

AMERICAN ENGINEERTM

A PUBLICATION OF THE AMERICAN ENGINEERING ASSOCIATION

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APRIL, 1991 Volume 1, Number 2

AEA Legal Defense Fund

There are only two basic methods of affecting change that is meaningful to the engineering community. Legislation or litigation. Both are extremely expensive efforts. AEA is therefore establishing the "AEA Legal Defense Fund" to help defray the costs of potential litigation. For the time being we will continue our efforts on the legislative front from member dues to the legal extent possible.

We are establishing a fund to provide finances to litigate selected cases where engineers have been harmed. This fund will provide for the defense of engineers and related occupations or to file litigation related to foreign imports, whether people, goods, or services; discrimination; terms of employment; pensions; patent rights; and tax issues which are detrimental to engineers and related occupations.

We currently have an immigration case which could have a dramatic effect on the ability of companies to import foreign workers under the H-1 visa classification. In addition, displaced citizen engineers may be able to recover salaries lost while unemployed. The initial cost estimate for this case is a minimum of \$25,000 and could be significantly higher. We do not have the funds to initiate this case at this time. IF THE FUNDS CANNOT BE RAISED TO COVER

THE MINIMUM COST OF THE CASE, THE CASE WILL NOT BE FILED.

These funds can only be used for the purposes stated above and cannot be combined with any other funds. For that reason a separate bank account will be established for this fund. We will maintain separate books to provide for a complete accounting of these funds. Distribution of unused funds will be per the applicable state and federal laws should it become necessary to dissolve the account.

This fund may be used for any type or number of actions as long as they fall within the parameters set out when the fund is established. I envision this as a continuing effort by AEA on behalf of the engineering community. Only those cases which we believe will have broad benefits to the engineering community will be funded through the defense fund.

Contributions in any amount may be made with checks payable to "AEA Legal Defense Fund" and mailed to our Fort Worth address: P.O. Box 820473, Fort Worth, TX 76180-0473.

Billy Reed

Roger Boisjoly Joins AEA Board Of Directors

The American Engineering Association is very proud to announce that Mr. Roger M. Boisjoly has agreed to serve the American working engineer in the capacity of member of our Board of Directors. Mr. Boisjoly brings to AEA a unique and proven ability to solve both technical and professional problems.

In making the announcement AEA President Billy E. Reed stated "We are extremely pleased to announce our association with Roger. We look forward to working with a person of his stature and ethics on the issues facing the engineering community."

He is a Consulting Mechanical Engineer, a Forensic Engineer and an Ethics Consultant. He received a Bachelor of Science degree in General (Mechanical) Engineering from the University of Lowell, formerly the Lowell Technical Institute of Lowell Massachusetts.

He was elected Mayor of Willard, Utah and served in 1982 and 1983 in that capacity.

He has received many professional awards including several from NASA for his significant contributions to the Space Shuttle Program and a Certificate of Appreciation from NASA for his performance in support of the Presidential Commission investigating the Space Shuttle Challenger disaster.

He received a Citation of Honor Award from the Institute of Electrical and Electronics Engineers, the Scientific Freedom and Responsibility Award from the American Association for the Advancement of Science, the Engineering Ethics Award from the

National Academy of Forensic Engineers and was nominated for the Founders Award from the American Society of Mechanical Engineers.

He has been interviewed by the news media and testified before Congress many times as well as having an impressive list of articles published in several different publications. He has either given lectures or participated in nearly a hundred ethics discussions.

His professional memberships include the National Society of Professional Engineers, Arizona Society of Professional Engineers, The Institute of Electrical and Electronics Engineers, the National Academy of Forensic Engineers and the American Engineering Association.

In accepting the challenge of working on our Board of Directors, Roger states "...we are not in competition with the other technical societies, but we do recognize the ineffectiveness of these societies to work on the real day-to-day issues for the benefit of their memberships. ...to my knowledge AEA is the only organization which is actively engaged in meaningful attempts to stop the unlimited importation of foreign engineers that take our working level jobs."

According to AEA's Reed "Roger will be writing a regular column in our monthly publication, and serving as a Committee Chairman in addition to his duties as a member of the Board of Directors. This type of total commitment in something he believes in is typical of Roger. It is totally in character."

American Engineering Association Purposes And Goals

The purpose of the American Engineering Association is: "to establish and maintain a national organization which will aid the progress and development of the engineering profession and related occupations; to enhance the status of members of the engineering profession and related occupations; to support activities for the employment of Americans in the engineering profession and related occupations; and to correlate and promote various activities designed to further the varied interests of the engineering profession and related occupations."

