most interested in sponsoring the Council. In view of the augmented scope of the proposed Product Safety Technical Council, we anticipate that greater effort will be required to secure ratification than would otherwise be the case.

In conclusion, we have a lot of work ahead of us. Your input and participation is requested. If you can attend the Annual Meeting at the Symposium, please come and be prepared to contribute to our planning. In the meantime, you can respond via any of the following:

- Newsletter Editor (VolgstadCRoger@ @Tandem.com)
- E-mail to the EMC-PSTC Forum (emc-pstc@ @ieee.org) or
- Brian Claes (via fax: 1-510-659-8260 or e-mail at bclaes@ @aol.com)

See you in Atlanta!
Brian Claes ■

IEEE 1995 INTERNATIONAL SYMPOSIUM ON ELECTROMAGNETIC COMPATIBILITY

Atlanta Marriott Marquis
August 14-18, 1995

SYMPOSIUM OVERVIEW

Exhibit Hours:

Tuesday, August 15
9 am to 5 pm

Wednesday, August 16
8:30 am to 5 pm

Thursday, August 17
8:30 am to 5 pm

Registration:

Sunday, August 13
4 pm to 8 pm

Monday, August 14
8 am to 8 pm

Tuesday, August 15
7:30 am to 4:30 pm

Wednesday, August 16
7:30 am to 4:30 pm

Thursday, August 17
7:30 am to 12:00 pm

Friday, August 18
7:30 am to 9 am

Area Activities, Continued From Page 4

Central Texas

March 31,1995 meeting of the Product Safety Technical Committee of Central Texas was held at the Hyatt Regency Austin. This was a special meeting with the EMBS Chapter, EMC Society and EMC Society Board of Directors. The Program was a panel discussion of the Problems of EMI Susceptibility in Medical Equipment. The panel consisted of Edwin Bronaugh, Dr. Glenn Bell and David Kilpatrick. Moderator was Dan Hoolihan.

Substantial public attention has recently been directed to the issue of susceptibility (the relative lack of immunity) of medical equipment to interference sources in the hospital and other environments. Of special concern are the emissions of cellular phones in close proximity to devices. The Food and Drug Administration (FDA) is actively reviewing the issue and a special center has been established at the University of Oklahoma to address it. Dan Hoolihan is a prominent figure in the area and represents the EMC Society on these Issues.

Orange County/ Southern California Chapter

This chapter has provided us with the following news items:

UL San Diego Office - Underwriters Laboratories has opened up a Local Engineering Services (LES) office in San Diego. The office is located in northern San Diego, in the vicinity of 1511805 interchange. The contact and specific location is as follows:

Bill Mikkawi
Underwriters Laboratories, Inc.
10040 Mesa Rim
San Diego, CA 92121-2912
Phone (619) 546-0908
FAX (619) 546-1745

2. NOM - As a follow up to our discussion regarding NOM Certification, enclosed please find a document that is being distributed courtesy of Jim deVries, Manager Dell Product Safety Department. This information was received via the Internet from PSTC e-mail thru IEEE.

3. Programs - Thanks to Neil Koigawachi of Ca1Comp for his excellent presentation on the EPA Energy Star Registration.

May 2: MSDS Generation, by Gabriel Roy of CalComp
June 6: What if your Safe Product Isn't, by Charlie Bayhi of CPSM

Future meetings:

July 11: Economic Espionage (Tentative), by the Federal Bureau of Investigation

Well that's all folks. Let me hear more from you. Those groups that I haven't heard from should call, write, fax, or e-mail.

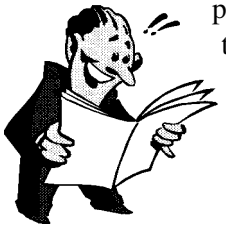
Best regards,
JohnReynolds ■

News and Notes, Continued From Page 6

SECOND CENELEC REPORT ON NATIONAL IMPLEMENTATION OF EUROPEAN STANDARDS PUBLISHED

CENELEC, the European Committee for Electrotechnical Standardization, has just published the second edition of its Catalogue on "National Implementation of European Standards."

