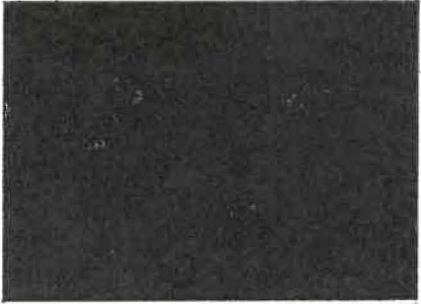
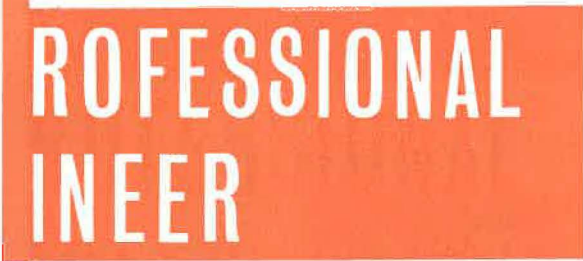




**THE  
MANITOBA**

**P**ROFESSIONAL  
**ENG**INEER



**bulletin of the  
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of the  
province of manitoba**

**october, 1970**



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*Vice-President* — R. Hood, P. Eng.

*Secretary and Registrar* — T. W. Algeo, P. Eng.

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Opinions expressed are not necessarily those held by the A.P.E.M. or the Council of the A.P.E.M.

WINNIPEG, MANITOBA, OCTOBER, 1970

## A President for All Seasons



L. W. BLACKMAN, P. Eng.

### A Tribute from the Bulletin Committee

At the annual meeting on November 26, 1970, Larry Blackman will cease to be a member of the Council of this Association. An entire volume of this publication could be devoted to outlining the contribution he made to this Association and to the profession of engineering. Anyone who is concerned about the image of the professional engineer could restore his faith completely by looking at this one man. He was fair and unbiased at all times — always he put the welfare of the Association ahead of all other considerations. He had no personal axes to grind. He did his homework and he did it well. He was President of the Association in a year that was probably the most difficult in the Association's history and the most time-consuming and yet a very great deal was accomplished and many problems were avoided because of his great administrative skill and his ability to get co-operation, respect and loyalty from those around him. He piloted the Association through troubled and tricky waters and the Association is immeasurably richer and sounder for having had Larry Blackman at the helm. There is no adequate way to thank a man who has rendered such distinguished and unselfish service to this profession. Perhaps the best way for us to thank him and to show our appreciation is to try to follow his good example.

## IMMIGRATION AND JOB OPPORTUNITIES

At the beginning of the Trudeau administration, the Immigration and Labour Departments were amalgamated into the Department of Manpower and Immigration, presumably so that better co-ordination could result between immigration and the labour market. This makes sense but the system appears to be falling down somewhere.

None of us, I'm sure, objects to immigration, since almost all of us are either immigrants or descendants of comparatively recent immigrants. However, surely immigration should be encouraged only at those times when the economy is booming and well able to absorb new citizens. Only those people who have skills that are in demand should be encouraged to enter Canada.

During the past two or three years there has been a surplus of engineers, and our own graduates are having increasing difficulty in finding employment in their chosen field. This situation is likely to continue for some time. Yet the Immigration Department still seems to be actively encouraging immigration of engineers into the country.

With increasing frequency new immigrants appear at the doors of the Association office looking for employment, with the story that they were assured by our Immigration Department that there would be no problem as far as employment was concerned.

This is certainly not fair to the immigrants, nor is it fair to Canadian Engineers especially new graduates who increasingly must compete for jobs.

It is time the Federal Government reviewed the situation and took remedial action.

— R.M.S.



## ENGINEERS IN POLITICS

During our country's formative years, when governments were concentrating on pulling the nation together and getting its people to think as one, journalists formed the backbone of its assemblies. This was only fitting, as they were the most knowledgeable about public affairs, and could influence the public better than any other group.

More recently, as the role of government shifted from public leadership to the making and enforcing of laws, lawyers as a group have held (and still hold) sway. This too, if not particularly healthy, is at least understandable. However, another change is upon us.

This decade has seen the emphasis in governments pass from the setting of guidelines (or laws) on how our affairs should be run, to the actual running of them. As government influence broadens to include more technological and managerial fields, engineers can, and should take a more prominent position in policy setting. Engineers would be less likely to play the games traditional to politics, and would concentrate on doing their job, that is, getting things done. Their experience at trading off one advantage for another in design and manufacture would be useful for legislators, driving home to them that very few things are red red or blue blue, but actually various shades of purple. They would lend a certain air of common sense and direction to an apparently chaotic process. The amateurs have spoiled the oldest profession; now it's happening in politics.

Here, however, we run into a snag. The early journalists and recent lawyers were mostly self-employed: the newspaper man had his small daily or weekly; the lawyer his private practice or partnership. Each could engage in politics and still keep his business ticking over until his return from the capital. In contrast, at present most engineers are salaried employees. Even worse, a large proportion of these employee-engineers either work directly for governments, or else for firms largely supported by government contracts. So to enter politics, the average engineer must first quit his job; a serious step for a first-time candidate.

We have a large talent pool of men, clear thinking by nature, training, and experience, who could inject new vigour and clarity into Canadian public life. But first this pool must be tapped. We need a law similar to the one that holds open a person's job until he returns from military service in time of war. Politics is, hopefully, as much a public service as war-time duty, and in the long run as important to our country's survival.

Let us start looking for ways and means now.

— R.R.M.

## NOMINATING COMMITTEE REPORT

The terms of the following members of Council will expire at the annual meeting to be held on November 26, 1970: L. W. Blackman, A. Baracos, S. Barkwell, L. S. Earp, K. Hallson, A. M. Lansdown.

The Nominating Committee has nominated the following: S. Barkwell, L. S. Earp, A. M. Lansdown, W. R. Newton, A. J. Summach.

Nomination forms will shortly be mailed to each member of the Association. Each form submitted must be signed by the person nominated, by one nominator and six sponsors, all of whom must be members in good standing of the Association.

There are five vacancies to be filled. Mr. Blackman was a member of Council by virtue of his position as Past President.



## "COUNCIL NOT POLLUTED"

Manitoba Pollution Probe, a citizens' organization dedicated to fight against pollution through public education, has approached the Association suggesting participation in an "Environmental Improvement Co-ordinating Council." This body would bring all interested active associations together to establish a collective body of information.

Council gave this request a cool reception since so little is known of the organization or their method of operation. There was general reluctance to get involved in a scare program. Councillor Blackman said "The Clean Environment Commission would be a better channel for the Association's efforts." Councillor Lansdown disagreed saying that governments were unable to effectively tackle the problem.

Councillor McBain felt there would be a considerable conflict of interest between members on this subject and it would be difficult for the profession to take a specific stand.

Councillor Baracos offered to attend the Pollution Probe meeting as an observer. Council encouraged this, but declined to grant him official observer status.

President Adam reported to Council on the meeting of the Canadian Council of

Professional Engineers Board of Directors. Besides outlining the items summarized separately in this issue, Mr. Adam mentioned an increasing concern for unity within the engineering profession. He felt that the nomination of the President of CCPE as Vice-President of EIC might be an indication of closer co-operation between the two groups. He stressed, however, that a real merger between EIC and CCPE is neither possible nor desirable since EIC is only one of many active engineering societies. He sees CCPE emerging as an umbrella organization under which the technical societies could operate in unity.

President Adam reported he had voted against a restrictive proposal to require applicants for membership through the Board of Examiners to hold a Bachelor's Degree. Ontario had questioned the expense of examining those with low standards when only 1 in 20 is able to pass the exams.