With this end in mind I have included a few goals which I believe are definitive and will speed our way.

1. Improve the economic and technical health of the engineering profession.
2. Strengthen and enhance the bond between all members of the engineering community.
3. Provide a monthly publication for members of the engineering community.
4. Increase the membership of the AEA to 50,000 by the end of 1991.

The first goal is the most difficult to achieve and will result some time in the future as the culmination of our current efforts. However, it is important to note that, from this day on, each and everything we

do will bring us closer to its realization. Every contribution, no matter how small, will benefit you and the engineering community. We are asking for a commitment to participate.

Our second goal is to bring the members of the engineering community together. Members from every engineering discipline will find unity, friendship, appreciation and strength within the American Engineering Association. As we grow in numbers and support we will increase our capabilities.

Our publication, the "AMERICAN ENGINEER" (AE), will serve as our communications link to bond our members together. We will address our engineering capabilities and the issues that effect our needs and professional lives. The AE will become a monthly publication that will unite the engineering community to influence legislation and political issues. It will keep our membership informed and play a major role in achieving our other goals.

Fifty thousand members by the end of 1991 is a very realistic and practical goal. To achieve this goal each member will have to recruit one new member each month for the rest of the year. The next 50,000 will be much easier.

Basically, these are our goals and our methods. We intend to do our part. Now, you must do your part.

Best Wishes and Good Luck.

Richard F. Tax, AEA Coordinator

Goal — 50,000 Members in 1991

Impressive AEA - CCEE Response

Last December we sent a message to supporters of Irwin Feerst's Committee of Concerned EEs and members of the American Engineering Association. The message contained: a proposal to merge the two groups, a letter to introduce them to the AEA, a ballot and an AEA application form with a demographic survey. I believe the response was impressive and I thought you might like to know the results.

The response to the first question: "Do you support the merger of the CCEEs with the AEA?" resulted in 91% Yes, 3.4% No, and 5.6% Abstentions. The response to the second question: "Would you like to join and support the AEA at this time?" produced 81% Affirmative, 8% No, and 11% Abstentions. Some of those voting against or abstaining from the second question wanted more information about the AEA. I hope our publication, the AE, has impressed them favorably and provided the answers they require.

The demographic survey response clearly focused the concern to five major issues. The issues are rated, in order, by their percentage of the total response. The number of issues selected by each respondent was not limited. Responses were as follows: Manpower, 29%; Pensions, 24%; Salary, 18%; Enhancing the profession, 17.5%; Job security, 17.5%. Not everyone used the explicit terms listed above so, I grouped similar terms under the above headings. Under the subject of "Manpower" we listed; glut, surplus or oversupply of engineers, lack of jobs, engineer shortage propaganda, importation of foreign engineers, recruiting of foreign engineering students, economic insecurity, and controlling the supply of engineers. Pensions and portable pensions were distinct enough. Salary, the third in the issue rating, included; unpaid overtime, salary compression, low salaries for U.S. engineers and for imported foreign engineers. For "Enhancing the profession" we included; life-long profession, stature or status of the engineer, work environment and conditions, stagnation, public awareness, professional recogni-

tion and elevating the profession. The last, but tied for fourth, is "Job security" and terms relating to job stability, age discrimination, and lay-offs and cut backs.

As previously mentioned, the five major or primary categories were at the focus of concern. However, also included were other issues, subjects, or methods that deserve acknowledgment. I believe these all fall under the charter of the AEA to enhance the status of the members of the engineering profession and related occupations.

For the moment, we will just list these as secondary issues keeping in mind that in the course of events any one may require special emphasis and consideration. The following, listed at random, are: benefits - life, medical and retirement health insurance; influencing legislation and national policy, U.S. manufacturing capabilities, patent rights and incentives, discriminatory legislation, strong engineering representation, morale and self-esteem, industrial policy, motivation, opportunities for continued education, use of non-fluent professors and teaching assistants, improve education, rate engineering schools, technology transfer, loss of our industrial base and more.

One unmentioned subject that needs immediate attention is a legal defense fund or, perhaps, "war chest" might be more appropriate. This is presently under investigation and will play an important role in achieving our goals.