According to CENELEC rules, European standards are to be implemented in CENELEC member countries by giving it the status of a national standard, either by publication of an identical text or by endorsement.



This unique reference tool, compiled in December, 1994, lists the national implementation by CENELEC members of more than 500 European standards (EN's). The publication, designed for use in industry and by exporters, gives exact national references for European standards.

The 270 page National Implementation Catalogue can be purchased directly from the CENELEC Central Secretariat, rue de Stassart 35, B-1O50 Brussels. Price: BEF 5000 (postage and handling included within Europe). The publication is also for sale through the National Electechnical Committees, members of CENELEC.

USING THE CE MARK

[The following two articles are extracted from the M.A. Lamothe and Associates Inc. / Ultra Tech Engineering Labs Inc. newsletter, "Approvals Review". Subscriptions are free and available by calling 905-877-2203. The editor wishes to thank Lamothe and Associates and Ultra Tech Engineering Labs for their support of the PSN. - Ed.]

There has been a significant degree of confusion regarding when you can start using the CE marking and when it is mandatory for use in Europe.

The CE marking can not be used before the "possible from" date and must be used from the "Mandatory By" date shown in the table below.

Directive	Category	Possible From	Mandatory
72/23/EEC	Low Voltage	1995/01/01	1997/01/01
89/336/EEC	EMC	1992/01/01	1996/01/01
91/263/EEC	Telephone	1992/11/06	1997/01/01
93/42/EEC	Medical	1995/01/01	1998/06/15

You will note that most products will have to comply with more than one directive and the dates from each directive will need to be considered.

The Low Voltage directive is generic and applies unless there is a specific directive covering your type of product.

Remember that the CE marking is not a certification mark; it is your 'statement' that you meet all of the applicable requirements in the directives that apply to your product. Most com-

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Some examples of operational insulation spacings (pollution degree 2) in primary and secondary circuits are:

Circuit	Working Voltage	Clearance	Creepage Distance
Primary	250rms	1.7 mm	2.5 mm
Primary	350 dc	1.7	4.0
Secondary	350 dc	1.6	4.0
Secondary	ELV, SELV	0.7	1.2

Because of these spacings requirements, IEC 950 says that many printed wiring board insulations for the bulk dc in the primary of switching-mode power supplies must have at least 4.0 mm between conductors. This is more than that required for primary-to-ground creepage distance, 2.5 millimeters!

IEC 950 says that SEL V circuits on printed wiring boards must have at least 1.2 millimeters between conductors. If we were stuck with these dimensions, then we could never use SMT devices!

These spacings requirements provide many design constraints, especially as our products get smaller and smaller, and require smaller and smaller spacings.

Fortunately, IEC 950 provides some test and constructional alternatives to these dimensions.

The first alternative is to test the spacings with a dielectric strength test.

This is a good alternative because the required spacings are very much larger than the actual breakdown distances. Let's look at some examples.

For 350-volt dc primary and secondary circuits, the test voltage would be 1500 volts rms. For the ELV and SELV circuits, the test voltage would be 500 volts rms.

Upon review of IEC 664, we find that 1.1 mm will withstand 1500 volts, and 0.1 mm will withstand 500 volts.

These data suggest that creepage distances very much smaller than the required creepage distances will pass the dielectric strength test.

So, all we need do is, for each voltage, find the smallest spacing on the board, and test it. For EL V and SEL V circuits, if the spacings are not less than 0.1 mm, then we can expect to pass the 500- volt dielectric strength test. This will qualify all the EL V and SEL V spacings on the board. Similar tests can be done for each voltage greater than ELV.

The second alternative is to short-circuit each insulation that is less than the required spacing.

This would be an inordinate amount of testing if each spacing had to be tested. Fortunately, IEC 950 specifies only two conditions when such testing must be performed. This cuts down the testing to a reasonable amount.

