

---

---

# ***THE PRODUCT SAFETY SOCIETY NEWSLETTER***

---

May, 1988

Vol 1, No. 4

***CHAIRMAN'S MESSAGE***  
by RICHARD PESCATORE

***PAGE 2***

***TECHNICALLY SPEAKING***  
by RICH NUTE

***PAGE 3***

***TRACEABILITY OF PLASTIC MATERIALS***  
by Lin R. Johnson

***PAGE 5***

***CHAPTER ACTIVITY REPORTS***

***PAGE 7***

***EDITORIAL***

***PAGE 12***

---

The Product Safety Society Newsletter is published monthly by the Santa Clara Valley Chapter of the Product Safety Society. Comments and questions about the Newsletter may be addressed to Product Safety Society Newsletter, c/o Qume Corp, Attention: Roger Volgstadt, 500 Yosemite Drive, Milpitas, CA 95035.

This Newsletter is prepared on Qume Corporation's *PageLINK Controller and LaserTEN Plus* printer. The editor wishes to extend a special thanks to the following individuals for their efforts in preparing this Newsletter: Claudette Oberdisk, John McBain (SCV PSS), Walt Hart and Al Van Houdt (NWC PSS), Jim Norgard (NEC PSS), and Charlie Bayhi (LAC PSS).

## CHAIRMAN'S MESSAGE

by RICHARD PESCATORE

In last month's *Newsletter*, I discussed membership requirements for the IEEE. In prior months, I encouraged you to join the IEEE. By now, I assume that you have your membership number in hand. (But if you don't, it's not too late. Join today!) So, what is the next step?

We need your support. If you believe in what we are trying to do, sign our petition and return it to us as soon as possible. We presently have the minimum number of signatures needed to petition the IEEE for sanction as a member Society. However, our probability of a successful petition will increase significantly if we can double or triple this number.

If you have already signed our petition thank you. If you haven't yet signed our petition, please do so now.

For all of you, please get three of your friends or colleagues who are also IEEE members to sign the petition and send it to us.

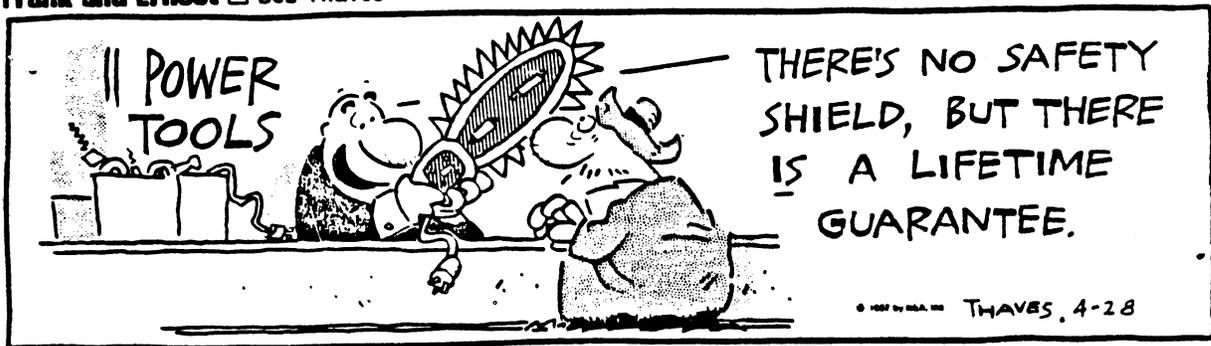
Many of you have indicated your excitement about the formation of the Product Safety Society and its planned affiliation with the IEEE. We need your active participation to become successful. Our plan is to formally present our petition to the IEEE in early summer (assuming we get signatures by then). Please spread the word.

Enough of the soap box. I am on my way out of town again (vacation this time), but feel free to call Brian Claes (408-725-5173) or John McBain (408-447-0738) if you have any questions.

Now let's have fun. Hope to see you at a meeting soon.

Rich Pescatore  
Chairman

**Frank and Ernest** □ Bob Thaves



"Reprinted by permission of Newspaper Enterprise Association"

## TECHNICALLY SPEAKING

by RICHARD NUTE

### CSA 1402A: Energy Discharge

Hello from Vancouver, Washington, USA!

Perusing my new CSA Bulletin 1402A I found Clause 5.11, "Energy Discharge". This is new to 1402A, so I thought I'd look further.