This, I believe, summarizes the response from those that shared their thoughts and comments with us. I see no problem in addressing the subjects that many of you have identified. I also believe that we are ready and committed to the task ahead. The members listed in the AE mast head will provide the initial leadership. We all thank you for your interest and your participation.

Richard F. Tax, AEA Coordinator

P.O. Box 2012, River Vale, NJ 07656

Now Is Not The Time To Change Jobs

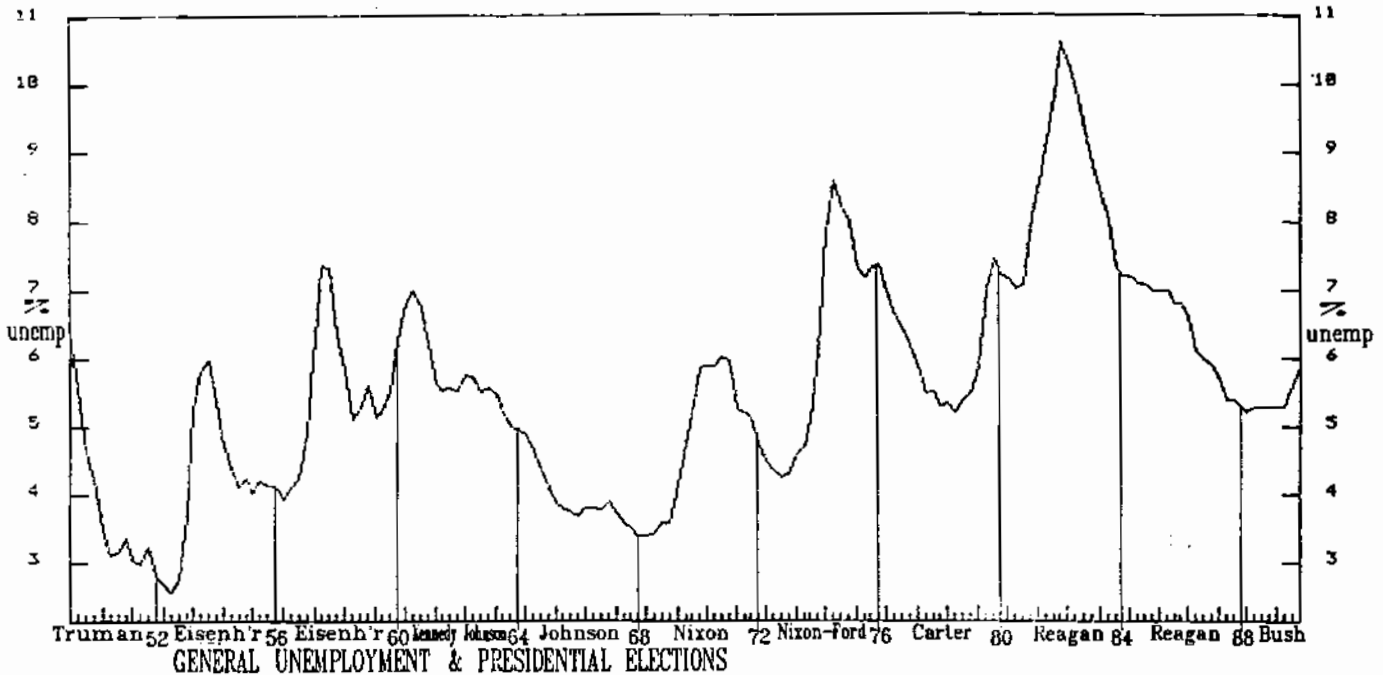
Robert A. Rivers, P.O. Box 129, Union NH 03887

There have been other more opportune times to have changed jobs as there will be more opportune times in the future. This first quarter of 1991 is the worst part of the business cycle with negative employer attitudes brought on by threatened profits, pressure from Wall Street to reduce expenditures even to the extent of so called restructuring, and increased business failures due to a credit crunch. Our short term (year and three quarters), forecast indicates a peak Engineering unemployment of 43,000 during this quarter, almost twice what it was during 1989.