The first condition is where short circuiting would cause overheating of a material and thereby create a risk of fire. A short-circuit, by definition, is zero ohms and cannot itself be a risk of fire. The short -circuit testing specified in IEC 950 tests for heating in relatively low impedances in the source providing the current into the short-circuit. Usually, this will be the power supply or power distribution of the electronic equipment.

So, depending on resistances in the circuits, you may be able to conduct one short-circuit test which will maximize the heating in the power supply and power distribution circuits.

Continued

The second condition is where short-circuiting would cause thermal damage to one of the safety insulations, basic, supplementary, or reinforced. In low-voltage secondary circuits, these insulations would be the isolating insulations in the isolating transformer. So, a short-circuit at the output of the transformer or the power supply will cause the maximum heating of the primary-secondary (safety) insulations.

So, short-circuit testing is not as onerous as it first seems.

The third alternative is an exemption to both dielectric testing and short-circuit testing. If the material that could be overheated during the short-circuit test is V-l or better, then short-circuit and dielectric strength testing is exempted.

Since circuit boards usually are V-1 or better, and wire insulation is V-1 or better, and since transformer insulations are usually V-1 or better, often testing is not required.

Furthermore, elsewhere in the IEC 950 standard, use of V-1 materials is encouraged for all insulations and wherever there is a chance of overheating.

So, after all this discussion, we discover that, for the most part, we can ignore spacing requirements for operational insulations, including most of those in primary circuits of switching-mode power supplies.

What do these operational insulation (spacing) requirements and alternative tests and constructions buy in terms of product safety?

Let's first examine the purpose of spacings requirements. The spacings requirements in IEC 950 are loosely related to IEC 664. The object of IEC 664 is to prevent solid insulation failure under normal operating conditions. IEC 664 tells us that normal operating conditions include the transient overvoltages on power lines.

(The solid insulation in question is both bulk solid insulation and surface -- creepage -- insulation. Air insulation can be allowed to fail as air is a renewable insulation. The failure of air insulation is not permanent and usually inconsequential to the safety of a product.)

"IEC 664, being a basic safety standard, is principally concerned with dimensioning or otherwise protecting safety insulations against failure due to the normal transient overvoltages that may be transmitted via the power line to a product. "

IEC 664, being a basic safety standard, is principally concerned with dimensioning or otherwise protecting safety insulations against failure due to the normal transient overvoltages that may be transmitted via the power line to a product.

When spacings requirements are applied to operational insulations, the presumption is made that (1) the solid operational insulation is indeed subject to transient overvoltage, and (2) the solid operational insulation will not fail in the presence of transient overvoltages. Prevention of failure of operational insulation presumes that the failure of operational insulation will lead to an unacceptable safety situation.

Since the safety insulations are independently addressed, and since safety insulations fully preclude electric shock, the unacceptable safety situation implied by the failure of

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News and Notes, Continued From Page 11

panies are choosing to have their products tested and certified by an independent agency to ensure unfettered access to their chosen markets.

The CE marking and other logos are available on disk in both Corel Draw and Windows True Type font formats.

NOTIFIED VS. COMPETENT BODIES

Confusion often exists over the use of the terms 'Notified Body' and 'Competent Body' in various references to European approval requirements. There is no functional difference between the two bodies.

The term 'Competent Body' is used in the EMC directive and, as such, you must use a 'Competent Body' for all approvals required under the EMC directive. The 'Competent Body' may appoint an affiliated test lab.

'Notified Bodies' and 'Competent Bodies' are appointed by the government of the EU country in which they are located and 'Notified' to the central bureaucracy in Brussels for inclusion in the official listing of bodies who are competent to conduct the tests in question.

Each body is 'Notified' for specific product categories (Telephone, Information Technology, etc.) and specific types of test (Safety, Ergonomics, etc.). You may have to go to more than one body for a complete set of tests for any given product.

OSHA REVERSES POSITION ON NRTL POLICY

[The following information comes from the TMO Update, published by the Marlet Organization, Ridgefield, CT. Subscriptions are $ 90.00/ year and available by calling 203-438- 3801 - Ed.]