Council received a delayed report from our own Board of Examiners. The report could not be presented earlier because the Board could not raise a quorum for their meeting. Council considered incentives for the 12 man Board whose appointment must be approved by the Lieutenant-Governor-in-Council. Payment for meetings as in Quebec and Ontario was rejected but Association sponsored dinner meetings were approved.

The Profession moved a step closer to a final draft of the discipline by-law with the preparation of a full statement of its objectives. They are: To provide for an informal investigation of complaints with a progressively formal approach as to the seriousness of the complaint demands. To remove the necessity of one engineer making a personal accusation against another to start an investigation and to provide an opportunity for members to seek advice on ethics and policy matters. To minimize not only the cost to the Association of holding hearings but to relieve members of the cost of prosecuting a justified complaint or defending one which is unjustified. It is also hoped that the new by-law will set up the machinery to handle any allegation levelled against the profession or against any member. The by-law is now at the final draft stage.

Council also turned its attention to an ad in a local paper for an Engineer—a university or MIT graduate. Firm action

was taken by Council in bringing the error to the attention of the advertiser.

Approval was given for Registrar Algeo to visit outlying areas of the province. Councillor Hood expressed concern for the servicing of members remote from most Association activities, and a need for better communication between the Association and its members.

As usual Council handled a mass of "routine" work. At the last three regular Council meetings a total of 77 applications for registration have been processed. Council also handled 31 transfers, granted 23 licenses, accepted 32 Engineers in Training and received 7 requests for reinstatement. It has been a busy period for an active Association.

A very short time was spent considering the accounts after the Registrar's explanation that a negative overdraft is a deposit.

— K.M.J.



## BEEFERS AND COMPLAINERS

Organizations usually regard their chronic beefers and complainers as negative assets, as a hindrance to their operation and well-being. Some are; some aren't.

One type, the malcontent, either suffers from a personality defect or has become institutionalized by his surroundings over the years, and would complain under any set of circumstances. He indeed lowers office spirits, retards the work of others, and becomes a nuisance to all.

The other type, the complainer whose gripes are justified, is a sign of deep-seated illness in the outfit, and is potentially valuable to it because he sees what is wrong, and often knows how to right it. He has probably already tried constructive criticism or positive suggestions through the recognized channels, but has been ignored, brushed off, or even bullied by his superiors. He then unconsciously relieves the resulting frustration by beefing to his peers, and will, if neglected over the years, turn into the malcontent already discussed.

Management's failure to act on valid suggestions offered by these workers may lead to poor customer service with the

resulting loss of sales or public confidence, or to inefficiency and unnecessary operating expense. It will certainly lower employee morale, and so cause poor work and high employee turnover rates. Any one of these results of simple inattention is expensive; a combination is disastrous. The manager who retains the dirty-thirties notion that "if you don't like it here, you can damn well leave" is just sending valuable idea-men to work for his competitors, and deserves what he gets.

Thus it is vital for a supervisor to differentiate between the useless malcontent and the justified complainer, if he values the corporate well-being more than his pride. Lack of training and interest in human nature increase the difficulties, as does the universal pre-occupation with solving day-to-day problems while ignoring their underlying causes. (The Forest and Trees Syndrome.) Great rewards, however, await the perceptive organization that recognizes the latent value in its dissatisfied employees, and redirects their energies from complaining, back to making useful suggestions.

— R.R.M.



## KNOCK KNOCK

In these days of constant imminent crisis and radio talk back shows it has become popular to express a critical attitude. Any action taken by an individual or group is particularly vulnerable to the knockers of our society. Action not taken where it might have been is a little less obvious but once ferretted out can produce handwagons of people who could have done better.

The Professional Engineers of Manitoba are generally not inclined to knock since their profession continually demonstrates the difficulty involved in "getting things done." Occasionally some of us are tempted into the game and get very critical of our own Association. Before being too hard on the president, councillors or committee members we should remember that old adage "If you haven't tried it — don't knock it."

And the next time you feel like knocking the Association, knock instead on the door of 710 Chamber of Commerce Building — meet the staff and offer your services. An interesting and challenging experience can be your reward.

— K.M.J.

## IMPORTANT

Any member who does not intend to retain his membership for 1971 should send his resignation in to the Association office no later than December 31st. Under our by-laws, any member who resigns after December 31st, is liable for half the year's annual dues if he resigns on or before June 30th, and the entire year's dues if he resigns after June 30th. If you have retired from active practice or have moved from the province and are no longer engaged in any engineering work in Manitoba, and you do not wish to retain your membership, please be sure to send your resignation in to the Association office by December 31st.

Every year, some members are written off for non-payment of dues on June 30th, because they intended to resign at the end of the previous year but did not make their intentions known to the office, and they don't want to pay fees for the current year. This means that they must be removed on June 30th for non-payment and if they ever wish to be reinstated to membership again they must pay the entire fee, plus \$3.00 penalty, for the year in which they were removed, plus another registration fee, plus the full fee for the year of reinstatement. Under our existing fee structure this would total \$88.00.



## OH, TO BE ON COUNCIL!

This is the time of year when nomination forms are sent out and members begin thinking about serving on Council, or about trying to talk their friends or business associates into running. And why not.

To the uninitiated it could all look very appealing. Surely a certain amount of prestige attaches itself to a Councillor. Surely he is regarded as a peer among engineers; is treated with deference and respect. He attends a few meetings a year, makes a few grave decisions, sits on the platform at the annual meeting looking very wise, gets a flattering picture taken for publication in the professional bulletin, and perhaps even in the local dailies should he be elevated to the position of President. There might even be a free cocktail party thrown in. He looks genial and full of conviviality as he presents the golf cups to the year's winners. His wife becomes first lady at the annual ball. It

all seems very grand and prestigious. Being revered and adulated by his fellow engineers naturally places certain heavy responsibilities on his shoulders. A Councillor is, of course, projecting the image of the profession at the highest level, so he must remain at least relatively sober at all the stags, and he ought to polish his shoes once a month. Also, and of course it is very incidental and hardly important at all, but if he got elected to Council there is this one item that has been bugging him for a long time. He wants a colored phone, and his boss, the old tightwad, won't let him have one. Now if he could just get elected to Council, then he could suggest to his fellow Councillors that it would certainly help the image of the engineer if they all had colored phones, and this way he could bring pressure to bear on his boss. So with a little coaxing, after the nomination forms arrive, Johnny Peng allows his fellow-workers, (who also happen to want colored phones from old skinflint), to talk him into letting his name stand. His friends have been complaining for years that the same old clique is running Council, and they spread the word that Johnny represents a new group interested in improving the image of the professional engineer. And Johnny is elected to Council.

He heads off to his first Council meeting full of enthusiasm, dampened only slightly by the fact that he has to miss a football game on T.V. in order to attend. He plans to put forward the colored phone idea during the first lull in the meeting. After four hours he begins to wonder if there will be a lull. Council has dealt with registrations, transfers (there are two kinds, those who are coming into the province and those who are transferring but not coming, and they are registered under different sections of the Act—at least he thinks that's what happens.) Then there were licences and engineers-in-training. He flapped back and forth through the Act and the by-laws, trying to figure out when an engineer-in-training can apply for full registration and how many projects are covered by a licence. He asked three or four very intelligent questions and was not only surprised but somewhat miffed when he read the account of his questions in the Bulletin. The darned reporter seemed to have entirely missed the point about what really clever and probing questions he was asking.