The Figure shows general unemployment rates for the past 42 years along with timing marks to highlight the fourth quarter (October to December) of each Presidential election year. While general unemployment is shown, Engineering unemployment follows gen-

eral unemployment with high correlation but lagging one quarter. You will note that there is some cyclic behavior to unemployment. There is a four year pattern. The data shown leads one to the hypothesis that: The political party controlling the administration is returned when unemployment is decreasing in the quarter preceding the election. In 8 out of the last ten elections, the results could have been foretold. In the remaining two elections, the administration was engaged in a non-winning war, (Korea and Vietnam). The final hypothesis with a 10 out of 10 score is: THE POLITICAL PARTY CONTROLLING THE ADMINISTRATION IS RETURNED WHEN UNEMPLOYMENT IS DECREASING IN THE QUARTER PRECEDING THE ELECTION AND WHEN THE ADMINISTRATION IS NOT ENGAGED IN A NON-WINNING WAR. The importance of this

is that POLITICAL SURVIVAL DICTATES THAT A PARTY PRODUCE DECLINING UNEMPLOYMENT RATES BEFORE AN ELECTION. The Federal Reserve controls the Federal Funds Rate on a daily basis. A correlation between the Federal Funds Rate and General Unemployment was found to be 0.929 during the eighties indicating substantially complete control of General Unemployment by the FRB. It is not possible to have an always decreasing unemployment level to satisfy the above hypothesis. It is thus necessary to have some periods of increase in order to have a decrease. The present time is just such a period that provides the backdrop for the appropriately timed decrease in 1992 through the election. The administration is now getting a Recession out of the way in order to



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have the desired expansion in 1992. The FRB is driving interest rates down now to produce lower unemployment seven quarters from now at the end of 1992.

As an Engineer, your defense is to recognize the forces over which you have no control and take advantage of high demand periods in this manipulated cycle. The probability is that the highest demand will occur at or just after an election so do your job changing at that time. If unemployment is increasing, hold on for dear life until the worst is over. There are of course many exceptions. There are always some expanding areas of activity in the worst of times. There are special situations. The general state of the economy only determines the competitive background and the general ability to negotiate.

Notice

We have continuing problems with the U.S. Postal "Service." Some mail has been taking a very long time to be delivered or returned when delivery is not possible. Also they have lost some small amount of mail.

AEA sends a letter, acknowledging we have received your membership dues upon receipt of those dues, and normally within less

than a week. If you have not received a letter in response to your membership application within thirty days, please contact us at our Fort Worth address, so that we may determine whether it was received.

We will respond to your inquiry.
Billy Reed

Engineering Supply/Demand Revisited

In the last issue of this newsletter I raised the question of whether there is or ever will be an engineer shortage as some claim. I pointed out how erroneous data from one source can be repeated by others bent on making the shortage case. I also brought to your attention that many shortage articles are only examining the supply side of the supply/demand equation and thus can not possibly arrive at a conclusion about shortage or surplus. I presented sound economic reasons why there could not be an engineer shortage in our free economy and noted that there indeed has not been one in the lifetime of even our retired colleagues.

I have come across some more recent evidence of my contentions. During the intervening period, to my considerable distress, I have noted that questionable information continues to appear in print. I am beginning to believe that if there is a shortage of anything it may be of thorough research or intellectual honesty on the part of those who promulgate misleading statements. One can only hope that college entrants and their parents are not dazzled by the brightness of some of the pictures that are painted.

One distinction that is entering discussions of the possibility of an engineering shortage is the use of the word shortfall.

This important distinction can and still is being misinterpreted or ignored in some articles where it is picked up and used for devious purposes. The use of the word shortfall is a recognition that only the supply side of the question is being examined. Shortfall simply means that there will be fewer engineers trained over a period of time as compared with some other arbitrarily selected period of time. For example, one could say that the United States has had a shortfall of trained military personnel for the last forty years if the comparison period was the World War II era when we had over ten million citizens under arms.

One widely cited number from the few sources of original work is the shortfall of 275,000 engineering graduates by the year 2011 which was promulgated through a "leaked" working paper of the National Science Foundation (NSF). Alan Fechter, Executive Director of the National Research Council's Office of Scientific and Engineering Personnel has effectively discredited the NSF work in a recent paper "Engineering Shortages and Shortfalls: Myths and Realities" which was adapted from remarks which he presented at the Sixth Convention of Professional Engineering Societies and the National Academy of Engineering on 31 May 1990. The subsequent weak defense of the NSF work by Peter W. House, Director of NSF's Division of Policy Research and Analysis only served to reinforce Dr. Fechter's position.