NRTL accreditation program... having performed on-site assessments and administrative reviews of the certification programs of the 5 year "grandfathered" organizations, UL and FM, provides a Notice of Interpretation to allow UL and PM to continue to engage in programs currently employing procedures denied to other OSHA accredited NRTL's. OSHA has now reversed its previous positions and invites currently recognized NRTL's as well as new applicants to request approval for any of these acceptable procedures.

As fully described in this clarification no tice, newly acceptable procedures fall within one or more of the following:

[of special interest to our readers:]

1. Acceptance of testing data from independent organizations other than NRTL's.
2. Acceptance of witnessed testing data;
3. Acceptance of testing data from non-independent organizations;
4. Acceptance of evaluation data from non- independent organizations (requiring NRTL review prior to marketing);
5. Acceptance of continued certification following minor product modifications by the client;

Continued

6. Acceptance of product evaluations from organizations that function as part of the International Electrotechnical Commission Certification Body (IEC-CB) Scheme; and
7. Acceptance of services other than testing or evaluation performed by subcontractors or agents.

Certain procedures are unacceptable. Included among these are manufacturer's self-declaration, client self-certification, and other similar procedures that permit non-NRTL' s to determine conformance with the product standard, i.e. certify the product"

NEW UL MAGAZINE

UL has a new magazine-style publication entitled "On the Mark". It is "...dedicated to getting the pertinent information to UL' s customers and others interested in conformity assessment" The magazine will be discussing new programs, new Listing categories and new developments for the industries served by UL in the US, well as in other countries around the globe.

Subscriptions are available upon request

Contact Carole Feil, Underwriters Laboratories, Inc. 333 Pfingsten Road, Northbrook, IL 60062 or phone (708) 272-8800, ext 42068.

NATIONAL ELECTRICAL SAFETY MONTH

May was National Electrical Safety Month according to the National Electric Safety Foundation (NESF). The theme of the campaign was "The Four Seasons of Electrical Safety," emphasizing the need for year-round Electrical safety.

NESF is a not-for-profit organization started in July, 1994. The roots of NESF can be traced to an effort in 1991 by the Consumer Product Safety Commission (CPSC) and the National Electrical Manufacturers Association (NEMA) to work together to promote consumer awareness of Electrical safety. Underwriters Laboratories Inc. (UL) joined the effort in 1992 and the Occupational Safety Health Administration (OSHA) joined in 1994.

For more information about National Electrical Safety Month, or about NESF, contact National Electrical Safety Foundation, 2101 L Street, NW, Suite 300, Washington, DC 20037, or phone 202-457-1962.

UPDATED PUBLICATION TO LIST CERTIFICATION ORGANIZATIONS

The Standards Code and Information Program of the National Institute of Standards and Technology (NIST) has awarded a contract to the Marley Organization, Inc. (TMO) to revise and update NIST Special Publication (SP 774) entitled "Directory of U.S. Private Sector Product Certification Programs". NIST SP 774 was last published in Dec., 1989 and included information on the name and purpose of each organization, the types of products certified, and the steps involved in the certification scheme. The revised directory will add to these elements a pictorial of each organization's certification mark. More information about the directory can be obtained by contacting the Marley Organization at 203-438-3801.
Copied By: VOLGSTADT_ROGER @ESP

Continued

SINGAPORE GREEN LABELING SCHEME

[The following information is provided via Manning I. Rose of AT&T Global Information Solutions M.Rose@ieee.org - Ed.]

The Singapore Ministry of the Environment intends to award the green label to personal computers (PC's) which are energy-efficient. The following is the draft qualification criteria for energy-efficient PC's.

To qualify, a personal computer should be equipped with a power management feature that minimizes electricity consumption when it is left idle. The draft qualifying criteria for the different components of personal computers is shown below.

There are some 400,000 personal computers at workplaces [in Singapore] and the number is increasing. Study shows that personal computers in workplaces are usually switched on throughout office hours although they are used about a tenth of the time. An ordinary personal computer consumes between 150 and 300 watts of electricity when switched on. On the other hand, a personal computer with a power management features uses 60 Watts or less when it is idle.

