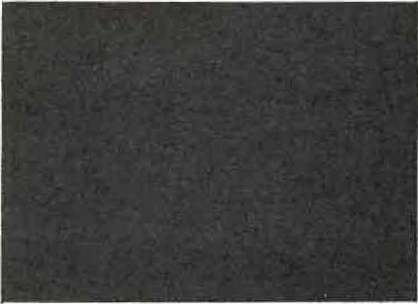
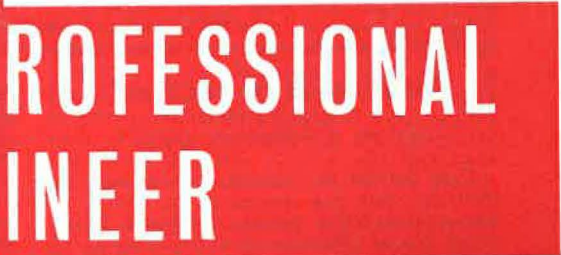




**THE
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PROFESSIONAL
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WINNIPEG, MANITOBA, JUNE 1969

"... EVERY WIND OF DOCTRINE ..."

(Eph. 4:14)

By W. R. NEWTON, P.Eng.

One begins to wonder at the state of morality and the standards of values in our society when greater credence seems to be given to ensuring the protection of the draft dodgers and deserters who slink across our borders rather than honor the obligation they have to their country and the society that has nurtured and protected them, than honoring the young man who accepts his responsibility and stands and fights. We wonder, too, at this condition when more concern is expressed in certain quarters to ensuring the freedom of those who preach sedition in our parks and public places, who entice certain groups to riot and mayhem, and who shout vindictives at our police forces, than to enhancing respect in our youth for the man on the beat whom we have charged with the responsibility for our protection and to guard our rights to walk our streets or to visit our public parks unmolested and unhampered by the hooligan element in our group. One wonders at our moral values when free reign is given to those who make their fortunes by placing those pornographic paperbacks on our bookshelves or inducing the low minded in our society to spend their money on the erotic and sensual in our movie houses, and show a complete disregard for the tastes of the right minded by using our public television media to set a new low standard of morality all in the name of freedom — freedom of censor. It seems to me that if we are going to prepare our society for the very complex world we see for tomorrow, we must do so by establishing values and moral standards, respect for law and order, and by placing a value on things

other than freedom of licence if we are going to produce the kind of solidity of character and the standard of self discipline that will enable us to survive.

By geography, size and process of development to date, Canadians have been granted a preferred position in respect of their living environment relative to the peoples of the rest of the world. In a matter of respect for individual freedom, prosperity, and a vision of what the future can hold, law and order, and systems of good government, we are the most fortunate peoples, yea, even considering our often envied neighbors to the south of the border. We live in a situation of affluence and the good life which is repeated nowhere else on this planet. We enjoy a degree of personal freedom and freedom from restriction that must be the envy of all. We have, within the borders of our country, untapped riches which, if properly developed, will continue to sustain this position of affluence and good living. We live in a society where the government and the system of government still recognizes that its first responsibility is to the people and in the realization that a government is a power only as long as it retains the confidence of the people it has been directed to govern. As we read our papers and listen and watch our television sets, however, we are continually being faced with a great preponderance of propaganda which continually tries to tell us what a bad state we are in, which directly or indirectly tries to emphasize our weaknesses and play down our strengths, and to seemingly emphasize the needs for radical change where no change, but cultivation, is needed. It seems to me that we do not need a new garden, we only need to nurture and properly develop the one

we have and by placing the emphasis upon improving what we have, we will not only enhance the position of all the peoples of our Canadian society, but also enhance our position in respect of assisting in guiding and directing world affairs.

When we allow groups to flaunt the law, to attack our institutions, to discredit our police forces, or to destroy any facet of our good order, we allow to be threatened the very structure of our freedom. By allowing of such conduct on our campuses, in our parks or in a particular social grouping, we are not granting these sections freedom of action and thought, but rather we are allowing attacks on our collective freedoms which will gradually whittle away what centuries of effort by wise and thoughtful men have sought and successfully built up. When we permit disorders to occur and our police forces to be derided and referred to as "pigs," etc. we are not allowing free reign to free thought, but rather allowing a state to exist where stricter police controls will have to be enforced and established, so that some semblance of order might prevail. When we answer unrealistic demands by individual groups we chisel away the fabric of freedom and order which covers us all.

There are those whose individual philosophies would introduce the marxist, the extreme left, or other radical socialist philosophies into our systems, philosophies which were inspired by conditions foreign to our way of life. There are others on the extreme right who are equally prepared to destroy those rights, which have been so hard won, by placing individuals or individual groups in preferred positions to the detriment of others. There are those who feel the American system is the only salvation for Canada, and there are on the other hand, those who would cut the natural ties we have established with our neighbours. If we are to avoid the pitfalls of any of these, we must put our own garden in order and satisfy ourselves that what we have, despite the problems the system may presently be encountering, is best for us and we must work towards improving this system and correcting the errors. Let us not change with every wind that flows from east or south, but rather let us emphasize the values we have and strengthen these values so that our problems themselves will naturally be solved.