One point that I did not discuss in my previous article as an indicator of the lack of an engineer shortage in the last twenty years was the fact that salaries barely kept up with inflation during that period, with a few exceptions in either direction. I did mention in the case of Petroleum Engineers that a potential shortage was averted by the simple expedient of raising the salary level to be 15% above the average for all engineers, a condition that still prevails. In the meantime the American Association of Engineering Societies (AAES) has announced that compensation for U.S. engineers has failed to keep up with inflation for the third consecutive year according to their 1990 Survey responses from more than 120,000 engineers and 14,000 engineering educators. By the way, our own Bob Rivers, whose predictions have the highest credibility of any I've seen, is coming up with engineering unemployment

estimates in a band around 2% for the next four quarters. The Bureau of Labor Statistics (BLS) actual rate for the third quarter of 1990 was 1.9%. (The transition engineering unemployment rate at times of full engineering employment equals 0.3 to 0.4 percent).

In view of the foregoing I had mixed feelings when I read in my local newspaper, the San Francisco Chronicle, of the visits to local high schools of John A. Focht Jr., President of the American Society of Civil Engineers, to "sell the students on engineering." He was focusing on minorities and females who, according to demographic studies, would be needed in larger numbers in the engineering world if there were an increased demand sometime in the future. I felt good that these student were being introduced to the opportunities of engineering, because it is a field where a bright underprivileged young person can propel himself/herself into the middle class. On the other hand, I was worried that the idea might be oversold, knowing that the worst thing you can do for the underprivileged is to offer them unfulfillable promises. I also wondered if some of Mr. Focht's zeal might have been connected with the fact that he is president of a company that would benefit from an oversupply of engineers. I hope, at least, that this gentleman was pitching all engineering because I have noted that civil engineering has been on a considerable decline for years, as indicated by reduced student enrollments and low salary levels as compared with other fields of engineering.

Another recent newspaper article in the San Jose Mercury praised the new immigration law because under it greater numbers of sorely needed engineers would be allowed to immigrate to the United States. This author did not appear to have researched the subject very well. She accepted one of the large shortfall numbers that is floating around and did not bother to explain that shortfall does not mean shortage. Even though health care is our fastest rising cost, she did not suggest what an economist might conclude, namely that what we really need most are more health care workers to exert a downward pressure on those costs. This author did not seem to care that opportunities would be lost for our own young people to enter the engineering field. It was not too surprising to note that this writer was an immigration lawyer (although such information is closely held, I've heard that the average fee for helping immigrant engineers over the hurdles is around \$5000). I wonder what kind of statements the engineering educators will be making from now on in their quest to keep the classrooms full. If they simply say that the United States needs more engineers, the immigration lawyers will publicize the fact that they know how to fill the gap faster. I have a feeling that the social consciousness of the educators will rise rapidly and they will point out the folly of reducing opportunities for young people who are already here.

All this just reinforces the suggestions with respect to this subject that I made in my last column which I will now modify as follows:

1. Question all sources of data and information on the subject.
2. Determine whether the author or speaker has a special interest that is not consistent with the interests of the overwhelming majority of people in the engineering profession, the engineering practitioners, as well as the engineering students and potential students.
3. If the conclusions drawn are not compatible with what you learned in Economics 101, don't lend credence to them.
4. Do whatever you can (like write a letter to the editor) to debunk the false notions.

*Frank Lord, Past Chairman
USAB Manpower Committee*

Reader's Voice

We set aside this column in each issue of the "American Engineer" to allow readers to voice an opinion on any professional issue they choose. Material to be considered should be a maximum of 500 words, relevant to a current issue that affects the professional life of an engineer. It should be in good taste and not slanderous. Each submission should include the name, address, home and business phone of the writer. We will include the writer's name, city and state in each published item (unless the writer requests anonymity). We reserve the right to edit each submission, as long as we don't change the gist of it, and to publish or not publish it. We assume that authors who send us material have accepted these conditions, unless they instruct us otherwise in writing.

Robert Bruce, AEA Editor
P.O. Box 4493, Great Neck, NY 11023

The Dissident Engineer's Bookshelf "Agents of Influence"

by Pat Choate, Alfred Knopf, 1990

The story of former U.S. trade officials working as lobbyists for Japanese companies makes this book one of the most controversial of 1990. The influence of these lobbyists is a serious concern for American engineers, who have been severely hurt by our federal, state, and local governments' policies on international trade and investment.

The author, Pat Choate, condensed the book into an article entitled, "Political Advantage: Japan's Campaign for America," which appeared in the September-October 1990 issue of the *Harvard Business Review*. That magazine's November-December 1990 issue published commentaries on the article.