#### 1. Allowed values of capacitance

Part (b) specifies that the stored energy available at the pins of the plug shall not exceed 20 Joules when calculated as follows:

$$J = 5 \times 10E-7 \times C \times VE^2$$

where c = capacitance in microfarads  
and F = Measured peak voltage

Being curious, I solved for C to find the maximum value of L N capacitance allowed. (Remember, 1402A applies to the energy available between the pins of the plug.)

$$C = \frac{J}{5 \times 10E-7 \times VE^2}$$

For a 120-volt input:

$$C = \frac{20}{5 \times 10E-7 \times (120 \times 2E1/2)E^2}$$

or C = 1,388.9 microfarads.

For a 250-volt input:

$$C = \frac{20}{5 \times 10E-7 \times (250 \times 2E1/2)E^2}$$

or C = 320 microfarads.

No problems. Nobody EVER uses these values for EMI filters.

#### 2. Capacitive reactance.

These are large capacitors. And, they are directly across the ac line, either phase-to-phase or phase-to-neutral. (Remember, the 1403A requirement applies to the pins or the attachment plug.) I thought I would calculate the capacitive reactance for each of these capacitors:

$$Xc = \frac{1}{2 \times \pi \times f \times c}$$

For the 1388.9 uF capacitor,

$$Xc = \frac{1}{2 \times \pi \times 60 \times 1388.9 \times 10E-6}$$

or Xc = 1.909 ohms

and, for the 300 uF capacitor,

$$Xc = \frac{1}{2 \times \pi \times 60 \times 300 \times 10E-6}$$

or Xc = 8.289 ohms

These are very low values of capacitive reactance for across-the-line application. Reactive current is:

**TECHNICALLY SPEAKING, Continued**

$$I = \frac{E}{X_c}$$

$$I = \frac{120}{1.909}$$

or  $I = 62.86$  amps reactive.

A 120 Volt, 20 Amp branch circuit can't supply this current!

**3. Line rectification — capacitor input.**

Maybe the concern is for the energy stored in the capacitors of an off-line rectifier for a switching-mode power supply.

However, there are rectifiers between the capacitors and the pins of the plug. These rectifiers effectively isolate the capacitors from the plug. No energy is available at the plug.

Maybe the concern is for the single-fault condition ( although this is not apparent from the statement) where one diode is shorted.

Here we have two choices: either full-wave rectifier circuit, or half-wave rectifier circuit.

For a single-phase power line. the only possible full-wave rectifier configuration is that of a bridge circuit. Any one diode short in a bridge circuit results in full and immediate discharge of the capacitors. (The reader is invited to confirm this.)

Thus, only a half-wave rectifier is a problem. The rectifier would have to fail at the instant the plug is pulled from the socket. (Again, the reader is invited to confirm this.) Off-line half-wave rectifiers simply are not used to any extent in data processing equipment.

**4. 42.4 volts peak limitation.**

In part (a), one second after disconnection, the voltage between the pins of the plug must not exceed 42.4 volts. so, now we are talking about 20 joules at 42.4 volts. obviously, this is not a shock hazard.

What kind of hazard did the sub-committee have in mind?

Well. for drill. we can again calculate the maximum value of allowed capacitance. this time using 42.4 volts:

For 42.4 volts:

$$C = \frac{20}{5 \times 10^{-7} \times (42.4)^2}$$

$$C = 22.249 \text{ microfarads.}$$

Across a power line? Not likely in data processing equipment.

**5. Conclusion.**

Here's a test and calculation we've got to do for EVERY CSA 220 power supply, and EVERYone will pass.

The 1402A cover states the bulletin was prepared in consultation with the 220 committee. There have got to be some EE's on board: Where was their analysis of the requirement? Aren't EE's supposed to be thorough and responsible for the validity of a technical requirement?

*Comments to the above are welcome. Please address your response to the attention of the Product Safety Society Newsletter. 500 Yosemite Drive, Milpitas, CA 95035*

## **Traceability of Plastic Materials — A UL Requirement;**

### *An Organized Approach for Compliance*

*The following article is the first in an important two part series on the necessity of maintaining traceability of plastic components. The reader is urged to evaluate his or her own company's traceability program in light of the authors comments.*

#### **Lin R. Johnson, P.E.**

Hewlett Packard

Ft. Collins Systems Division

Ft. Collins, CO 80525

### **UNDERSTANDING TRACEABILITY**

#### **1.0 Introduction:**

An end product manufacturer such as Hewlett Packard/Ft. Collins Systems Division obtains Underwriters Laboratories (UL) approval on products as a valuable marketing feature. The UL approval process for a particular product is extensive.