He deliberated on such weighty prob-

lems as whether or not the Association should submit a brief regarding the Future Development of Science Education in the Province, and the adoption of a building code. By the time Council had reached item 17 on the agenda he had run down to the parking meter to insert dimes three times. He supposed that for the next meeting he would have to use one of the neighboring parking garages and pay \$1.50 to do so. Due to the imminent suspension of elevator service for the night, the meeting was adjourned before the agenda was completed, so the matter of colored phones remained in embryonic condition.

Before the next meeting he received in the mail 58 pages of printed material on various subjects, all of which he was supposed to digest. The second meeting was similar to the first except that it started at noon. Once more he asked several very intelligent questions and made a few suggestions about how procedures could be improved. He detected a note of quiet patience in the voice of the chairman, who said all his suggestions would be noted. Once more the Bulletin committee reporter completely distorted his contribution to the meeting. After he got the item of colored phones on the agenda he would have to deal with some form of discipline for the Bulletin committee. They certainly needed some guide lines.

Then a special meeting was held in the evening and the members of Council were seated at the front. He sat in a dignified fashion, rather like royalty, he thought. This would be his first experience at receiving the adulation and respect due his position. But the members present had obviously made too many trips to the bar. They treated him more like a sitting duck. Someone kept asking him questions about a lot of issues and he didn't have any ready answers. After all a member of Council couldn't be expected to carry all that mound of information in his head. He flapped back and forth through his papers but obviously the office had sent them to him in very bad order, as he could find nothing pertinent. He thought of falling off his chair to change the mood of the meeting, but that tactic had already been tried by one of his predecessors. For an hour the members badgered at Council. They seemed to find fault with everything. It was very discouraging.

He soon discovered that Council had an endless amount of business to process. Meetings lasted from four to six hours, so they either took up all noon hour and part of the afternoon, or if they started at 3:30 he could count on being home for dinner about 9:00. He did get to present one golf cup. He had to pay \$5.00 for his dinner and \$4.50 for drinks for the privilege, and then they didn't even laugh at his joke and there were no photographers. He soon discovered it was even worse for the president. He was an ex-officio member of all committees; he was blamed for most things that went wrong, but if things went well, someone else usually claimed the credit. He not only had to attend all the Council meetings but all the Executive Committee meetings as well. He represented the Association at various and sundry functions, both business and social. He had to schedule his holidays around Association meetings. He spent more money to park his car to attend meetings than the annual cost of several colored phones. Johnny Peng wasn't sure he ever wanted to be president.

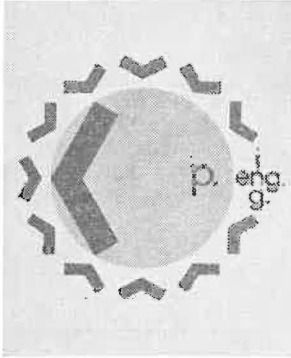
By March he wasn't even sure he wanted to be on Council any more. No one seemed to be treating him with noticeable respect. His friends kept bugging him about the colored phone item and he just couldn't get it on the agenda. Council never seemed to get to the bottom of an agenda. It was incredible the number of things that the Association was asked to become involved in or to give an opinion on. There were some rumblings at home, too. Johnny's wife complained that he seemed to spend every evening going over papers. He was tired of long dreary meetings, of committees and sub-committees, of budgets and hearings. A hearing could take up several full days. He was missing a great deal of time from his place of employment. His boss didn't say anything about it, certainly didn't suggest docking his pay, but it did make him feel just a little squeamish about making such a fuss about the colored phone. The boss seemed to regard Johnny's contribution and that of other engineers in the firm who were on committees, as a worthwhile contribution to the profession. No doubt it cost the boss a lot of money. Both the boss and the President were making him very uneasy. The President obviously had little time for anything but his regular job and Association business. He was out of pocket just by being on Council and the boss was certainly out

of pocket, and yet he suddenly realized he had never heard either one of them say, "What is there in it for me?" They both seemed to give far more than their fair share. Johnny mulled it over. Could it be that they had got where they were by hard work and doing a few things for their professional organization with no selfish motives at all?

After a year of tedious meetings, reams of paper, hours of homework, important decisions taken, briefs prepared and presented, etc. etc. etc., Johnny was ready for his first annual meeting as a Councillor. He sat at the front with other members of Council and visiting dignitaries and the meeting got underway. As it progressed he wondered how the members could know so little about what is going on in the Association. Didn't they ever read the Bulletin and the regular mailings? They fired questions at Council, almost harassed them, argued, and questioned their decisions. Didn't they realize that Councillors knew a lot more about these matters than they could possibly know? Apparently not. Criticism was levelled at them in various areas. Someone even got up and asked what Council had done about the group that wanted colored phones. Wasn't Council interested in raising the prestige of the engineer, in improving the image? Not one person got up and said what a great bunch of guys they were to have given up all that time over the year.

Twelve months later Johnny Peng again sat at the head table, his two-year term drawing to a close. It was almost a repetition of the previous meeting, only with a slight variation in the people baiting Council. Again the members of Council had worked long hard hours for the Association, and once more they were subjected to a barrage of foolish questions and suggestions and more criticism. Under the item of New Business, someone at the back rose. "I direct this question to Mr. Peng," he said, "As I understand this was an item of great concern to him when he was elected to Council. Does he not feel that the Association should urge all employers to furnish colored phones for engineers in order to improve the image of the engineer? And if he still holds to this view, which he espoused prior to his election to Council, what has he done about it?" Johnny Peng sighed. He rose and faced what looked to him more like an alien group than one in awe of his

position as Councillor. He glanced down at the files in front of him, files he had accumulated during his two years as Councillor. His collection was about a quarter the size of the President's pile of papers. He looked up at the questioner. He remembered asking this same sort of question of Council himself at an annual meeting about three years previously. It seemed an eternity ago. Actually it was only 49 meetings and about 50 reams of paper back. "Naturally," he said to the questioner, "I am interested in anything that will help the image of the professional engineer. While I have enjoyed my work on Council enormously, unfortunately for personal reasons I am unable to continue as a Councillor, so I would suggest that if you want this matter of colored phones taken up by Council, you contact one of the new Councillors." Johnny Peng sat down. He thought it had been rather a diplomatic answer. He wouldn't alienate his friends who were all for colored phones, and he wouldn't be stuck with the job of trying to get the item on a Council agenda. The President rose. "If the questioner wishes to enhance the image of the professional engineer," he said, "I would suggest that he volunteer his services for one of our committees and donate his time and talents to the operations and betterment of his profession." Johnny Peng figeted in his chair. He looked at the President. He knew he had had a very trying year. Even some of the members of Council had sometimes seemed to be something less than cooperative. The President always had his homework done and came to every meeting well prepared for every item on the agenda. He had been patient and tolerant of those who were not so well prepared. The annual meeting itself must be quite a strain on a President. He has to stand up in front of all those members, some of whom seem to make sport out of sniping at him. The President had fielded all questions well with ready answers; he had answered quite a barrage of criticism, and he looked tired. The President was speaking again. "In concluding this meeting," he said, "I wish to thank you very much for the opportunity you have given me to serve as your President. For me, it has been one of the most rewarding experiences of my life." Johnny Peng glanced at the President. He didn't look so tired any more, and he looked about ten feet tall as he stood there alone facing the members. Johnny Peng led the applause. — S.J.A.



### THE CANADIAN COUNCIL OF PROFESSIONAL ENGINEERS

The Canadian Council of Professional Engineers is the co-ordinating body of the eleven provincial and territorial professional engineering associations which are responsible for the registrations and licensing of Canada's 64,000 professional engineers. While the definite channels of communication between Council and Canada's engineers are still in the exploratory stage, the Bulletin will attempt to keep the APEM membership informed on Council activities under the C.C.P.E. Logo.