One of the differences between a free country and one oppressed is the degree of government. That government which

governs the least is that which governs best. In states where the people are completely dependent upon the government, the people are the least free. The degree of dependence upon government can reach a state where fear of the loss of government benefits results in the lack of desire to criticize or to change a poor government. There are continual and steady pressures from many quarters in this country to make the citizen more and more dependent upon his government. In accepting this dependency, we must realize that the degree of this acceptance becomes a measure by which we are prepared to relinquish hard won freedoms. In this potentially very rich country, if we aim to create a living environment which these riches can offer, we must have the initiative to develop these riches and we cannot do so by tying ourselves by strings to our government. We must not, by our lack of initiative, lose the challenge for the future that this country can offer, not only to its citizens but also to the world.

The population of our country is made up of peoples from virtually every land on earth. These people largely came to this country to escape from oppression, to seek a living environment denied them in their own country and/or to establish a life for themselves governed only by their own abilities. These people over the years of our development have helped to establish a system incorporating the best that man can evolve through the process of discussion and debate rather than through revolution. Now that the position of affluence granted by the foresight of these people is being realized, we must not let it be destroyed by accepting the false presumption that all of the problems of other lands are also prevalent in our society.

It seems time that we, as individual Canadians as well as collectively, took a long, hard look at ourselves, counted our blessings once again, evaluated our position and emphasized our strengths rather than our weaknesses. It is time we all decided to ignore the prophets of doom, to shake off the inferiority complex we have placed on ourselves by our self-effacing attitudes and stood up to face the future. In my mind, Canada is one of the last strongholds of true individual freedom and has the power to lead the world if only we have the courage to accept that fact. We must accept and sustain a system of collective morality, our high standards of good order and protect our systems of law. We must not arbitrarily accept that standard being foisted upon us by those

whose only objective appears to be change for change sake. We are in a position, if we only recognize it, of showing the world how man can live and prosper equitably with man. Let us not lose by default the position that history has granted us, a position that must be the envy of thinking people in all parts of the world.



QUESTIONS ENGINEERING STUDENTS ARE ASKING

By K. A. MILLIONS, P. Eng.

This reporter was privileged to attend the dinner given by the Association for the 1969 graduating class on February 25, 1969. The question and answer period after the dinner was especially interesting and gave an insight into the thinking of these young people.

Contrary to what we've been led to believe by the news media as to what is going on at our universities, the impression gained at the dinner was that the new graduates are sincere and enthusiastic, probably better informed than we were at their stage of professional development, and are very anxious to gain experience so that they can soon become professionals in the best sense of the word.

During the question and answer period two questions were asked on at least three occasions. Obviously if complete and satisfactory answers had been forthcoming the first time, they would not have been repeated. The questions were directed to those practising engineers present; therefore they may be considered to have been directed to the profession as a whole and to our Association which represents us. The questions were:

- a) Is the University curriculum designed to prepare the graduate so that he is of real immediate use to an employer upon graduation?
- b) Is there any formal method, whether by committee or other means, whereby the curriculum is reviewed on a continuing basis by practising engineers?

The questions themselves indicate that the students feel that the curriculum could be made more meaningful and more closely related to engineering as it is practised in government, industry, and consulting practice. They also are looking

to us in the Association to make ourselves conversant with the present curriculum so that we may make constructive suggestions as to how the curriculum could be improved.

Students today feel that the establishment, as represented by the University and the professions, is letting them down. Fortunately our engineering students are not yet expressing their concern through destructive, radical action. By their questions they have constructively pointed to one area of concern and have suggested a method of reviewing the problem.

Our Association, both executive and other members, would be remiss if it does not take a close look at these questions. When the questions are asked again next spring, and I'm sure they will be, we should be able to give positive assurance that we are sure the courses are pertinent because a combined Association and University committee has closely scrutinized the curriculum and constructive suggestions have been incorporated in the courses.



PERSONAL RESPONSIBILITIES

By R. J. JEWELL, P. Eng.

The line of disussion at a recent meeting of the Bulletin committee had turned towards the theme of personal responsibility — not in the concept of an engineer to his profession, but of an individual in society. The group had been discussing the problem of providing for the large additional numbers of people expected on this earth by say 1980 when someone queried whose responsibility it was to attempt the co-ordination and planning of such a project. However, there are so many aspects relating to the responsibility of individuals in society that the discussion centered around an individual's response to the social environment in which he lives.

One of the aspects discussed was the feeling of inadequacy felt by an individual towards influencing the policies followed by his society. This can best be illustrated by the political system. We have a one man, one vote system in which a man who conscientiously assesses the situation, can have his vote negated by another who votes without thought. He is further restricted by the party system in that he has to choose between the policies

of the parties represented irrespective of the qualifications of the men up for election. Even if a highly qualified, conscientious individual is elected, he seems to be rendered impotent by the system, thus it is small wonder that an individual in society feels incapable of influencing decisions made on his behalf.

The field of birth control is another problem revolving around individual responsibility. However, here in most cases it is a problem of environment more than anything else. For centuries the Indian peasant has raised as many children as he could so that they could look after him. There the responsibility has been to his own future rather than to his country (which is hit so often by famine and thus becomes unable to feed its people) or to the world which will ultimately have to feed them. Unfortunately, advances in medicine, and the zeal with which they are introduced to underdeveloped countries, far exceed the introduction of programs to educate the people on how to feed the millions of extra lives saved (and lengthened) and how to restrict the number of births. Once again the individual feels rather helpless to alter or influence the course of events.