#### **1.2 The UL Scenario:**

##### **The Product Evaluation; The Approval; The Follow-up**

When an end product manufacturer seeks approval of a product a formal evaluation of that product is begun with UL. The formal evaluation examines and tests the product for compliance with a specific UL standard. Because of the different nature of and intended use of different products, different standards are available. An end product manufacturer, working with UL, decides which standards are appropriate and the product is thus evaluated to that standard (Business machines and equipment involved with Information Processing are beginning to be evaluated to UL 478 5th edition. UL 478 5th makes reference to other standards such as UL 746C for polymeric materials which in turn references UL 94 also for polymeric materials. Thus these standards become part of the evaluation process on specific issues.)

During the formal evaluation, a product is evaluated and tested for many safety related topics. Relative to plastics, an example of one such topic is the product's enclosure. The enclosure, in addition to its aesthetic value as the cabinet for the product, must protect the operator from access to electrical and other hazards within the machine. When made from plastic, the enclosure must meet specific criteria for flammability, strength, non-brittleness, etc. During the formal product evaluation, the adequacy of the particular enclosure design and the specific material selection(s) is evaluated for suitability by the UL investigating engineer.

Once evaluated and approved, the manufacturer is NOT at liberty to deviate from the design specifications without prior re-investigation and approval by UL.

When the product has been determined to be in compliance with the appropriate standard, the details of materials and construction of the sample product are documented. This documentation is known as the UL Follow-up Procedure and is the basis to insure that the safety sensitive characteristics of the product remain unchanged.

UL follow-up Services Department has the responsibility for periodic audits of the manufacturers production. UL Follow-up Services uses the Follow-up Procedure as their basis of determining that the product continues to be manufactured the same as the approved sample product. Follow-up Services is involved as long as the "UL approved" label is used on that product.

Utilizing the Follow-up Procedure, the Follow-up Services Inspector performs a verify" function ONLY. The Follow-up Services Inspector does NOT evaluate the suitability of a particular design. Only when formally evaluated by UL Engineering is a determination made as to the suitability of a particular design or material selection. Often there are several ways to describe the safety sensitive characteristics which are detailed in the Follow-up Procedure. Care must be taken by the end product manufacturer to insure that the descriptions which are used are accurate and that any alternate materials or constructional details are included exactly as the product will be or could be manufactured. Any changes, even though the wording of particular described characteristic may be only slightly different, must be re-evaluated prior to any production change. Follow-up Services does NOT re-evaluate a particular design; they only verify what is in the Follow-up Procedure.

If a discrepancy is found by the Follow-up Inspector between what is produced and what is described in the Follow-up Procedure, the right to use the 04UL" label can be immediately revoked. This typically translates to an immediate hold on shipments and possible rework of finished products.

### **1.3 The Follow-up Procedure: How It Relates to Plastics and Traceability.**

A discrepancy commonly encountered by the inspector with plastics is "unable to verify." This means that a particular plastic component, as described in the Follow-up Procedure, specified a particular plastic but it's actual use is uncertain. The Follow-up Services Inspector will ask the end product manufacturer to prove that the particular plastic, as described, was utilized to produce the particular plastic component. If the end product manufacturer is unable to do this by one of the techniques which is described in Section 2 of this paper, the plastic specified for that component is said to NOT BE TRACEABLE to what was really used.

*Next month, Lin will continue with the second part of this article. discussing the safety properties of plastic parts and suggesting several techniques for providing traceability.*

## **CHAPTER ACTIVITY REPORTS**

### **SANTA CLARA VALLEY CHAPTER REPORT**

The April 26 meeting was called to order by the Vice-Chairman, Brain Claes, who reviewed the Agenda and received brief Committee reports.

Secretary (John McBain) — The UL 478 draft standard based on IEC 950 has been sent out. If you have not received a copy, then contact UL. Petition signatures are over 100 now, but we need as many more as possible to strengthen our application to the IEEE. Please collect and send in more signatures of IEEE members!