The Green Labeling Scheme, launched in May 1992, now includes 18 product categories. To date, 338 products have been awarded the Green Label.

The Ministry welcomes comments on the draft qualifying criteria. The comments will be considered by an Advisory Committee before the qualifying criteria are finalized. Unfortunately, comments should have reached the following address before May 31,1995. However, questions and comments can still be addressed to:

Secretariat of The Singapore Green Labeling Scheme
c/o Waste Minimization Department
Ministry of the Environment,
Enviro Bldg #20-00
40 Scotts Road
Singapore 0922 Fax 7354297

DRAFT QUALIFYING CRITERIA FOR ENERGY EFFICIENT COMPUTERS

- Electricity Consumption when the component is idle.
- System Unit / Computer Monitor: 30 Watts or less

- Computer system with Built in Monitor: 60 Watts or less

a) System Unit: Comprising a mother board with central processing unit, CPU, power unit, hard disk drives and floppy disk drives.

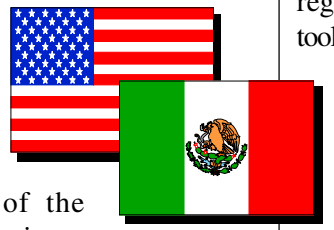
b) Computer Monitor: External Monitor or Computer screen.

c) Computer System with built-in Monitor: Comprising a System. Unit and Monitor that is included in the computer casing or cabinet and power through the System Unit.

Continued

UL AND MEXICAN SAFETY AGENCY ENTER AGREEMENT

UL and NYCE (Normalizacion Y Certificacion Electonica) of Mexico announced May 16th an agreement to work together to provide manufacturers with safety certifications for North America. NYCE, based in Mexico City, is accredited to issue certification for electronic products that meet the regulations of the Secretaria de Comercia y Fomento Industrial (SECOFI), the Mexican government body responsible for product safety regulations.



OSHA REPORT

[The following information, written by Steve Lohr, was taken from the 1995 New York News Service- Ed.]

Bowing to pressure from Congress and business groups, the Clinton administration has decided not to issue regulations to protect workers from repetitive strain injuries, government officials say.

Hundreds of thousands of American workers, from meat packers to computer programmers, are afflicted with repetitive strain injuries each year.

The fast-growing problem worried government officials as far back as 1990, when the Bush administration told the Occupational Safety and Health Administration, known as OSHA, to begin to develop a so-called ergonomic standard to protect workers.

While the risk is greater in factories, repetitive strain injuries have become a big source of injuries in offices. As the nation shifts increasingly to a service economy, roughly 40 million people - more than 40 percent of the work force- now work on computer keyboards.

As part of their campaign to curb federal regulations, the conservative Republicans who took control of Congress in November took aim at the push by OSHA for ergonomic rules. Ergonomics is a discipline that tries to design jobs and tools to fit the physical and psychological limits of people.

Led by Rep. Tom DeLay, R- Texas, the House majority whip, the Congressional conservatives attacked the ergonomic initiative of OSHA as precisely the kind of government regulation that should be stopped - costly and time-consuming for business, based on good intentions but mushy science.

Indeed, the science behind ergonomics does not supply neat cause-and-effect answers. Suggested risk factors extend beyond the job to include stress at home, exercise routines and vitamin deficiencies.

In their bid to stop the ergonomic rules, the Republicans were backed by powerful business groups like the National Federation of Independent Business and the National Association of Manufacturers, which formed a Coalition on Ergonomics to organize the opposition.

OSHA is an executive agency, so it can issue regulations without Congressional approval. Still, Congress can apply plenty of pressure. DeLay, for example, tacked an additional $3.5 million - the estimated cost of the OSHA ergonomics program - onto the agency's budget cuts.

Yet more important, it seems, is the Clinton administration's reading of the anti-regulatory

Continued

mood in Washington. Faced with an election year in 1996, scarce political capital is not going to be spent on the OSHA rules, especially if the business groups are firmly opposed.