A more daily aspect of individual response, is the feeling of not wanting to become conspicuous for the fear of looking foolish. For instance, the May 1969 edition of the Readers Digest contains an article entitled "Why People don't help in a Crisis," which discusses bystander behaviour and gives some explanations of the apparent callousness of crowds towards an individual in trouble. The phenomenon is also observed in the refusal or reluctance of men to stand up in a bus to give their seat to women (sometimes explained as being a result of the trend towards equality of the sexes). In another sense it is the feeling of not wanting to look foolish that accounts for the reluctance or inability of some people to make decisions or take responsibility. They simply do not want to be blamed if anything goes wrong—to look foolish.

Other individual responses are caused by lack of thought for others, either consciously or unconsciously. Examples of these are litterbugging and chaotic and dangerous driving. This attitude is also shown in a lack of respect for other people's property in cases involving car theft and vandalism to name just a few of the modern examples of lack of personal responsibility.

I don't pretend to be a psychologist or a philosopher, but it seems that individuals become submerged in the group and their actions are those of the group, with no personal responsibility taken. In small groups, people have in the past, and are still able to retain their individuality and personal responsibility, but as the size of the group increases it becomes more difficult to influence and feel personally responsible to society.



NOMINATING COMMITTEE REPORT

The Nominating Committee has submitted the following names for nomination as members of Council: J. D. Adam, R. Hood, C. R. McBain, F. G. Denson.

Forms for additional nominations will be circulated to all members at least 50 days before the Annual Meeting.



LET'S STICK TO THE FACTS

Association members have undoubtedly been following with interest the controversy regarding the flooding of Southern Indian Lake.

No matter what position one takes on this matter, and it seems everyone has a position, we feel that some of the debate has been carried out in a most unprofessional manner. Certainly much of the personal abuse to which Hydro officials have been subjected originated among that group which we have all come to know as "student radicals." However there seems to be an alarming tendency on the part of some professionals to adopt the over-emotional methods of the student radicals as their own.

We do not pretend to know enough about the subject to make a judgment one way or the other, but one fact seems evident. Both the government and Manitoba Hydro have acted in what they consider to be the best interests of the majority of Manitobans. Yet officials representing both Hydro and government were subjected to a juvenile display of personal harassment at the public hearings on the issue. Surely debate on this level is detrimental to both the general public and the group who disagree with the Hydro decision.

We would hope that all those who

oppose the flooding of Southern Indian Lake, especially those within the engineering profession, will carry out their campaign in a manner more suited to a debating forum than a campus sit-in.



COUNCIL MEETINGS

The Council meeting of March 19, 1969 got off to a late start due to an in camera meeting before the official meeting. There were eight councillors present as well as the president, registrar and past president.

The first part of the meeting was taken up by the routine items such as registrations and accounts. There was then some discussion on a special meeting of the Premises Committee with Chamber of Commerce about costs of renovating our premises. This information was required for presentation to members at meeting on March 26.

The discussion then centered around the appointments of engineers to the Metro Building Commission. There was some confusion as to whether they would be considered as representatives of the Association or as appointments of Metro. There was much discussion and rustling of paper during the search for letters, by-laws, etc.

The debate then switched to the question of whether the Building Commission must notify a designer before reviewing his plans. At the suggestion that this matter be referred to our lawyer, Councillor Earp pointed out that the council had prepared the code of ethics and should be able to interpret them. The question never was interpreted. Discussion then returned to the Building Commission and a motion was finally passed that members of the commission be told they are representatives of the Commission and not representatives of the Association.

There was then some debate concerning breaches of ethics. There was much discussion as to whether merely investigating alleged breaches of ethics leaves the Association open for lawsuits since an investigation implies some breach of conduct.

Council then reviewed the report of the Student Liaison Committee and agreed with the committee recommendation that

activities among under-graduate students be stepped up.

Appointments were then made to the Engineering Architects Committee. It was suggested that one of the questions this committee should consider is the matter of Engineering firms using architectural technologists to perform their architectural design and architectural firms using engineering technologists for their engineering design. — R.M.S.



President's Report

By L. W. BLACKMAN, P. Eng.

Council has now completed five months of management of your affairs in 1969. It has been a very busy period with Council holding eight meetings, not including all the committee meetings which members of Council attend, depending on their areas of responsibility.

I should first like to report to you on the financial position of the Association to date, not that the financial position is of primary importance, but because the increase in expenditures relates directly to an increase in the activity of the Association. At our annual meeting last year, Council was authorized to increase fees through an \$8.00 range up to a maximum of \$33.00 per year. There is little doubt in my mind that there will have to be an increase next year. The budget committee met recently and forecast a significant deficit for 1969. The principal area of overrun is in mail volume, secretarial assistance and printing costs. The increased cost is due to increased postal rates and to the significant increase in activity.

During past years it has not been unusual to hear complaints about the lack of interest shown by the members in their Association. The common attitude appeared to be "let Council look after it." It is apparent that there is a significant increase in interest shown in the affairs of the Association by the membership at large.