Membership (Scott Barrows) — We have a proposal for membership card but would like help from those of you with some artistic talent in designing a card and logo for the Product Safety Society.

Constitution (Mike Harris) — The draft Chapter Constitution is being typed now. Members of the IEEE CHMT (Components, Hybrids, and Manufacturing Technology) Society expressed support for our efforts at a recent meeting.

Chapter Communications (Roger Volgstadt) — The newsletter is doing well, but could use more contributed articles, letters, and cartoons. A regular technical columnist (Rich Nute) has started, but other contributors are very welcome to send in material or to call Roger at 408-942-4020.

Program (Brian Claes) — The programs for the rest of the year are being planned, but we still want to hear from members about possible topics and guest speakers. One proposal is to have a less structured meeting without a guest speaker to discuss various certification and product safety problems. Any comments from members? The program for the next meeting should be announced in the Newsletter when the guest speaker is confirmed.

The technical topic at this meeting was “Warning Labels”. Unfortunately, part of the program, an excellent videotape called “Warning Signs”, had to be postponed until the May meeting because of technical difficulties. The guest speaker, Al Hughes of FMC, chairman of the ANSI Z535.4 subcommittee, presented and discussed the new draft American National Standard ANSI Z535.4, “Product Safety Signs and Labels”.

Copies of the draft were available to attendees, but the talk covered background as well. For example, four points that warning labels should always consider are (1) the nature of the hazard, (2) the seriousness of the hazard, (3) how to avoid the hazard, and (4) the consequence of not avoiding the hazard. One comment from the question session was that other ANSI Standards could be expected to start using the labelling specifications in this Standard as time goes by.

--continued--

*Santa Clara Valley Chapter Report, Continued*

The next meeting will be on Tuesday, May 24, at 7:00 pm at Apple Computer in Cupertino, 20525 Mariani Avenue, on the corner of DeAnza Blvd. (just south of the De Anza exit on Hwy 280). Please ignore the address given on the April meeting agenda. We will be having our first Double Feature: the topics will be "Warning Signs", the slightly delayed but "must see" videotape, and "Hi-Pot Testing", with a guest speaker from the Rod-L Company.

PLEASE NOTE that the videotape will show BEFORE the meeting, starting at 6:45 pm, and AFTER the Rod-L presentation is over. And be sure to ask Ken Warwick about the popcorn! See you there!

**NEWS FROM COLORADO:**

Participation in the Product Safety Society is growing in Colorado. Several people there have asked to be added to our mailing list this month. Reports Steve Tarket. He is still acting as a contact person for interested people and would be glad to hear from those wanting to start a PSS Chapter somewhere in the Denver area. So don't wait!

Contact: Steve Tarket (M/S 65)  
3404 E. Harmony Road  
Ft. Collins, CO 80525  
telephone 303-229-2481; Fax 303-229-2692

**NEWS FROM SOUTHERN CALIFORNIA:**

Attention all Product Safety personnel in the Los Angeles area!!! The Product Safety Society contact person mentioned in last month's Newsletter, Charlie Bayhi of MAI Basic Four, is taking the plunge. He is organizing a "Chapter Start-Up Meeting" for the evening of Monday, June 6, 1988, 7:00 pm at MAI Basic Four (See enclosed flyer and map).

Besides some organizational discussion, the meeting will include a short technical presentation. "Witness and Self-Certification Programs". There may be some real time and money saving advantages if you qualify for these safety agency programs, as many companies have already discovered.

So reserve this evening for meeting with other product safety professionals (and probably some old friends, too). This is a great chance to hear an interesting and useful presentation, encourage professional activities within the product safety community, and have a good time -all in the same evening!