Since this is the first use of the C.C.P.E. Logo a description of its significance is outlined below.

"Eleven stylized arrowheads appear around the suggestion of a circular table to represent the eleven Provincial and Territorial Associations/Corporation in Council session.

A stylized "C" sitting within the circumference of the table stands for "Canadian-Canadien."

Horizontally opposite to this "C" and lying also within the circumference of the table is the "P" part of the designation "p. eng.," so carefully designed in order to bring out the fact that in Quebec the English designation for registered engineers is "eng." At right angles is the designation of "ing." which is that used by Quebec franco-phone engineers in the French language. In this manner the official designations of those registered engineers who are members of the Provincial and Territorial Associations/Corporation are

incorporated into this new C.C.P.E. Logo.

Thus in symbol and abbreviation this can now read as "The Canadian Council of Professional Engineers — Le Conseil Canadien des Ingenieurs."

#### C.C.P.E. Elects New President

Mr. John Bartlett Angel, P. Eng., 57, of St. John's, Newfoundland, has been elected president of the Canadian Council of Professional Engineers. Mr. Angel, born in St. John's, Newfoundland, completed his engineering studies at McGill University, Montreal, graduating with a Bachelor of Engineering (Metallurgy) in 1935.

During his student years Mr. Angel obtained extensive knowledge of the Canadian Arctic and Greenland having been a member of several noted expeditions in those areas at that time. Upon graduation he entered the family firm whose founding predates the Canadian Confederation of 1867. Since 1948 he has been its president. He is also chief executive officer of a number of other related Newfoundland companies.

He has been President of the Association of Professional Engineers of Newfoundland (1965), and, in addition to his memberships in professional and technical organizations, he has served on boards of various academic, business and community groups.

Married and the father of five children, Mr. Angel is also a member of golf and fishing clubs in the St. John's area.

Mr. Angel succeeds Mr. John H. Dinsmore of Montreal who remains a member of the executive committee until May, 1971 as immediate past-president. Mr. H. L. Morrison of Edmonton becomes vice-president and the newly-elected member of the executive committee is Mr. D. C. Lambert of Vancouver.

#### Council Decisions and Ratification

A number of important decisions which will have long term effects on the engineering profession in Canada were made by the members of the Board of Directors during their deliberations at the western meeting. In accordance with the By-laws of the Council, ratification by the Associations/Corporation is necessary on all matters except those which are recom-

mendations to the associations or those which are referrals for action by the associations or are classified as items of internal management of the Council.

### **Technical Manpower Statistics and Planning**

The establishment of an agency, semi-independent of the Council, but under the leadership and general supervision of C.C.P.E., which would consist of a board or commission of representatives of various interested governmental and non-governmental organizations was proposed by the Board of Directors. The objective of this agency would be to carry out engineering and technical manpower studies with findings supplied by participating bodies. Such an agency could be designated as the Canadian Engineering (and Technical) Manpower Commission. In order to investigate the feasibility of such a proposal, the Board authorized an expenditure for the cost of such a study with the request that a detailed report and recommendations be submitted to the Board as soon as possible.

### **Youth Science Foundation**

The Council learnt that the Youth Science Foundation had decided to introduce an engineering section in the various Science Fairs it supports throughout Canada. It was also informed that the Foundation had agreed to support the establishment of a Canadian National Science and Engineering Club Association under its auspices. For these reasons, the directors authorized the Council to continue its support of the Foundation particularly in the areas of Science and Engineering Fairs and Student Counselling.

### **Engineering Technologists and Technicians**

Concern was expressed about possible difficulties arising with respect to the area of practice of technologists and technicians vis-a-vis that of professional engineers. Council decided to hold a special seminar on this subject in conjunction with the 1970 Fall meeting of the Board of Directors.

### **S.C.I.T.E.C.**

A report was presented to the Board about the formation of the new national organization called the Scientific, Engi-

neering and Technological Community of Canada. S.C.I.T.E.C. is intended to be a single comprehensive organization designed to mobilize the strength of the scientific and technological community of Canada and to dialogue with government and the public. Its membership is open to Natural Scientists, Social Scientists, Applied Scientists, Technologists and Students.

In receiving this report, the Council concurred with the recommendation of its executive committee that C.C.P.E. not become immediately a participating organization within this new agency because of inadequate engineering representation on the governing Council. It did however ensure that individual membership of the General Manager would be retained and that C.C.P.E. participation in S.C.I.T.E.C. would be reconsidered at a later date.

### **Definition of Engineering**

The Board of Directors called for work to continue on a Model Definition of Engineering which might be used in future revisions of the Engineers Acts of the various Provincial Professional Engineers Associations/Corporation. It is felt that all present definitions do not adequately reflect the nature of current engineering practice.

### **Fees and Performance Standards**

The Council received a report from a special committee appointed to discuss and negotiate with the Federal Government matters concerning a New Form of Contract for consulting services and a Federal Government consulting Fee Schedule and Performance Standards. The committees were directed to continue to press the Government in an effort to arrive at a mutually satisfactory arrangement.

### **Student Counselling**

A report was also received concerning the activity of the National Joint Committee on Student Counselling, a sub-committee of the Canadian Engineering Societies Committee of which the Council is a member.

Work is almost completed on a new Monograph on Careers in the Engineering profession. A new pamphlet for wide distribution on the subject of the engineering

profession, a film-strip and a 16 m.m. film are also being considered as possible aids for use in student counselling on careers in engineering. —E.E.L.

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### FORMER BULLETIN EDITOR RUNS FOR COUNCIL

Bill Newton, who has served the Association well as our Bulletin Editor, has been nominated for Council. Bill's highly regarded analytical mind and ready wit have been appreciated in the past, and would make a fine addition to Council. —J.W.J.L.

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### LETTERS TO THE EDITOR CHURCHILL-NELSON RIVER POWER DEVELOPMENT

In the June, 1970 edition of the Manitoba Professional Engineer, Mr. Alden R. West, P. Eng., outlines his point of view in regard to the considerations which should be taken into account in the development of the Churchill-Nelson River power potential.

The points are well taken and I am sure deserve consideration. (I am also sure that most of them had already been considered by the Manitoba Hydro.) I would have no quarrel with Mr. West had he not expressed regrets "that little support seemed evident among those attending for the alternatives to high level or intermediate flooding of the lake," as proposed by Professor Kuiper.

It is beyond me how Mr. West could expect a self-respecting Professional Engineer not intimately involved with the project to either express approval or disapproval on a subject as complex as the Churchill-Nelson River Power Development, on the basis of the divergent information provided to us during the meeting of May 5th, without months or even years of study.

Surely the lack of support for Professor Kuiper's proposal stemmed not from the engineering principles involved, but simply from the fashion in which Professor Kuiper took it upon himself to make his proposal publicly known.

Professor Kuiper should not have supplemented his general criticisms with the presentation of an engineering alterna-

tive. Surely the objections to Hydro's proposal had nothing to do with engineering alternatives but rather Hydro's terms of reference and objectives. It is only these items that Professor Kuiper should have quarreled with, if he felt so compelled.

I also believe that the use during the meeting of such ambiguous terms as "anguish and agony" in conjunction with an engineering proposal is inexcusable for one can suffer "anguish and agony" on the death of one's cat or on the death of one's parent, but surely there is a lot of difference between the two.

The action of Professor Kuiper and some of his colleagues is particularly regrettable as, by the use of academic and job titles, they have conveyed an impression of supreme authority to the uninformed public.