In a statement to be released Sunday, Joseph Dear, the assistant secretary of labor who heads OSHA, noted that 700,000 Americans suffered from work-related musculoskeletal disorders and discussed the fate of the ergonomic standard proposed by the agency.

"In the face of Congressional intervention in OSHA standard setting," Dear said, "it is not now possible to publish a standard which has the breadth necessary to attack this problem."

Last week, Barbara Silverstein, the special assistant for the OSHA ergonomic program, left the agency.

Ms. Silverstein, an ergonomics expert on leave from the Washington State Department of Labor, joined OSHA in November 1993 to work on the federal standard.

"Because of the political pressure from Congress, OSHA cannot publish an ergonomic standard - it's not going to happen," Ms. Silverstein said last week.

Ms. Silverstein said she was leaving for a vacation, after which she would return to work as a senior official in the Washington labor department and as an adjunct professor at the University of Washington.

In recent months OSHA has pared back its ergonomic standard to try to make it more palatable to business. The latest proposal emphasizes education and prevention for companies more than punishment for offenders.

"In the end," said Neal Taslitz, executive director of the Repetitive Strain Injury Foundation, a nonprofit organization, "the OSHA proposal was mostly a program of required education to try to prevent this epidemic." ■

FROM THE "DON'T TRY THIS AT HOME" DEPARTMENT...

The Arizona (U.S.) Highway Patrol came upon a pile of smoldering metal imbedded into the side of a cliff rising above the road, at the apex of a curve.

The wreckage resembled the site of an airplane crash, but it was a car. The type of car was unidentifiable at the scene.

The boys in the lab finally figured out what it was, and what had happened.

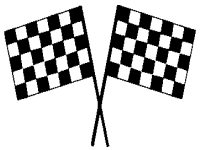
It seems that a guy had somehow got hold of a JATO unit, (Jet Assisted Take Off, actually a solid-fuel rocket) that is used to give heavy military transport planes an extra 'push' for taking off from short airfields. He had driven his Chevy Impala out into the desert, and found a long, straight stretch of road. Then he attached the JATO unit to his car, jumped in, got up some speed, and fired off the JATO!!

Best as they could determine, he was doing somewhere between 250 and 300 mph (350-420kph) when he came to that curve....

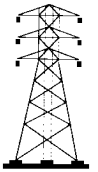
The brakes were completely burned away, apparently from trying to slow the car.

NOTE: Solid-fuel rockets don't have an 'off'... once started, they bum at full thrust 'till the fuel is all gone.

Sometimes you just can't write enough regulations to protect people from themselves. ■



Technically Speaking
Continued From page 6



operational insulation must be overheating and fire.

Now we can express why and how operational spacings, testing, and construction contributes to the safety of the product.

First, spacings and, alternatively, dielectric strength testing, demonstrate that the operational insulation is not likely to fail.

Second, short-circuit testing demonstrates that upon failure of operational insulation, unacceptable overheating and fire are not likely.

Third, the requirement for V-I insulating materials for operational insulation (without any testing) presumes a fire, but only of short duration. (The heat source ignites the V-I material in proximity to the heat source; the V-I material burns away from the heat source until the remaining material is too far from the source to continue ignition, and the fire extinguishes.)

ACKNOWLEDGEMENTS

Thanks to a colleague for suggesting this topic.

Your comments on this article are welcome. Please address your comments to the Product Safety Newsletter, Attention: Roger Volgstadt, c/o Tandem Computers Inc., 10300 N. Tantau Avenue, LOC 55-53,Cupertino,California 95014-0708.

If you want to discuss this article with your colleagues as well as with the author and editor, e-mail your comments to emc-pstc@@ieee.org.

*****

VOLUNTEERS NEEDED

- **Activities Editor**
- **Page Layout**
- **Articles**

If interested, contact
Roger Volgstadt at (408) 285-2540

CORRECTION

Our apologies to EuroConsult Inc. for the incorrect address and phone number following their "Machinery Safety, International and Euorpean Requirements" article in the March/April edition of PSN. The correct address and phone number of EuroConsult is as follows:

EuroConsult Inc.
P.O. Box 243
Manchester, MA 01944

Phone: 508-526-1687
Fax: 508-526-7118

Internet, Continued From Page 7

- Maryland
- Florida
- Los Angeles County
- Cook County (Illinois/Chicago), for some product categories
- North Carolina
- Rhode Island
- Virginia

This was the list we received from UL. As you can see from the list, the areas San Francisco and New York City are not mentioned. If there are other areas that pstc members know about, please post them. We could keep a running list of areas.