Contact: Charlie Bayhi (M/S 303)  
14101 Myford Road  
Tustin, CA 92680  
Telephone: 714-730-2556; Fax: 714-730-3185

# SOUTHERN CALIFORNIA CHAPTER

of the

## PRODUCT SAFETY SOCIETY

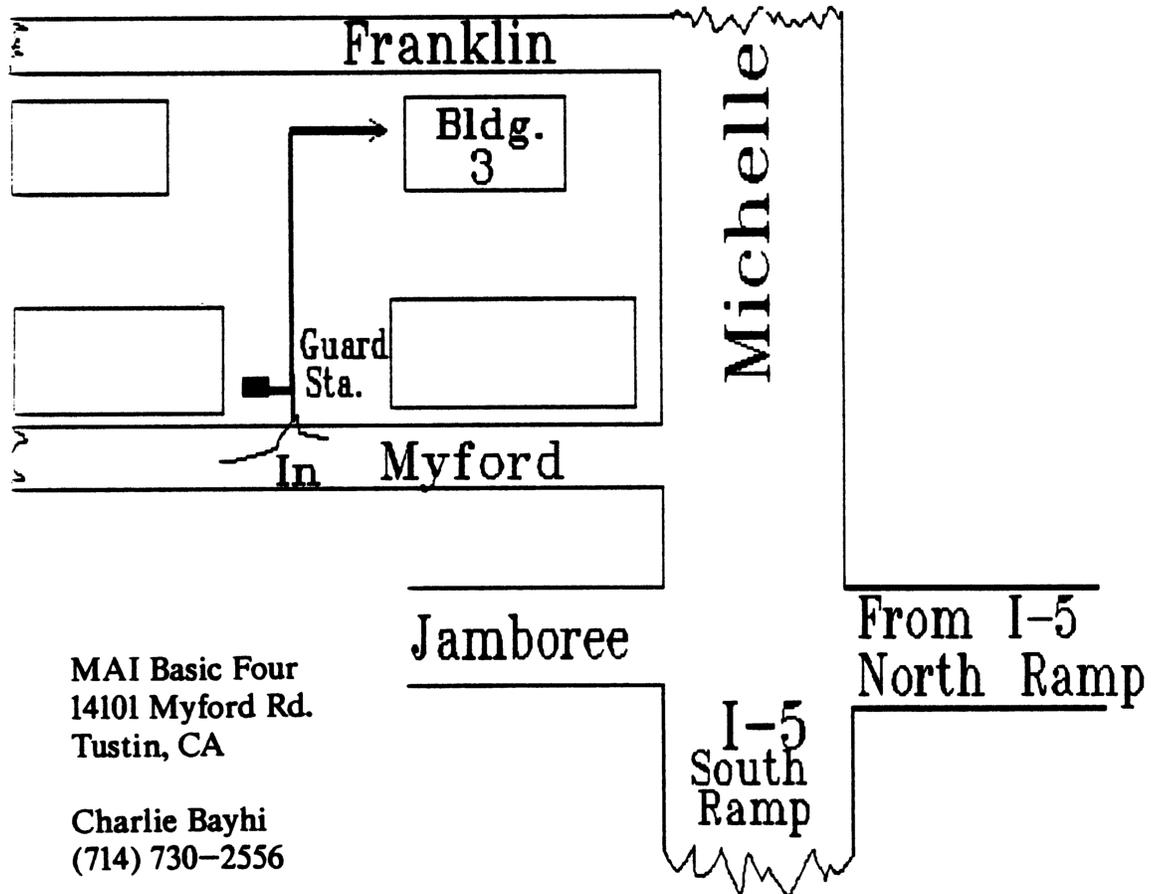
Monday June 6, 1988

7:00 PM

Presentation -- Witness and Self Certification Programs

UL -- COMPASS Program  
Product Submittal Agreement  
Fixed Deposit Agreement  
Manufacturer's Test Data

CSA -- Category Certification  
Fixed Deposit License  
Shared Certification



Directions -

Take the Myford Road Exit from 1-5  
Proceed to the Guard Station at the MAI  
Basic Four Entrance at 14101 Myford Road.  
Advise the Guard that you are attending the  
Product Safety Society Meeting. He will  
direct you to the meeting in Bldg. 3

**Northwest Chapter of PSS News**

On April 28, 1988, the Pacific Northwest Chapter of the Product Safety Society convened another conference call meeting to discuss its upcoming meeting of June 29, 1988. The meeting at Fluke Mfg. Co. in Everett, WA (see map below) will feature speakers from HP and Fluke discussing Domestic and European Product Liability. There will also be a technical demonstration regarding Line Transient Surge Testing. Following the meeting, there will be an informal, no host dinner and social event. The meeting will start at 1:00 pm and dismiss at about 5:00 pm, followed by the dinner.