Lee Iacocca wrote, "The U.S. government has become the training ground for Japanese agents." U.S. Congressman Marcy Kaptur asked, "When U.S. trade officials are sitting across the table from foreign clients, are they negotiating for the United States or thinking about their next job?" Hironobu Shibuya, president of the New York firm of Dentsu Burson-Marsteller, observed, "If the clever Japanese master plan that Choate envisions were actually being effected, we would hardly see the strong anti-Japanese sentiment that today runs through Congress and many segments of the business community." (Dentsu Burson-Marsteller was formerly a wholly American-owned firm named Burson-Marsteller.) And Tomohito Shinoda, Washington representative of Taro Kimura, Inc., wrote, "There is no quarantee that domestic interest groups will pursue better policies to benefit America's future." The comment you get depends on the person you ask (and his economic interest).

The issue involved is not whether foreign influence is good, but whether consequent policy outcomes are in the best interest of U.S. society. If they are not, the blame lies with policymakers for letting themselves be coerced into responding to unreasonable requests.

There is pending legislation aimed at curbing this "revolving door" of employment for U.S. trade officials, and this legislation deserves our support. However, we can never completely eliminate all influences on our government which hurt our interests. The best answer is to have our own "agents of influence" to pursue the economic well-being of U.S. engineers. But do not expect any help from the old-line engineering societies. Those societies are always eager to help increase the supply of engineers, but when there is an opportunity to increase the demand for engineers, nobody is home.
Reviewer's name withheld on request

Special Message About Future Issues Of "American Engineer"

You know we'd like to keep all our readers on our mailing list, keep you all abreast of our activities and give you an opportunity to participate and grow with us. Unfortunately and in fairness to our membership, we can't afford the luxury of a large non-member mailing list. So if you haven't contributed to our growth (see membership blank in this issue), you may not receive any more issues of AE. We encourage you to join, since this will benefit your career and enhance our position.

To our members, we thank you for your support. We'll work to make "American Engineer" a publication you'd be proud of, and to pursue your professional well being.

APPLICATION FORM

AMERICAN ENGINEERING ASSOCIATION
P.O. Box 820473, Fort Worth, TX 76180-0473

Name: _____ U.S. Citizen: _____ Naturalized: _____

Address: _____ Apt: _____

City: _____ State: _____ Zip Code: _____

Home Phone: _____ Work Phone: _____

MEMBER (\$20.00) PROFESSIONAL MEMBER (\$50.00) SPONSORING MEMBER (\$100.00)

The difference between membership grades is the financial support and dedication to the issues. All members receive a copy of the AEA monthly publication.

SIGNATURE: _____ DATE: _____

Annual membership begins on receipt of Application
Dues in the American Engineering Association are tax deductible.

NSPE And Engineering Professionalism

Billy E. Reed, AEA President

P.O. Box 820473, Fort Worth, TX 76180-0473

I read recently in the engineering trade press that the National Society of Professional Engineers (NSPE) proposes to create a "multidisciplinary professional society for all 'qualified' engineers that will deal with the political and professional concerns of U.S. engineers." This announcement should raise the antenna of every engineer in the country.

Whom are they trying to kid? This is the same society that has for years ignored the needs and wishes of working engineers. This is the same society that for years has been run by academics and industry management. They want to suddenly look out for our interests? Isn't there a saying about Greeks bearing gifts?

The NSPE has embraced the engineering shortage propaganda espoused by the National Science Foundation and others for years now. Is this in the interest of its membership? The NSPE refused to take a public stand on the 1990 immigration bill, which was a disaster for citizen engineers. I was told NSPE would bring the bill up to its leadership at the next director's meeting, which, as memory serves me, was to be after all of the hearings were over.