The most pressing topic at this time would appear to be discipline, as it applies to ethical practice. There has been considerable concern shown both by the membership and Council with respect to alleged unethical practice on the part of some engineers. I should like to empha-

size at this point, that this is not a general problem, but a problem created by a very few individuals. However, the concern of the membership is general, since one or two incidents are sufficient to destroy the reputation of the profession as a whole. Council has spent a good deal of time reviewing the Association's position in respect to discipline and has obtained legal advice as to the interpretation of the Act, and the power of Council in disciplining members.

We are advised that Council can take steps to discipline, or investigate a member, only where there has been a formal complaint laid. **Formal is interpreted as being a sworn complaint, where the complainant is prepared to provide evidence to substantiate the complaint.** On receipt of such a complaint, Council then becomes a Court to hear the evidence and pass judgment. The ruling of Council is subject to appeal to the Court of Queen's Bench, which Court can either uphold or set aside the ruling made by Council. The Act protects the members of Council against any action on the basis of their participation in such a hearing. The Act also protects the complainant against any action by the accused member, where the complainant can show that the action he took was bona fide.

Most discipline cases could be handled fairly simply, if Council had the power to act in an informal way. We are told however, that this is not possible, since immediately such procedure is undertaken, we are no longer acting within the terms of reference set out in our Act.

Council is thus frustrated in any effort to carry out what must be considered the primary function of the Association — the protection of the public. I do not believe, however, that our present position should be viewed in a negative way, as Council is now aware of the limitations of the Act and by-laws. Our objective must be the drafting of the necessary by-law revisions to permit Council to properly carry out this duty.

Another indication of the interest of the membership in the activities of the profession, is the fact that we have already had one special meeting called at the request of members under By-law No. 19 and a second meeting will probably be called in the very near future.

Your Council submitted a brief to the Senate Committee on a "Science Policy for Canada." The submission emphasized

the need for regional research centres, which could co-ordinate the available expertise and expand the scientific base required to support industrial growth.

Your Council has been making every effort to work as closely as possible with the Engineering Institute of Canada. We have made some progress, but in my opinion we must make a great deal more. There would appear to be a good deal of interest in bringing the two organizations more closely together and in fact, the Engineering Institute has formally indicated its interest in amalgamation. The Directors of the Canadian Council of Professional Engineers have instructed the Executive of that organization, to proceed with discussions towards the co-ordination of the various engineering organizations in Canada. Apparently most engineers agree in principle that the various professional and learned societies should be re-constructed so that engineers in Canada can speak with a single voice. Engineers are supposed to be very practical, logical and well organized people. If this is the case, why is it so difficult to bring engineers together in a common purpose? It appears to be most illogical that the very considerable contribution of both time and money, which many engineers put into the various engineering activities, cannot be better organized to make a much more significant contribution to the development of our country and profession. Notwithstanding the lack of success to date, we must continue to work toward the co-ordination of engineering activities in Manitoba and hopefully in Canada as a whole.

Routine activities such as the transfer of members from other provincial associations, the registration of new members and similar activities, have been proceeding in a normal way. These matters while routine, are a critical and important part of the responsibilities of Council, and I use the word "routine" simply to indicate that it is an ongoing activity, which repeats itself from month to month. The major interest here I believe, is the fact that the Association is maintaining a good rate of growth.

Your committee on student counselling has made an effort to increase its activities and is making considerable progress in this area. Liaison with the undergraduate students in engineering at the University of Manitoba, has improved and I would suggest that the meetings held with the graduating class, have been of

considerable value to both the students and those members of the Association, who attended. I believe we have learned a good deal from the students and should be better equipped to provide the necessary liaison with the University next year. It is most important that new graduates coming into the profession, should understand what the profession is, what it can do for them and more importantly — what they can do for it.

This report has covered some of the activities of Council. It by no means covers all of the business or all of the topics, which have been considered. I must also point out that certain committees have been mentioned, while a larger number have not. The members must recognize that a great deal of work is done by these various committees. The best way to get a better understanding of their work is to come to the next annual meeting.



GRADUATES' DINNER

On February 25th, 1969, a dinner was held by the Association at the Montcalm Motor Hotel for the 1969 Engineering graduates from the University of Manitoba. The dinner was attended by Members of Council and several committee members as well as the graduating class. Two movies dealing with the profession were shown and a question and answer period held, with members of the Association attempting to answer questions regarding the profession put to them by the new graduates. The discussion was excellent and the questions asked were indicative of the high calibre of the current graduating class. The students expressed the feeling that a meeting such as this was extremely useful in answering some of their questions regarding the profession. One of their suggestions was that an affair such as this could be held for undergraduate students, since there is undoubtedly some confusion regarding professional matters on the part of students much earlier in the academic life than fourth year university. Remembering some of our own confusion in our undergraduate days, this suggestion certainly merits further consideration.

Before the meeting closed, a short speech was given by the senior stick of the graduating class, Mr. A. Bodie, regarding his campaign for president of the University of Manitoba Students Union to

which he was subsequently elected. We were extremely impressed with Mr. Bodie's sincere approach and his common-sense attitude with respect to student issues.

It seems that all we hear about in respect of our universities today concerns the radical element and it is refreshing to hear from men like Mr. Bodie and to realize that for the most part our students are sane and sensible. As long as we have students such as Mr. Bodie, the standards, at least in some areas of university life, will still remain high. Mr. Bodie and students of his calibre should receive the fullest support of the engineering fraternity and we wish him well in his coming endeavour. — R.M.S.