Yours very truly,  
W. Saltzberg, P. Eng.

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### LIMITING ENROLLMENT

The Editor:

In reply to the article entitled "Limiting enrollment not the answer" in the June, 1970 edition of the bulletin, I would like to make the following comments.

It is the feeling of my colleagues that limiting enrollment would create:

- (1) a deviation from the assembly line production of engineers
- (2) more personal contact between professors and students
- (3) higher standards for the teaching and learning processes
- (4) higher demand and possibly full employment for new graduate engineers
- (5) more challenging jobs for engineers, technicians and technologists, and
- (6) last, but not least, remuneration equitable and comparable to those of other professions.

It is also agreed that limiting enrollment is not the only answer to our problems.

The establishment of one strong association for all the practising engineers of Canada, the establishment of a full time public relations department within the association, the creation of full time legal counsel to look after the interest of the association and of the members are only

a few of the more important issues that should be dealt with, and the sooner the better. You would probably say that all this would cost a lot of money. You are right! This would cost a lot of money, but I can assure you that the membership at large would be willingly to pay as much as say \$10.00 to \$20.00 a month knowing they would get the value of their money. Without the settlement of these important issues facing our profession, I do not think we can effectively overcome the problems surrounding us in our neglected biological and social environment.

T. Pataky, P. Eng.

♦ ♦ ♦



COUNCILLOR G. A. DePAUW

♦ ♦ ♦

### ARCHITECTURAL FIXTURE FOR SALE

When the engineers and architects took an apartment together at 177 Lombard, we naturally left the decor to the architects. Well, we did not get stuck with the paintings, but we do have an imported light fixture (union made in New York), which is more expensive than functional or beautiful. This architectural artifact with maximum rating of 120 watts, may be viewed at the Association office, and if you bid highly enough, you may per-

haps be the lucky one to take home this beautiful light fixture, which would make an illuminating gift for a wedding anniversary.

—J.W.J.L.

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### SPRING GOLF TOURNAMENT

The APEM annual spring golf tournament was held on June 18 at the Breezy Bend Golf and Country Club under ideal conditions. The weather was great and with only 57 golfers (?) there was no crowding and no waiting.

For the few engineers who, because of good organization or lack of anything better to do, did show up the day was great. Some of the early finishers including Past President Fowler got so carried away with the game they played 27 holes. Poor Frank, even picking the best two of his three nines he couldn't win a prize.

The best golfer of the day was Grant Edgar with a fine 80 for low gross honors and the Landon Cup. He was chased to the wire by Harold Wilson's 83.

The best jockeying act was done by Bill Thubron, a guest, whose 93—22—71 won him low net. Four hours after the awards Bill was still trying to figure out what his prize was.

The most honest golfers of the day were Wally Tibelius who was high gross and Bill Aspinall who was high net. To save them embarrassment and heckling their scores were not announced; they were simply given decks of playing cards and advised to try a different game. As they both work for the Gas Company they can play during lunch hours.

Some of the other highlights of the day: Ken Jardine having to play his ball off the wooden bridge on 18 and then hitting it (ball or bridge?) so hard he lost his iron ring; the consistency of Bob Ross with his 7 on the 4th, 2 on the 5th and 11 on the 6th; Bill Lynn who had two birdies and two 10's, was in the bush three times on one hole and then demanded Gord Marshall and Frank Fowler concede him an eight foot putt; Gerry Foley leaping across two tables and 12 people to catch one of the golf balls being tossed out—that fishing net came in handy Gerry; Chester Zeglinski getting two birdies and the shocked disbelief of his golfing companions; the surprisingly few golf balls retained by the Sports Committee.

Terry Monastyrski and his committee are to be commended for a job well done. It's too bad the turnout was so low and so few stayed for dinner. Surely out of a membership of over 1800 we can get more than 57 out for a day of golf, fun and fresh air. Maybe a dancing girl as first prize would spark some interest.

Let's see a big turnout for the fall tournament and prove that the engineers still know how to have fun. — R.J.B.



### HOW ARE YOUR PRINCIPLES?

"It's a matter of principle." We drag out the phrase as a sort of apology when we are doing or saying something we aren't entirely proud of. If we are doing or saying something really worthwhile that speaks well for itself, we don't use the expression.

We have many differently principled members. There are those who don't pay their annual fees by March 1st, as required by the by-law which they have probably voted for, and who are invoiced for the \$3.00 late-payment penalty. Some of them phone the office (on their employer's time), or they use a secretary whose salary their employer pays, to write a letter, to bring to our attention that they don't feel they should pay the \$3.00. After all they were only 3 days late and their intentions were of the best. They are quick to point out that it isn't the three dollars — it's the principle of the thing. The dictionary gives the following definition of "principle": "A fundamental truth or law; a moral rule or settled reason of action; uprightness; honesty."

We aren't quite sure what kind of moral rule prompts a person to use his employer's time and the time of the staff of his professional association to complain at great length because the rules of the association, laid down by the members and approved by over 90% of them, are being enforced.

Then there are those members whose moral rules prompt them to give hours of their time and considerable talent to the profession and the association, who give up their lunch hours to attend tedious meetings, who park their cars in an expensive parkade and never mention the financial cost to them, who drive to meetings in other parts of Manitoba and never

submit an expense account. One cannot help but be impressed at the number of consulting engineers who attend the full afternoon session of the annual general meeting, and who serve on Council and Committees and spend many hours in the Association office. They often use their own secretaries, stationery, duplicating machines, etc., for Association business. A quick glance at the Association's recommended Schedule of Minimum Fees will reveal that their contribution to the Association each year could be several hundred dollars. As a matter of principle, one member of Council refused to put any meals on his expense account when he travelled on our behalf. His reasoning was that if he stayed at home he had to eat anyway. Perhaps so, but it would be a lot cheaper at home. This March we registered a new member who was subsequently sent the wrong certificate by the firm that frames them for the association. He sent the certificate back from out of town, express prepaid, with a polite letter saying it was not his certificate and he would appreciate it if we could locate his own. He made no mention of the fact that the prepaid express had cost him \$4.25. Perhaps as a matter of principle he doesn't like to fuss because other people are human and make mistakes. The strange thing about it all is that it's only the complainers who say, "It's a matter of principle." The people who give generously of their time, their various talents, and who are out of pocket perhaps two or three times the annual fee, never mention their principles at all. They don't have to. They speak for themselves.

— S.J.A.



### OUTSTANDING VISITOR TO BULLETIN COMMITTEE

The Bulletin Committee welcomed John Adam to our August 11th meeting, demonstrating the fact we have at least one reader. John enlivened the occasion with a motivational speech directing our attention to upholding the general welfare of the Association. He was also able to answer questions about legislation, industrial development, consultants' fees, Canadian Council, and collective bargaining. We were glad to have this sign of interest in our activities. — J.W.J.L.