Best regards,

Dave Lorusso
EMC Corporation
171 South Street
Hopkinton, MA 01748
508-435-1000, x7518
508-435-5067 (fax)
lorusso@emc.com(email)

COMPLIANCE ENGINEERING WEB SITE

Through a month of struggle, I managed to have TREG, EMC-PSTC and some other info on-line. I am adding more to it Take a look at

http://199.171.27.194/compliance_engineering/defaulthtm or http://199.171.27.194 for ease.

Your comments and suggestions are MORE THAN WELCOME. Please be patient if you experience problems. Thanks.

Tom Bao
Timeplex

[The editor would like to extend a special thanks to Tom Bao for his efforts in creating a home page that includes archives of past product safety discussions on the emc-pstc forum. 'Net surfers should check out the above httpaddresses to see what a creative and valuable resource Tom has created. - Ed]

INSTRUCTIONS FOR USING E-MAIL

1. To Subscribe to the EMC- PSTC Product Safety Forum, send an e-mail message to:

majordomo@ieee.org

and place the following command in the body ofthe message:

subscribe emc-pstc <your_email_address>

(Do not include the brackets < or>).

2. To send a message to the EMC-PSTC discussion group, simply send an e-mail message to the following address:

emc-pstc@ieee.org

All mail sent to this Internet address will be immediately echoed to everyone on the EMC-PSTC list by an automated list server.

3. To get help about using the IEEE's EMC-PSTC discussion group, send an e-mail message to:

majordomo@ieee.org

and place the following command in the body of the message: help

Should you have any questions that are not answered in the above file, you may address them to the following: Volgstadt_Roger@Tandem.com

INTERNET RESOURCE FOR PRODUCT SAFETY COMPLIANCE

[The following announcement appeared in the PSN's March/April edition. However, because of numerous errors, we are re-publishing it here. Our apologies for any inconvenience caused. - Ed.]

Are you interested in news about UL, CSA, and the other Nationally Recognized Testing Laboratories? Do you need to stay abreast of the international product safety scene including information about IEC, VDE, the TUVs, the CB Scheme, and the European Community? Updates, information and resources for these and other product safety agencies can now be found on the Internet.

Using the "gopher" client, point your gopher at:

gopher.enews.com/l1/magazines/ alphabetic/all/ipsn/

If you have a Web browser, point it at:

http://www.enews.com/magazines/ipsn/

Once there, you will be able to sample International Product Safety News, including the current index and a selection of articles. You can also search and/or view the archives for articles of interest in back issues.

IPSN is the newsletter devoted to international product safety compliance. For subscriptions, contact:

Art Michael, Editor
Int'l Product Safety News
P.O.Box 1561-NRE
Middletown, CT 06457-8061
Phone (203)344-1651
Fax (203)346-9066
e-mailamichael@connix.com n

We Are Looking for Product Safety Articles!

Please send to:
Roger Volgstadt
Tandem Computers
MIS 55-53
10300 N. Tantau Ave.
Cupertino, CA 95014

Institutional Listings

We are grateful for the assistance given by these firms and invite application for Institutional Listings from other firms interested in the product safety field. An Institutional Listing recognizes contributions to support publication of the Product Safety Newsletter of the IEEE EMC Society Product Safety Technical Committee. Please direct inquiries to:

Ervin Gomez at (408) 553-7684 (phone) or (408) 553-7694 (fax)

The Product Safety Newsletter

c/o Tandem Computers Incorporated
10300 North Tantau Avenue, Loc 55-53
Cupertino, CA 95014
Attn: Roger Volgstadt

ADDRESS CORRECTION REQUESTED