THE \$3.00 FEE PENALTY AND THOSE WHO SQUAWK

NOW HEAR THIS! EVERY MEMBER WHO DOES NOT PAY HIS FEES BEFORE MARCH FIRST IS ASSESSED THE \$3.00 PENALTY AND THERE ARE NO EXCEPTIONS!

My wife was supposed to pay it and forgot. The baby chewed off a corner of the invoice and I didn't know when the deadline was. I've been sick. I've been on holidays. My secretary forgot to bring it to my attention. My kid carried the envelope around in his pocket for a week before he mailed it. These are just a few of the reasons members give in trying to avoid the \$3.00 penalty for late payment of fees.

By-law 32 which deals with fees, states that those members who do not pay the established fee before March 1st, shall pay an additional fee of \$3.00 as a penalty. It was the members who approved this penalty at a meeting and who subsequently approved it by far more than the required 66-2/3% voting by letter ballot.

Each year at the annual meeting, the members appoint auditors to inspect the books regularly to ensure that the members of the staff are adhering to the by-laws dealing with fees and are not deviating from them, and to report back to the members regarding the manner in which the financial matters are being handled by the staff.

And yet in spite of the fact that it is the members who set the fees and the

penalty and it is the members who appoint auditors to see that the by-laws are followed, there are still members who try to have their fees accepted after March 1st, without the penalty, and when they are invoiced for the additional \$3.00 (as always happens) they complain. Each year the office receives several stormy telephone calls and letters from members who do not want to pay the penalty, although they admit to paying their fees after the deadline, and although the invoices are usually mailed during the first week of December, and they have had the invoice for 10 or 11 weeks.

What is really incredible is that engineers would spend so much time and effort trying to avoid assuming a \$3.00 legitimate responsibility. Let's leave squawking to geese.



WHITESHELL NEWS

By J. E. GOLD, P. Eng.

More than 80 of the WNRE staff registered for the series of professional development lectures entitled "A Lecture Series on Nuclear Technology" organized by the Society of AECL Professional Employees at WNRE with the co-operation of AECL. The 20 lecture series ran from early November to late April on a lecture a week schedule, with the last half of 90 minute lecture period being on employee time on a voluntary basis. The Course Committee did an excellent job in organizing the series and obtaining interesting and well-qualified speakers. The course was enthusiastically received and lecture attendance remained at a consistently high level during the entire series. Lectures presented by Professional Engineers on the WNRE staff were:

"Instrumentation and Control"
by C. G. Lennox, P. Eng.

"Nuclear Physics"
by S. A. Mayman, P. Eng.

"Power Station Thermodynamics"
by R. O. Sochaski, P. Eng.

The Whiteshell Reactor No. 1 (WR-1), an engineering test reactor, is the major irradiation facility at the Whiteshell Nuclear Research Establishment. WR-1 was the world's first operating heavy water moderated reactor to use a low-cost organic coolant. Although it was built solely for research purposes, the WR-1

Reactor is "owned" by the Engineering Services Division, and the Operations Branch of this Division is responsible for the safe and efficient operation of WR-1 and the in-reactor research loops associated with it.

The Engineering Services Division is the largest of the five Divisions in the Whiteshell establishment. D. R. Tegart, P. Eng., Manager, Engineering Services Division, has a staff of approximately 330 employees including 53 professionals. An indication of the extent of the engineering contribution at Whiteshell is that on March 31, 1969, the Engineering Division employed 37% of the total professional staff at WNRE.



DON'T SAY IT - WRITE IT!

Every day Council and the Association office receive phone calls and letters complaining of some detail of the way the Association is run. To save everyone's time, here is a handy clip-out belly-ache form. Please use soft lead pencil so that results may be read by our computer.

Dear Association:

I do not like

- Annual Meetings
- The \$3.00 late fee penalty
- Insurance salesmen
- Insurance advertising in engineering publications
- The E.I.C.
- C.C.P.E.
- A.P.E.M.
- Architects
- Government employees
- Consultants
- Formal Dances
- Informal Dances
- Roster with advertising
- Roster without advertising
- SignedP. Eng.
- I am anonymous

SALARY SURVEY—1968
ALL CANADA (Excluding Quebec)