## NEW MEMBERS

The following have been admitted to membership in the Association:

|                     |                  |
|---------------------|------------------|
| R. J. Smith         | D. A. Holmes     |
| R. K. Watson        | L. P. Lewkowich  |
| M. Hirt             | R. R. McMillan   |
| R. B. Pinkney       | H. G. MacDonald  |
| J. S. Iffe          | B. W. Millar     |
| A. M. Z. Alam       | W. D. K. Moore   |
| G. D. Andrews       | F. L. Nicholson  |
| R. A. Betancur      | R. B. Piercy     |
| D. Bilodeau         | M. C. Riley      |
| A. W. Bork          | E. J. Saldanha   |
| J. R. Buchanan      | M. D. Stoffman   |
| E. L. Carriere      | P. W. Wagner     |
| J. T. M. Fitzgerald | M. L. Kenny      |
| R. H. Frame         | P. Kolbe         |
| J. R. Frey          | V. B. Singh      |
| R. A. Harris        | A. N. Edgington  |
| D. G. Kroeker       | G. J. A. Kidd    |
| W. W. Lee           | A. H. Mendel     |
| R. J. Mitchell      | E. B. Pearson    |
| A. H. Muchantef     | R. G. Raymant    |
| P. E. Ring          | P. Boudens       |
| K. G. Sharp         | R. R. Buckley    |
| G. R. Smith         | K. A. Lenz       |
| P. J. Stewart-Hay   | R. L. Milburn    |
| B. Thompson         | D. N. Mowat      |
| W. A. R. Whitcomb   | N. A. Patterson  |
| R. Shklanka         | H. O. Wilson     |
| K. R. Ebbert        | O. Hawaleshka    |
| D. J. Wilson        | P. G. Laver      |
| R. J. Beckett       | C. E. Atkins     |
| R. L. Cheesman      | B. M. Bodnaruk   |
| J. F. Irwin         | A. Brown         |
| D. P. Smith         | W. R. Bullock    |
| K. W. Smith         | A. T. O. Chan    |
| J. C. Taylor        | R. A. Crouse     |
| J. C. Anderson      | J. C. Dodd       |
| S. Donison          | K. Ebenstreit    |
| R. M. Godse         | O. N. C. Florea  |
| D. L. Gordon        | J. L. Dodge      |
| N. W. Wilson        | R. M. Farish     |
| D. A. Winter        | T. W. Fitter     |
| M. O. Fuglem        | E. A. Greenhalgh |
| E. G. Kennedy       | M. G. Hammond    |
| R. D. Moss          | R. Henderson     |
| J. N. Arabsky       | H. T. Higuchi    |
| G. W. Bowhay        | H. Hildebrandt   |
| N. S. Crawford      | L. J. Holden     |
| D. C. De Graff      | D. R. Holstein   |
| R. D. Gurewich      | J. S. Jochmann   |
| G. Hajecek          | W. M. Kishpaugh  |
| P. C. Liu           | R. J. Linton     |
| R. M. Lord          | P. Magel         |
| R. G. Maxwell       | D. D. Nygaard    |
| N. Pal              | J. L. Peterson   |
| J. D. Poustie       | G. S. Ram        |
| J. E. Reimer        | R. P. Shand      |
| K. Singh            | E. G. Thrush     |
| D. A. Ross          | E. G. Willis     |

## ENGINEERS IN TRAINING

The following have been enrolled as Engineers in Training.

|                    |                 |
|--------------------|-----------------|
| E. Court           | R. H. Kury      |
| J. D. Maksimow     | A. Masi         |
| I. W. Mault        | A. J. Palmer    |
| C. Robinson        | G. H. Rozierski |
| W. M. DeKaegher    | E. G. Klassen   |
| E. D. Hansell      | D. A. Baydack   |
| G. E. Sorokowski   | G. G. Taverner  |
| M. T. Michalak     | N. B. Ulyatt    |
| T. R. Brown        | E. N. DuRussel  |
| C. H. Mache        | W. K. Cheng     |
| K. G. Bolton       | I. E. Shumada   |
| P. R. Irvine       | R. A. Hoffman   |
| R. C. Lindstrom    | K. A. Rosin     |
| A. O. R. Truderung | B. W. Korbaylo  |
| E. J. Ikonen       | R. Scouller     |

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## NO LONGER MEMBERS

Effective July 1, 1970, the following persons whose names appear in the current issue of the roster of Professional Engineers of Manitoba are no longer registered in the Province of Manitoba:

W. D. Alexander, G. S. Anderson, N. L. Anderson, C. M. Arkell, A. J. Blackery, K. Bradley, F. T. Brown, R. G. Brown, S. Brownstone, D. A. Chamberlain, W. B. Closs, R. Dixon, F. H. Farmer, R. J. Gamble, J. F. Graham, C. A. Hansen, B. R. Hinton, R. G. Hunter, S. J. Johnson, B. T. Kerr, J. G. Kerr, D. A. McCuaig, B. H. McDonald, D. G. McIntosh, M. J. Moriarity, R. E. Nemish, G. Ohijenko, K. M. Padegal, K. K. Paget, F. Paquet, B. W. Parker, C. G. Peters, N. Raz, U. Raz, J. S. Richards, M. Rosenbloom, G. W. Rowe, E. A. Schiller, R. A. Schwieder, R. N. Scott, G. W. Shipley, W. Stephenson, R. B. Welch, N. Wolczynsky.

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GEOTECHNICAL PROBLEMS  
IN TRANSPORTATION

The 23rd Canadian Geotechnical Conference will be held at Banff, Alberta on November 19 and 20, 1970. For more information contact:

A. B. Hamilton,  
Department of Civil Engineering,  
The University of Calgary,  
Calgary 44, Alberta.

## HOME STUDY COURSES

Home study courses for professional engineers are offered in the following subjects:

- Mathematics
- Applied Mathematics
- Control Systems
- Vibration Analysis
- Accounting
- Political Science
- Psychology
- Business Administration
- Economics
- Education
- English
- Law
- Statistics

Price of these tax deductible courses is from \$75 to \$145. Exams are held annually, usually in May.

For a free pamphlet "Home Study Courses for Professional Engineers" write to:

The Co-ordinator, Home Study Course,  
The Engineering Institute of Canada,  
2050 Mansfield Street, Room 700,  
Montreal 110, Quebec.

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Questions brought to the attention of the Association of late have indicated the value of the use of the Standard Form of Agreement Between Client and Professional Engineer in Consulting Practice. These agreement forms are available in the Association office, and the use of same is recommended.

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## PRESIDENT'S CORNER

By J. D. ADAM, P. Eng.

What can the President say in September?

One thought is that Council can't do everything; and for more activity in the Association we need more initiative on the Committees. This spreads the effort around, which is as it should be. After all, we are all professionals, so that a well-rounded Committee should have a similar competence to Council. With liaison Councillors to assist in two-way communications with Council, some interesting studies could be made.

This would be one way to extend our Association's capacity for relating with the Associations of other Provinces on issues of interest to the profession. We find now that Ontario, Quebec, British Columbia and Alberta, who have more resources, are the ones who seem to get more mileage on more subjects. Frequently there would be good material from such other Associations to relate to.

This is a plug for more sincere individuals to come forward to help in the planning. Without broad participation, we will probably continue on as we are, where dedicated people knock themselves out for a period of time, and then say, "Enough of that!"

I can vouch for the fact that participation is both interesting and educational! I should also comment that several of our Committees have shown excellent initiative, and when the planning was done, they receive considerable support to complete their proposals.

An analogy could be drawn here to the engineering job. If an analysis is thoroughly carried out, the facts set down, and a course of action recommended, some positive action can arise. From this base the supervision hierarchy can be aware of the facts — to lend their support, or to make some other suggestions for further investigation, arising out of their own experience or relative to other non-technical considerations. In this way, a proposition finally evolves.

Now substitute Council for the "supervision hierarchy" and you may have my message. Also note the interdependent relationship between the specialist engineer (or the originating group) and the hierarchy in order to achieve results. This is the professional relationship that is so often necessary in a hierarchy of professional engineers, and is frequently also the part that gives us the most trouble.

The action part of getting on with the proposal or design is of course stage 2 to the foregoing process of facts, analysis, and proposal with estimated costs for prior appreciation and approval. I mention it because it is the most frequent reason why something is not done about something. Like — why doesn't Council do something about . . .