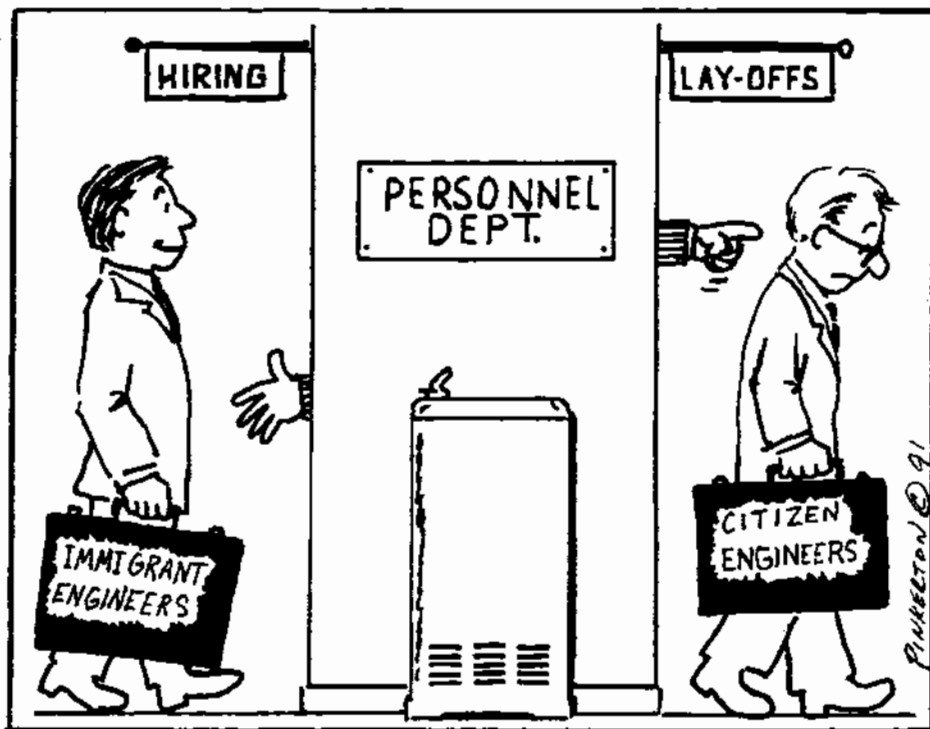
Another scary item on the agenda is the proposal for the Council of International Engineering Practice that would "protect the U.S.

engineer's ability to practice outside the U.S. when trade agreements or pacts are drawn up." NSPE has done little for working engineers for the past 30 years that I've been aware of them, and now they're going to protect us? The more likely result of this proposal would be merely to grant licenses to foreign engineers to practice here. Under the new immigration law, a degree or a license or an equivalent combination of education and experience would qualify an alien to work here.

To date, all memoranda of understanding and the free-trade agreements I am familiar with are to the detriment of citizen engineers. Where were these folks during our lawsuit to prevent the Department of Defense from ignoring the "Buy American" law, as it related to (engineering) services? Not a sound from NSPE.

Do we need an organization to work to improve the well-being of the citizen engineer? You bet we do. Should it be related to the NSPE? Not on your life.

As far as the "multidisciplinary professional society for all 'qualified' engineers that would deal with the political and professional concerns of U.S. engineers," we already have one: the American Engineering Association. And the AEA won't sell you out.



AEA Is For PTPs

Are you a Practicing Technical Professional (PTP)?

Then the American Engineering Association (AEA) is for YOU!

Invest In Your Future

Join AEA Today — See Page 5 for application

The following Members of the IEEE hereby petition for a ballot for a constitutional amendment for direct election of the V.P. for Professional Activities in accordance with the attached amendment.

SIGNATURE PRINTED NAME MEMBER NUMBER DATE

Blank lines for signature, printed name, member number, and date.

A NOTE ON THIS PETITION TO IEEE

The American Engineering Association supports the premise that improvements in the IEEE's ability to pursue professionalism is of benefit to our members. Therefore we encourage those of you who are IEEE members to sign the petition below and get other IEEE members to do the same. Then mail it back before May 15th to: Robert Rivers, Box 129, Union, NH 03887.

PETITION FOR A BALLOT TO AMEND THE IEEE CONSTITUTION

I (we) the undersigned voting member(s) of the Institute of Electrical and Electronics Engineers hereby petition for the following constitutional amendment to be placed on a ballot and mailed to all voting members in accordance with Article XIV of the IEEE Constitution.

ARTICLE VI - DELEGATES AND DIRECTORS

Sec. 4. The term of office of the President as a Delegate-at-large and Director-at-large shall be three years beginning with the office of President-Elect. The term of office of the Vice President-U.S. Professional Activities as a Delegate-at-large and Director-at-large shall be one year. The Bylaws shall provide the term of other Delegates elected by the voting members which shall be identical with the term of office as Director. All shall coincide with the fiscal year of the IEEE.

ARTICLE VII - PRESIDENT AND VICE PRESIDENT-U.S. PROFESSIONAL ACTIVITIES

Sec. 2. The Vice President-U.S. Professional Activities shall be elected or re-elected for one year by the U.S. voting members, by virtue of which election the Vice President-U.S. Professional Activities shall also be a Delegate-at-large and a Director-at-large.