YEAR	NUMBER	HIGH	UPPER DECILE	UPPER QUARTILE	MEDIAN	LOWER QUARTILE	LOWER DECILE	LOW	No. OF DEGREE	CAN.	U.S.A.	OTHER
1971 1970												
1969	..	.....	.....	.....	.....	.....	.....	.....	..	..	..	..
1968	63	20,000	13,041	10,920	9,295	8,100	7,500	3,600	34	31	1	2
1967	96	21,000	12,720	11,048	9,200	8,100	7,650	7,200	65	53	3	9
1966	427	60,000	10,800	9,700	9,000	8,400	8,025	800	393	342	13	38
1965	481	24,000	11,100	10,152	9,320	8,827	8,400	800	451	384	15	52
1964	545	25,000	12,000	10,680	9,800	9,120	8,700	950	512	424	15	73
1963	542	26,400	13,000	11,760	10,400	9,600	9,000	1,000	517	415	17	85
1962	856	27,000	13,800	12,000	11,000	10,000	9,360	800	812	655	38	119
1961	391	30,000	13,560	12,000	11,000	10,080	9,420	850	374	314	17	43
1960	542	56,005	15,000	13,000	11,892	10,700	10,000	800	520	433	26	61
1959	544	30,000	15,300	13,830	12,000	11,100	10,200	1,020	524	425	33	66
1958	569	30,000	16,000	14,100	12,600	11,475	10,400	5,200	546	456	33	57
1957	523	40,000	16,800	14,580	13,000	11,940	10,800	830	485	377	39	69
1956	538	31,000	17,400	14,900	13,000	12,000	11,000	1,255	488	371	30	87
1955	450	90,003	17,500	15,400	13,500	12,000	11,220	5,000	428	329	33	66
1954	467	72,000	19,800	16,000	14,000	12,500	11,400	7,350	421	312	32	77
1953	480	75,000	19,000	16,000	14,000	12,250	11,000	1,080	433	313	30	90
1952	625	45,000	20,000	16,400	14,300	12,500	11,400	7,100	576	430	20	126
1951	725	110,000	20,000	16,860	14,400	12,600	11,250	800	696	564	23	109
1950	1030	50,000	20,100	17,600	15,000	13,000	11,700	1,050	985	856	28	101
1949	978	60,000	22,000	18,000	15,000	13,200	11,960	1,000	951	829	28	94
1948	579	50,000	22,000	18,000	15,400	13,440	11,920	1,234	541	444	24	73
1947	366	50,000	23,500	20,000	16,000	13,500	11,900	3,900	348	286	13	49
1946	261	45,000	25,000	20,000	15,500	13,570	11,800	4,200	240	203	8	29
1945	230	90,000	24,000	19,440	16,000	13,500	12,000	1,100	207	171	7	29
1944	224	50,500	25,000	18,500	16,000	13,560	11,928	8,000	219	165	9	45
1943	180	55,000	25,000	19,750	16,000	13,500	11,280	1,315	176	142	12	22
1942	192	50,000	27,500	21,000	17,000	14,000	12,000	1,108	180	140	11	29
1941	204	96,200	25,000	20,000	16,300	13,500	11,750	8,500	191	151	16	24
1940	170	76,017	25,500	21,500	15,500	13,040	11,300	9,200	157	115	11	31

1939	198	50,000	24,000	20,000	16,800	14,000	12,000	5,200	182	140	10	32
1938	157	40,000	23,500	20,000	16,300	13,000	11,500	6,000	145	111	10	24
1937	127	62,000	30,000	22,000	16,500	12,600	11,400	904	117	84	7	26
1936	137	60,000	25,800	20,000	16,000	13,615	12,000	800	131	104	8	19
1935	148	110,000	29,500	22,000	17,400	13,050	12,000	1,670	141	121	6	14
1934	62	72,500	26,000	22,440	17,500	14,000	12,400	9,000	55	46	1	8
1933	121	42,000	25,000	20,500	16,300	13,200	11,820	10,000	114	96	8	10
1932	160	88,000	27,500	21,500	17,000	13,152	11,300	7,350	151	119	12	20
1931	78	40,000	22,500	20,000	15,120	12,645	11,400	5,160	76	60	8	8
1930	108	230,000	30,000	22,020	17,000	13,800	12,000	800	99	84	6	9
All	14,574	230,000	20,000	16,000	13,200	11,076	9,600	800	13,681	11,095	661	1,925

1930 includes all earlier years.

SALARY SURVEY—1968
PROVINCE OF MANITOBA

YEAR	NUMBER	HIGH	UPPER DECILE	UPPER QUANTILE	MEDIAN	LOWER QUANTILE	LOWER DECILE	LOW	No. OF DEGREE	CAN.	U.S.A.	OTHER
1971												
1970												
1969	..	.....	.....	.....	.....	.....	.....	.....	..	..	..	..
1968	..	.....	.....	.....	.....	.....	.....	.....	..	..	..	..
1967	1	.....	.....	.....	10,300	.....	.....	.....	0	..	..	..
1966	17	15,500	10,000	9,360	8,736	8,104	7,920	7,800	17	15	2	0
1965	24	13,500	9,960	9,360	8,900	8,300	8,000	7,800	24	23	0	1
1964	30	12,400	11,340	10,500	9,600	9,400	9,300	8,100	30	26	1	3
1963	14	15,000	13,500	11,000	10,190	9,000	8,700	8,400	13	11	0	2
1962	27	19,000	11,220	11,000	10,320	9,500	9,280	8,500	27	21	2	4
1961	31	16,800	13,000	12,000	11,000	10,000	9,360	9,000	30	30	0	0
1960	34	16,000	14,124	13,200	11,700	10,600	9,980	9,420	34	31	1	2
1959	21	15,000	13,200	12,576	12,000	10,780	10,000	1,060	19	17	1	1
1958	20	17,400	15,000	14,000	12,600	11,400	11,000	10,500	19	18	1	0
1957	19	25,000	16,500	15,000	13,500	11,800	11,000	10,285	17	13	2	2
1956	20	16,800	14,500	13,500	12,500	11,400	11,000	8,580	18	15	1	2
1955	20	18,500	15,000	13,464	12,300	11,200	11,000	10,000	19	17	0	2
1954	14	20,000	19,000	15,400	13,020	12,000	11,970	10,000	13	13	0	0
1953	28	31,000	18,000	16,800	15,500	14,365	13,000	10,500	27	21	0	6
1952	16	40,001	20,001	17,400	14,000	12,800	11,580	9,500	14	11	0	3
1951	24	20,000	20,000	15,200	13,620	12,000	9,600	1,370	24	20	0	4
1950	40	24,500	19,200	16,360	14,700	13,200	12,000	10,000	40	35	2	3
1949	30	27,500	19,000	16,978	15,240	13,600	11,700	7,860	28	26	1	1
1948	17	24,000	21,200	20,000	18,000	15,000	14,000	11,150	16	16	0	0
1947	4	23,400	.....	16,200	.....	14,040	.....	11,000	4	4	0	0
1946	11	27,000	20,350	18,000	15,000	11,088	11,000	10,374	10	10	0	0
1945	6	20,424	20,000	15,000	.....	13,740	13,500	13,000	6	5	0	1
1944	9	35,000	24,000	18,000	15,000	14,472	12,000	12,000	9	8	1	0
1943	4	33,000	.....	15,000	.....	13,650	.....	11,050	4	3	0	1
1942	5	20,500	.....	20,400	20,000	17,160	.....	12,000	4	4	0	0
1941	4	20,250	.....	17,500	.....	10,200	.....	9,600	4	3	0	1
1940	10	76,017	25,000	25,000	15,500	13,640	11,153	11,000	8	5	0	3