If I have bored some of you, please forgive me. However, the Bulletin Committee

had most things covered, and I really had to dig for my assignment of an "inspirational message."



### MANISPHERE DISPLAY WIN

The Career Guidance and Counselling Committee reported that our first attempt at participating in Manisphere as an Exhibitor was a success in informing the public on the Role of the Engineer in our society, and further the display won honorable mention from the Manisphere Display Committee.

The project was also a success from the point of view of membership participation and provides an indication that our members are willing to serve on worthwhile endeavours.

Alan Priestley, P. Eng., his Display Committee, and all other participants are commended for their fine effort, with special thanks to A. W. Robinson of Bristol Aerospace for his excellent professional assistance and many hours of volunteered labour; also, Aime Barsalou, P. Eng. for his artistic contribution.

The Committee have advised that the Association now has a 14' x 20" modular display booth, which is available for future displays and exhibits. — E.A.S.



### THE ENGINEER AND RESOURCE MANAGEMENT CONFERENCE

**Place:** International Inn

**Date:** October 15, 16, 17, 1970

#### PROGRAMME HIGHLIGHTS

##### Dinner Speaker:

Shaun Herron, "Resource Management — Layman's Point of View"

##### Session I:

D. Laird, "Preservation, Conservation, Resources"

D. W. Craik, P. Eng., "The Role of the Engineer in Providing Advice on Resource Management Policy"

K. Kristjanson, "Techniques for Resolving Conflicts in the Formulation of Resource Management Policy"

##### Session II:

E. Kuiper, P. Eng., "The Principles of Integrated Resource Management"

Sol Sinclair, "Environmental Quality Control, Impediments and Opitulations"

C. H. Templeton, P. Eng., "Engineering Projects — Their Impact on Resource Development and Management"

##### Session III:

T. E. Weber, "Water Management"

J. A. MacMillan, "Evaluation of Resource Development Programs for Agriculture"

L. Brooks, "Outdoor Recreation — Is It Non-Exploitation of a Natural Resource"

R. R. Koons, "The Engineer and Conservation—One Engineer's Philosophy"



### HURRAY FOR WOMEN LIBS!

The Association of Professional Engineers should divert some of its attention away from the "plight" of employee engineers, golf tournaments, dances, the white paper on taxation, career guidance and the edification of members through this publication and devote its energies to supporting something that affects not just 5-10% of our membership, but probably about 90%. The cause—the women's liberation movement.

This is a group of femmes that is really dedicated to bringing about the Just Society. Engineers, being practical by nature, should be in the forefront of this crusade. Let it be said of us, when the Libs have achieved the ultimate success they so thoroughly deserve, that they did not do it alone—that engineers were in the vanguard of the movement, and together with the femmes deserve much gratitude and loud hosannahs of praise. Who knows, our support might result in the appointment of one or two of our members to the Liberation Senate after it is established. Think what it would do to our image if we had on our Council, Senator Hood and Senator McBain. It has a nice ring.

It is high time we took our heads out of the sands and did an honest engineering appraisal of the situation as it is now, and as it might be in some future Nirvana after we and the Libs have achieved our goal of equality.

No longer need males have a selfish stranglehold on such sought-after jobs as garbage collecting, combat duty in war, repairing broken water mains in the middle of the night at 40 below, climbing 80 foot ladders in a howling gale to rescue an old lady from a burning building, policing the hippies in Memorial Park or the even more thankless tasks of being minister of finance or a university president.

Women form the larger percentage of our population and yet they get nothing like half the opportunity to free-load on society. Let's see that women get equal treatment in our courts too. Surely it is an archaic system that permits men the exclusive use of 90% of the jail and penitentiary space in this country. Let's give a little work to the consulting engineers and build more jails so the magistrates can properly acknowledge women's efforts in the field of crime and not use the excuse that there is nowhere to send them as a reason for not giving them fair recognition. Let the motto be: "Equal sentences for equal heists."

From the point of view of economics there will be certain advantages. You can sue the little woman for non-support if she doesn't get out and earn a decent wage, and give you a satisfactory allowance.

The potential for a variety of fun and games is unlimited. Picture yourself in a bar kicking up a deliberate fuss, in order to be evicted by the female bouncer. The allocation of partners to double rooms at a convention where all members are equal and sex can be no barrier, could also add to the conviviality. And sauna and steam baths will certainly take on added aesthetic appeal. Public buildings and locker rooms will no longer need to be equipped with His and Hers — just Theirs.

Let's give this worthy cause as much support as we can and look forward to the glorious day when the Libs have achieved their goal of equality. Then not only can you sit on the bus with a clear conscience surrounded by old ladies teetering about, but when the next request comes in that you be a pallbearer, you can simply reply, "I'm sorry I won't be able to oblige but my wife will substitute for me." And if you don't like the way your wife is performing, just take her to court, obtain a divorce and insist that she pay you enough alimony so that you can

hire a maid to assume her duties of pushing the buttons on the automatic washer, dryer and dish washing machines. Or if you decide to keep your wife around, as you shove her out to work in the morning, let your parting words be, "On your way out, dear, would you please take out the garbage."

Engineers arise! At the onset of the next holocaust, let your voice be heard above the din, shouting this battle cry: "Men and children first!" — S.J.A.

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### FISHER WINS FOR GOLF GOTTFRED FOR FOLIAGE

Congratulations to hard-working Gord Kirby on a successful Fall golf tournament.

Ron Fisher and Garry Maxwell came in from Portage la Prairie to win the two top prizes and they were both honest wins as neither one is on the Sports Committee — YET. Stewart Frost won the coveted Canadian Johns Manville prize.

Terry Monastyrski and Bud Christie did the handicapping and in the interests of trying to dispel rumours that the tournament is fixed so everyone on the Sports Committee wins, they decided to toss to see which one would do without a prize. Bud lost but he has more time to serve on the Committee so his turn will come.

It was nice to see Jim Warrenner back in our midst after a sojourn of studies in Missouri which certainly improved his golf game.

If any bright engineer should design a golf bag with a food compartment, Frank Fowler could be his first customer.

The highlight of the tournament had to be Bob Gottfred's magnificent beard. Rumours that he is growing a hair piece for a subsequent transplant were denied. There were 49 golfers and 8 engineers broke 100. Bearded Bob was not one of them. — S.J.A.

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### PHILOSOPHICALLY YOURS

Light cares can speak, but heavy ones are dumb. — Seneca.

Look on each day as if it were your last, and each unlooked-for hour will seem a boon. — Horace.

The advantage of living is not measured by length, but by use; some men have lived long, and lived little; attend to it while you are in it. — Montaigne.

For we must not only acquire wisdom, but profit by it. — Cicero.

For doubting pleases me no less than knowing. — Dante.

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### THE FAMOUS SOLILOQUY OF HAMLET — B. Sc.

To be or not to be, that is the question  
Whether 'tis really wiser to ignore  
The strains and stress of abnormal loading  
or to increase again the Safety Factor;  
And by increasing "Fix" them, to bolt,  
to weld;

No more; and by a weld, to say we end  
The brainfag, and the thousand bumps  
and jolts

Design is heir to; 'tis a consummation  
Devoutly to be wished. To bolt, to weld;  
Toweld, perchance to split; Ay, there's the  
rub;

For in that weld so made what seams may  
come.