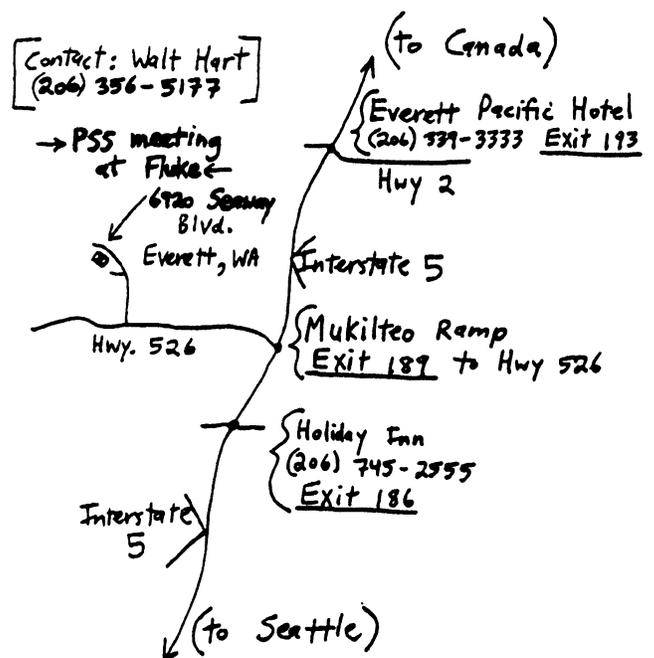
Attendees of either the meeting and/ or dinner are requested to complete and return the RSVP form on the next page or call Walt Hart at 206-356-5177.

Additional plans were made for future meetings. Specifically, an October 19th meeting was planned at Tektronix in Beaverton. OR. A speaker is still being sought with expertise in the area of primary circuit components. Another meeting is also scheduled for sometime in February, 1989, again at Fluke Mfg. Co. in Everett, WA. The subject for the February meeting will be on transformers.

The planning meeting also discussed finances, such as covering the cost of speakers, newsletter mailings, etc. More information will be needed before the officers can formulate a plan. Lastly, the Pacific Northwest Chapter has requested its members to fill out and return the questionnaire on the next page so that the program committee officers can properly address its members interests.

Questions or comments concerning activities in the Pacific Northwest can be addressed to:

Al Van Houdt  
 Product Safety Engineer  
 SpaceLabs, Inc.  
 206-882-3700



### Northwest Chapter Questionnaire

Name(s): \_\_\_\_\_

(We) will be attending the following: \_\_\_\_ Meeting \_\_\_\_ Dinner on June 29, 1988.

Return form to:

Mr. Walt Hart  
Product Safety Manager  
John Fluke Manufacturing Co., Inc.  
6920 Seaway Blvd.  
Everett, WA 98206

Those individuals involved in the Pacific Northwest Chapter of the Product Safety Society are urged to review the following list of proposed topics and prioritize each according to your interests. An agenda will be compiled and sent to the chapter through your chapter's newsletter. Please complete the form and return it to the address shown above.

Priority	Subject
----------	---------

- |       |   |
|-------|---|
| _____ | Topic Presented by UL Staff: _____              |
| _____ | Topic Presented by CSA Staff: _____             |
| _____ | Topic Presented by TUV Staff: _____             |
| _____ | European Approvals and Strategy: _____          |
| _____ | South American Approvals and Strategy: _____    |
| _____ | Presentation by ____ on the Topic of: _____     |
| _____ | Safety Engineering Topic: _____                 |
| _____ | Safety Engineering Topic: _____                 |
| _____ | Quantitative Hazard Assessment Techniques _____ |
| _____ | Topic: Human Factors, Safety -- Hardware: _____ |
| _____ | Human Factors, Software: _____                  |
| _____ | Other Topics: _____                             |

## NEWS FROM NEW ENGLAND

The New England Product Safety Society promises BIG Things for the future. Announcements were sent out in late April to 1500 people in the product safety industry in the greater Northeast area. Response has been very good. Most people are pleased "... that someone finally got around to organizing this group".

The first organizational meeting is scheduled for May 25, 1988 at 7:00 pm, and their own local newsletter will be published in Mid-June.