1939	3	25,000	.....	.....	15,000	.....	.....	9,840	3	1	0	2
1938	6	20,952	19,700	18,500	.....	17,600	11,800	11,000	6	4	1	1
1937	3	13,800	.....	.....	12,250	.....	.....	11,000	2	2	0	0
1936	7	19,500	19,400	16,000	14,500	12,000	9,600	800	5	5	0	0
1935	4	18,300	.....	16,200	.....	12,000	.....	11,760	3	3	0	0
1934	1	.....	.....	.....	15,005	.....	.....	.....	1	1	0	0
1933	6	25,000	25,000	18,000	.....	15,800	14,680	10,800	5	3	1	1
1932	5	75,000	.....	40,000	21,000	15,005	.....	10,000	3	3	0	0
1931	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1930	7	70,000	24,492	20,000	18,684	18,684	18,300	12,000	6	6	0	0
All	542	76,017	19,000	15,400	12,600	10,500	9,360	800	512	449	17	46

1930 includes all earlier years.

SALARY SURVEY — 1968
Salary Distribution disregarding year of graduation
ALL CANADA, EXCLUDING QUEBEC

PERCENTAGE	DOLLARS	PERCENTAGE	DOLLARS
High	230.000	45	12.900
95%	24.000	40	12.360
90	20.000	35	12.000
85	18.000	30	11.592
80	17.000	25	11.076
75	16.000	20	10.620
70	15.300	15	10.056
65	15.000	10	9.600
60	14.300	05%	8.900
55	13.800	Low	800
50	13.200		

TOTAL REPORTING 14,574

NEW MEMBERS

The following new members have been registered:

A. C. Smith	J. R. Crosby
G. S. Halter	A. J. Blackery
D. T. Anderson	C. A. Clements
C. J. A. Coats	D. J. Shyluk
G. O. Hanson	A. C. Stark
A. N. Ogale	W. Bilozer
A. Rosenbloom	R. B. Clapham
G. L. Turnquist	G. W. Cruikshank
R. C. Lacasse	B. H. Y. Fan
R. J. Jewell	L. G. Ferry
J. G. Bragg	J. D. G. Bailes
J. C. Joseph	W. R. Griefe
K. M. Padegal	B. J. Haller
H. E. Wichert	E. A. Van Humbeck
S. S. Yoshino	E. S. Katai
L. A. Anderson	T. A. Mohammed
F. P. Barlishen	L. A. Morris
D. W. Harvey	D. R. Rentz
W. W. Dolhun	J. N. Roik
R. G. Radley	J. J. Schreuder
D. A. McCuaig	C. V. Thio
R. N. Shaw	J. V. Weiszmann
G. C. Booth	N. G. Wills
K. W. Campbell	R. B. Young
P. Machibroda	E. A. Zaleski
M. J. Bohn	K. S. Yang
M. J. Prosser	

♦ ♦ ♦

THE A TO L's HAVE IT

If you want to be elected to Council and your name is Smith or Williams, or anything else starting with a letter from the last half of the alphabet, you'd better change your name. A glance at the list of members of Council shown on the first page of this publication reveals the fact that everyone of them has a name starting with a letter in the A-L portion of the alphabet. The solution to this phenomenon is not as simple as might appear on the surface. In voting for Councillors the membership at large does not just start at the top of the ballot and pick the first four or five names. The names on the ballots are rotated four times so that on one quarter of the ballots, candidates whose names appear at the last quarter of the alphabet are on top. Any explanations as to why Council is selected from the A-L section would be appreciated. After all this trend is not general. The Premier of this Province is named Weir, his predecessor was named Roblin, the Prime Minister's name starts with T and his predecessor was named Pearson.

UP WITH THE JONESES

If you want to keep up with the Joneses in engineering in this Province, you are out of luck. We have five Stewarts, eight Smiths, eight Williams, but no Jones.