When we have covered up with paint this  
joint

Must give us qualms; there's the fracture  
That makes a shipwreck of our reputation,  
For who could bear the boss's plain  
remarks,

The jester's quips, the draughtsman's  
sneers,

The others damned superiority;  
The cancelled leave, the overtime,  
The hurried re-design, the thought  
That one square inch of section more  
Would have sufficed! Who would not  
swear

To leave this engineering life, and take  
up doctoring, for there

Mistakes are buried, nor do return  
Per. departmental memos, to disturb  
And lash our souls and make us long  
To kick the next poor blighter that we  
meet;

Thus danger doth make "checkers" of us  
all

And thus the lure of false economy  
To brush aside, and anxiously  
We scan each shear and bending moment  
With due regard to all contingencies  
And keep in good repute. — Anon

With apologies to

Mr. Wm. Shakespeare

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### GENERAL INFORMATION ON THE ASSOCIATION OF PROFESSIONAL ENGINEERS OF THE PROVINCE OF MANITOBA

#### WHAT IS IT?

The Association of Professional Engineers of The Province of Manitoba is a body incorporated in 1920 to administer the Engineering Profession Act, passed the same year. This Act governs the practice of engineering in Manitoba.

Administration of the Act covers several broad areas:

- (a) The review of applicants to ensure that those accepted as members have qualifications as required by the Act.
- (b) An examination program which permits applicants not holding an accredited degree to bring their academic standard up to an acceptable engineering level based on a National Syllabus.
- (c) Enforcement of the provision restricting the practice of engineering to members of the Association.
- (d) Enforcement of the disciplinary provisions of the Act, designed to protect the public from substandard or unethical practice by people who are members of the Association.

#### HOW IS THE ASSOCIATION ORGANIZED TO DO ITS WORK?

The Association is managed by an elected Council of 9 members.

From among its members, Council elects a President and a Vice-President.

The Past President serves one year following his term as President.

The Council is assisted by the permanent staff presently numbering three, and by Committees which are appointed by Council.

The following list of Committees and their function will serve to inform prospective members of Association activities.

**Discipline Practice and Ethics**—This function has to date been carried out by Council and the Registrar. Establishment of the Committee is subject to the approval of a new by-law now being drafted.

**The Board of Examiners**—reviews the academic qualifications of applicants who do not hold an accredited degree in engineering, and recommends examinations in order that these applicants may attempt to prove that they are academically qualified. This Board usually consists of from twelve to fourteen engineers, and its composition is subject to the approval of the Lt. Governor-in-Council.

**Admissions Review Board**—considers appeals, and as a panel interviews applicants who appeal, or whose qualifications are unusually difficult to evaluate.

**Advisory**—makes policy recommendations to Council, and its most recent assignment was the new Code of Ethics.

**Awards**—awards are presented periodically by the Association to outstanding members of the profession, upon recommendation of this Committee.

**Career Guidance and Counselling**—this group is responsible for the career guidance of students at the high school level, and provides the speakers, aids and displays required for career guidance events.

**Bulletin**—produces and publishes the Manitoba Professional Engineer, four times a year.

**Consulting Engineers**—considers problems that apply in particular to the consulting engineer—makes recommendations to Council regarding policy, and the recommended schedules of minimum fees.

**Employee Engineers**—appointed to consider the problems of the employee engineer, and in addition conducts one of the salary surveys now in existence.

**Engineers-Architects**—includes three architects as well as three engineers, and considers problems common to both professions.

**Legislation**—prepares and recommends changes in the by-laws and the Act. A sub-committee has recently completed a new disciplinary by-law draft which is now undergoing review by Council.

**Membership**—its members maintain membership growth. The student liaison section of this Committee works with the undergraduate students at the University of Manitoba. Another sub-committee arranges facilities for most of the Association meetings.

**Nominating**—ensures that there are enough members nominated to replace Councillors whose terms have expired. (Usually at least as many further nominations are received from the membership at large.)

**Premises**—charged with providing suitable Association accommodation on a continuing basis.

**Safety in Engineering Practice**—reviews incidents or situations where there is evidence of possible unsafe engineering practice with the object of preventing such incidents or accidents from occurring in the near future.

**Social**—organizes the Annual General Meeting, the Annual Association Dance, and other social events.

**Sports**—organizes the Annual Curling Event, and the Golf Tournaments.

**M.S.C.E.T.T.**—The A.P.E.M. encouraged and assisted the foundation of the M.S.C.E.T.T. Inc. We have nine engineers working with the Society, setting academic standards, judging experience, and assisting the Board of Directors.

**Each Member of Council**—provides a liaison function with one or more of the Committees, and he may also serve on the Budget Committee or the Executive Committee which are Committees of Council.

## BENEFITS OF ASSOCIATION MEMBERSHIP

1. Registration as a Professional Engineer is an indication of the willingness of

an individual to accept engineering responsibility. Progressive management realizes this fact.

2. The term "P. Eng." is recognized by industry and the general public as denoting high standards of qualifications and ethics. The term is legally protected and may only be used by members registered with the Association. Through membership the individual assumes an identity as a member of a highly qualified and respected profession.

3. Registration permits members to practise either in employed capacities or as self-employed consultants and allows them to sign and seal drawings, reports, etc., which is required by many organizations receiving such documents.

4. Through active participation in the Association, service on committees, etc., the member has an opportunity to develop the many skills associated with administrative and management functions.

5. By the Association's membership in the Canadian Council of Professional Engineers, representing some 65,000 Engineers across Canada, the member has a voice in all matters pertaining to the practice of engineering in Canada. An individual can contribute in a significant way to the cause of the Profession and its development on a local and national scale.

6. Group Insurance Benefits — Through the C.C.P.E., group insurance plans are available to Association members. Plans include a variety of options for Life, Disability, and Major Medical Insurance. It is generally agreed that the Annual savings to members participating, exceeds the annual membership fee. If membership is not retained in at least one Provincial Association or the Corporation, the insurance is cancelled. Professional Liability Insurance is now available to Consulting Engineers. Excluding this plan, 16,888 members were insured in the amount of \$761,090,466 as of March 1, 1970.

7. A very useful Roster is published each year and supplied to members. All Members and Engineers in Training are listed. Degrees, place of employment, job titles, residence address and phone numbers are listed.

8. Four times a year members receive the Manitoba Professional Engineer. This Bulletin does not necessarily reflect the

official position of the Association but does provide a forum for members to express personal viewpoints.

9. Current engineering salary data is circulated to Members and Industry. Members and non-members consult with the Staff regarding equitable remuneration for Engineers and Technical employees.

10. A limited employment service is provided for members.

11. Position evaluations are available to members.

12. An increasing number of members are discussing employment, legal, and ethical problems with the staff. References are provided in many cases.

13. The office provides a technical classification service to Industry. The many levels of Technical Manpower must be sorted out, particularly when overseas qualifications are involved.

14. The Association holds one Dance each year, and the Annual Meeting is usually followed by a Dinner and Guest Speaker. Two Golf Tournaments and one Bonspiel are held per year in Metro Winnipeg, but members residing at other engineering centres are encouraged to arrange their own social events and meetings with the assistance of the Staff and Council. Several special meetings are arranged per year on subjects of vital interest to the Profession.

15. The A.P.E.M. works in close cooperation with the other Associations and the Corporation, ensuring that registration standards are similar, and transfer of membership from Province to Province is an uncomplicated procedure.

16. By ensuring a high and uniform standard of registration, the supply of engineers is limited. This acts to the economic advantage of those qualified. If a significant percentage of the inquiries from Canada and the rest of the world resulted in registrations, there would be a huge surplus of engineers, but many with doubtful qualifications.

17. On looking through the wide variety of Committee activities listed earlier, it should be evident that participation is not one of the lesser benefits of membership.

(This material was prepared by the Registrar for the use of the Membership Committee.)