Petitions are being received supporting the IEEE affiliation. Mr. Norgaard will be providing an agenda of speakers and the results of their first meeting in the next issue of the *Newsletter*. Questions about New England's activities may be addressed to:

Mr. James R. Norgaard  
New England Product Safety Society  
629 Massachusetts Ave.  
Boxborough, MA 01719  
617-263-2662

## ***EDITORIAL***

Being part of a large group is really nice sometimes. All you need to do is show up, greet those you know, meet new friends and enjoy the planned activities. Of course, a large group does have its drawbacks. One is that several may have a calm assurance that whatever needs to be done will be done by someone else. Please allow me to encourage you to be that someone else in your local Product Safety Society this year.

Here at the "Monthly Gazette", there is no mild mannered Clark Kent, sorting through mountains of news items, presenting its readers with the hottest Safety Society News. Instead, a few individuals take some time each month preparing what we think you want to know. To be a success, and easier on each person involved, we need more people who would love Desk Top Publishing, organizing and preparing articles, obtaining cartoon syndicate approvals, contacting officers, and in many ways, being the main channel for Product Safety Society Information. Sound interesting? Please contact either myself or any of your local officers on how to serve this growing society.

Roger Volgstadt  
Communications Committee

PETITION FOR THE ESTABLISHMENT OF AN IEEE SOCIETY

Date \_\_\_\_\_

We, the undersigned, who are currently members of the IEEE, hereby petition for approval to form a Product Safety Society affiliated with the IEEE. The proposed field of interest, scope and objectives of the Product Safety Society are shown on the back of this form in the Charter and Strategy statements.

	<u>Signature of Petitioner</u>	<u>Membership Grade and Number</u>	<u>Printed Name</u>
1)			
2)			
3)			
4)			
5)			
6)			
7)			
8)			
9)			
10)			
11)			
12)			
13)			
14)			
15)			
16)			

The following individual is serving as Organizer for the Society.

Richard L. Pescatore, P.E. (tel. 408-447-6607)  
M/S 42LS  
19447 Pruneridge Avenue  
Cupertino, CA 95014 U.S.A.

PRODUCT SAFETY SOCIETY

## CHARTER

The Product Safety Society is an organization concerned with the safety of electronic products. Its members strive to advance the knowledge and awareness of product safety through:

- \* Study of product safety engineering principles and applications.
- \* Promotion of a consistent understanding and interpretation of applicable product safety standards.
- \* Understanding of the contribution of test houses and certification processes.
- \* Study of product safety management principles and applications.

## STRATEGY

The Product Safety society intends to meet the Charter statement through enhanced communications and education. The following methods may be used to this end:

- \* Host presentations by technical experts.
- \* Provide a forum for presentations to and from test houses.
- \* Host panel discussions on selected topics.
- \* Provide information that is predicated on principles of product safety engineering to standards writing groups and other professional organizations.
- \* Provide information based on Industry practices to third party certification agencies.

## IEEE AFFILIATION PETITION UPDATE

Thanks to everyone on this page, we have over the required minimum 100 signatures of IEEE members on our petition! But the more names we have, the stronger our application to the IEEE will be, so SEND in those petitions!!! Please send us your correct IEEE membership number if it is missing from this list. And if YOUR NAME is NOT here, then shame on you! Join the IEEE and send us a petition right away!