ARTICLE X - CORPORATE OFFICERS

Sec. 2. The Bylaws shall specify those Corporate Officers, other than the President, the President-Elect, and the Vice President for U.S. Professional Activities to be elected by the Assembly. Those elected by the Assembly, by virtue of such election shall be Directors-at-large but not Delegates. Other Officers shall be appointed by the Board of Directors and as such will be neither Directors nor Delegates.

ARTICLE XII - NOMINATIONS AND ELECTIONS

Sec. 1. The Board of Directors shall submit annually to all eligible voting members a list of nominees for Delegates, the President-Elect, the Vice President-U.S. Professional Activities, and such other Officers as may be specified in the Bylaws to be elected by the eligible voting members for the coming term. Submission may be by notice in an IEEE publication which goes to all voting members.

Sec. 3. Nomination by petition for the offices named in Section 1 of this Article may be made by letter to the Board of Directors setting forth the name of the proposed candidate and office for which the candidate is desired to be nominated. Nomination by petition for the office of Vice President-U.S. Professional Activities shall not require more than 1% of the U.S. Voting members and election shall be by only the U.S. voting members. Otherwise, the required number of signatures on such petition and the date of receipt shall be specified in the Bylaws.

Please make copies for additional signatures.

Please return to Robert A. Rivers, P.O. Box 129, Union NH 03887

Past, Present, And Future

Roger M. Boisjoly, P.E., Consulting Engineer
3047 Menlo Street, Mesa, AZ 85213

I have been branded a Whistle-Blower as a result of my Space Shuttle Challenger testimony—exposing the truth about the management decision-making process which, over our engineering objections, was used to launch the Challenger. In this, my first column for the AEA Newsletter, I want to start off by ensuring that the playing field of communication is on a level plane. Whistle-Blower is their term; my term is Truth-Teller.

From my intense Challenger experience over the past five years, plus my previous 26 years in the Aerospace Industry, I have learned many lessons which are directly applicable to most engineers' careers. I have learned that some of you may substitute the words Snitch, Troublemaker, or Malcontent for the word Whistle-Blower as a result of corporate propaganda. For instance, I know that some of my former close colleagues at Morton Thiokol think of me in those negative terms; they never bothered to contact me for my side.

I hope that as you read this and future columns, you will not accept the corporate propaganda. They will tell you of your vital importance to them as a professional, but their wants and needs are at stake when they try to discredit people like me as non-team players. It simply is not true.

There are some common threads which link almost all legitimate Truth-Tellers together. First, we are most often long-term dedicated employees whose only concern is to right a wrong to keep someone from getting hurt or perhaps killed. Second, we are usually attacked by our employers by a barrage of personal charges without foundation or basis in fact. Third, you will never hear or read about debate of the actual, factual issues which were exposed. Corporate organizations have a fixation on punishing the messenger bringing bad news, rather than punishing the wrong-doers.

After the Challenger disaster, corporate attorneys instructed several of my colleagues and myself, in the strongest manner, to answer all investigative questions with a "Yes" or "No" only, and to volunteer nothing. This direction became a huge barrier between Thiokol management and the working engineers who testified. When several of us violated those instructions, it turned ugly. The general isolation began for me, as it became Me against Them.

Don't make any mistake about where engineers stand on the corporate ladder in this country. We are, at best, on the bottom rung; we are used and treated as a renewable resource by almost every corporate organization in the country. Why then, I ask, do corporate managers wonder about the lowest levels of the last 30 years in categories such as Productivity, Morale, Quality, Safety, Schedule, and Innovation?

There are some bright spots, as some companies recognize their past errors and are in a corrective mode. But, even so, now is the time for all of us to pick up the challenge ourselves at the working level. Start to make changes happen at a faster pace and at a more meaningful level, to preserve engineering as a legitimate profession—one with reasonable long-term stability and a measure of prestige. If the bulk of engineers continue to act as scared sheep and capitulate to outside forces or hostile engineering managers, then those engineers deserve no better treatment than they receive currently.

If you think the current makeup of the many Technical Societies will suddenly awaken to the plight of the working engineer, then guess again; they have not done anything of significance for the working engineer since they were organized. This is NOT a recommendation to resign from any Society to which you may currently belong. However, I do hope that you realize you now have the opportunity and the ability to participate in changing the engineering profession for the better...

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