Allison, Joseph A	4830337	Haskins, L. Gilda 4	4422465	Pescatore, Richard L.	6428676
Andersen, Jerry D.	7562861	Hirsch, A W	1380435	Piper, Kenneth A.	6218879
Arnold, Jerald L.	5120076	Howard, Keith	4377776	Poling, Philip R.	3648706
Beckett, Glenn	1939107	Hunter, Robert D.	6737452	Prekeges, David	2779528
Beeman, Robert H.	5609227	Johns, Lucie J.	8193893	Ray, Darryl P.	7272206
Bender, James L.	7040132	Johnson, Alan	5881941	Redman, D. John	3964509
Bennett, W S.	1543354	Johnson, Lin R.	8706426	Rogers, Michael	4302964
Berger, Bart	065615	Keltey, Richard J.	7937188	Roll, Steven G.	5904347
Bishara, Michael N.		Kendall, Charles	2738417	Sallberg, Charles A.	4827804
Biskup, Richard J.	4622759	Kohoutek, Henry J.	2197663	Sanesl, Mark	8835381
Bradley, Richard	8706715	La I'etra, Jr., Frank	6901557	Shetler, John R.	
Burke, Thomas	4801254	Laidig, John	6830236	Skinner II, Loren C.	6514640
Burleson, A. Jo	3295938	Lamb, James O.	7613243	Smail, James E.	6843866
Cabral, Steven	1779560	Leach, M. J.	5237656	Steinfeld, Robert	1779297
Cappels, Dick	1846104	IJee, Robert	4069795	Tashjian, Haig E.	3450517
Chacon, Lourdes	8597205	IJeung, Kent	7481815	Taylor, John P.	6509244
Chappeu, Terry N.	1806744	Lim, B. Jeff	8598807	Thompson, Keith	7067879
Cheng, Chin	5769203	Lockwood, John	5921846	Todd, Lawrence E.	6539613
Chuang, David	4789129	IJuebbbers, Scott	5133293	Trefney, Ralph P.	6932834
Clapp, Fred D.	0215350	Lutter, Michael	4655411	Van Houdt, Al	8786R40
Cocksedge, Kenneth	5773742	Margherita, Michele	8238883	Van Savage, John F.	0416115
Cole, James M.	5373162	Marks, Murlin	5581442	Victorine, Gary W.	7532310
Coles, Patricia L.	4055695	Marquez, Jesse	7361496	Vilms, Liia	F067553
Craig, Dana B.	1874999	Marzano, Louis D.	8018426	Walters, Galen	
Cronquist, W E.	3472479	McBain, John W	8672800	Weisbrook, Larry	2719383
Czock, Stanley M.	2140366	McCarrroll, Jr., P.C.	8810087	Wesling, Paul	6185318
Davis, Robert H.	6478010	Mellberg, Hans	6737738	Whitehouse, Terence	4763256
Dickson, Douglas W	7859564	Miller, John J.	6087167	Windrem, David	3936382
Duckett, Jim	4614178	Moll, Thomas J.	8337610	Woldow, Allan F.	6016992
Ellsworth, Orval		Montague, John P.	3911278	Wong, Kenneth W. K.	5807805
Emerson, Wayne C.	5635008	Montgomery, Gordon C.	3684438	Wong, Randolph B.	0779967
Esteves, Mabel Ro	6844815	Montrose, Mark I.	7081250	Wujer, Joseph H.	1380344
Fujiyama, Atsutoshi	8193641	Mosher, Stephen s.	7301260	Yang, Cary Y.	5978671
Goldblum, Robert D.	1556646	Musterman, s. R.	5527759	Yee, Michael	1751882
Hagel, Hugh	4313599	Naik, Vipin	6473466	Yousif, Peious E.	4109690
Hanttula, Dawn M.	6555221	Ott, H. W	1459023	Yramategui, Michael H.	4849113
Harris, Ho Mo	2891059	Parker, Thomas H.	4919742	Zahra, Paul	4738431
Harrison, David A.	1849850	Pathak, Sudhir J.		Zeh, Jr., Richard J.	6510879
Hasenau, L.	8317448	Pearson, Mark P.	4876561	Zeidenbergs, Girts	0999912

Product Safety Society Newsletter  
2550 Walsh Avenue  
Santa Clara, CA 95051  
attn: Roger Volgstadt

## ***The Calendar of the Product Safety Society***

### **May 1988**

**Tuesday, May 24**

#### **Santa Clara Valley Chapter Meeting**

**Subject:** Warning Signs/Hi-Pot Testing

**Speaker:** Video/Representative from  
Rod-L Company

**Time:** 7:00 pm

**Location:** Apple Computer  
20525 Mariani Ave.  
Cupertino, CA

### **August 1988**

**Monday June 6**

#### **Southern California Chapter Meeting:**

**Subject:** Chapter StartUp; Also Witness  
& Self-Certification Programs

**Speaker:** Charlie Bayhi, MAI Basic Four

**Time:** 6:00 pm

**Location:** MAI Basic Four  
14101 Myford Road  
Tustin, CA  
(See enclosed map)

**Wednesday, June 29**

#### **Pacific Northwest Chapter Meeting**

**Subject:** Product Liability. Also:  
Surge Testing

**Speaker:** Representatives from  
HP and Fluke

**Time:** 1:00pm

**Location:** John Fluke Mfg. Co.  
6920 Seaway Blvd.  
Evertt, WA  
(see enclosed map; please  
RSVP with enclosed form)

May, 1988  
VOL. 1, NO. 4

**THE PRODUCT SAFETY  
NEWSLETTER**