Approximately 69% of the engineers registered to practise in Manitoba live in Greater Winnipeg. Twenty-one percent live outside the Province and 10% live in other parts of Manitoba. The greatest concentration of engineers is in postal zone 9—253. Winnipeg 19 (Fort Garry) is second with 134. Winnipeg 12 (St. James) is third with 101 and its partner Assiniboia is fourth with 90. St. Boniface is next with 78, followed by St. Vital with 55. Thirty-one members have made it into the Mighty Mortgage Town of Tuxedo.

♦ ♦ ♦

FLIN FLON MARRIAGE

Our Flin Flon correspondent, M. N. Collison, P. Eng., reports on the marriage of Kathy, daughter of R. L. Price, P. Eng. to Jack Stickney, son of W. J. Stickney, P. Eng.

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FIFTH E.I.C. REGION II TECHNICAL DEVELOPMENT PROGRAMME

The Fifth E.I.C. Region II Technical Development Program which was held at the University of Manitoba, May 12-24, 1969 was attended by 132 participants. Of the eleven courses originally scheduled, three New Approaches to Structural Design against Wind Action, Air Pollution, and Structural Connections—Behaviour and Design, had to be dropped due to a lack of participants.

The number of participants per course for the eight courses that were presented were as follows: Project Planning and Control Using Critical Path Method - 26; Transistor Circuit Design - 8; Water and Sewage Treatment - 16; Law for Engineers - 30; Fluidic Devices and Systems - 7; Airphoto Interpretation and Surficial Geology of Western Canada - 13; Finite Element Method - 19; and Statistics for Engineers - 13. The program organizers stated that they were delighted with the overall program attendance in that it allowed them to conduct highly specialized courses with a small number of people. Of the eighteen out-of-town participants that attended, three were from

Calgary; two from Kenora; one each from Ottawa, Regina, Saskatoon and Edmonton and Fort William, with the remainder from Pine Falls, Gillam, Pinawa, Beausejour and Brandon.



CONTINUING EDUCATION

A program of fall and spring courses to be held at the University of Manitoba is presently being prepared by the E.I.C. Winnipeg Branch Continuing Education Committee.

Courses being considered for the fall are Mathematics Review for Engineers, D.C. Transmission, Business Administration for Engineer, and Fortran Programming for Civil Engineers. These courses would be presented in ten to twenty session programs during the fall of 1969. The spring program would consist of one to three day courses to be held in January, February and March of 1970. Courses presently being considered are "Design in Plastics" and "Pumps, Their Motors and Controls."

Suggestions for other courses or for those listed above, and requests for information should be directed to Prof. E. Shapiro, Extension Division, University of Manitoba, Winnipeg 19, Manitoba in writing or by phone at 474-9623 or by writing P. Feschuk, P. Eng., M.E.I.C., E.I.C. Winnipeg Branch, Continuing Education Committee, c/o E.I.C. Winnipeg Branch, 455 Ellice Avenue, Winnipeg 2, Manitoba.



PHILOSOPHICALLY YOURS

A mature man can consider wherein his opponent may be right; an immature man must vindicate himself by proving the other fellow wrong. — C. S. Bluemel.

I have never for one instant seen clearly within myself; how then would you have me judge the deeds of others.

— Maeterlinck.

Sentiment is the poetry of the imagination. — Alphonse de LaMartine.

Grief can take care of itself, but to get the full value of a joy you must have somebody to divide it with. — Mark Twain.

Life is too short to be little. — Disraeli.

Great battles are really won before they are actually fought. To control our pas-

sions we must govern our habits, and keep watch over ourselves in the small details of every day life.

— Sir John Lubbock.



A MESSAGE INTENDED TO CONVEY FACTS, NOT INSPIRATION

To those who may ask, "What does the Association do for me, or what do I get from your 'Club' for my 25 bucks?" — rather than a general discussion of principles and ideals, I will attempt to answer the question.

The purpose of the Association is to administer the Engineering Profession Act and in so doing protect the public. To protect the public, standards of engineering competency are being maintained by the Association. Grandfather clause admissions have not been permitted for many years and an applicant must now hold an accredited degree in engineering plus experience, or have additional experience and submit to examinations as set by the Association, in an effort to demonstrate his competency. At the moment I am sitting before six applicants who are writing a three-hour paper on Statics and Dynamics (one of eleven exams that most of this group must write).

If even a small percentage of the enquiries received from Canada and the rest of the world resulted in registrations, there would *not* be a shortage of engineers, although there would probably be a shortage of *competent* engineers. Provided registration standards are maintained, a qualified engineer remains a rare commodity and the law of supply and demand ensures that he can obtain *and hold* an above average position and demand an above average income.

An engineer may feel that his present remuneration is below the contentment level but for one reason or another he may be reluctant to seek a new position. At least he should realize that, because registration requirements are being maintained by the Association, he *is* in demand on the open market, and that his present salary is much higher than it would be if registration standards dropped. This type of insurance is much more valuable than the excellent life and income insurance made available to members of all the Provincial Associations. To be assured of steady employment and an adequate salary is exceptional value at the present "mini" membership fee.

By definition of the present Act, some individuals are not by law required to register, and therefore choose not to. These people are

being carried on the backs of the true Professional who is proud to stand up and be counted as an Engineer.

Registration standards are continually rising. Those qualified for registration today may not find this the case one or five years hence. Ontario may be the first Province to require a comprehensive (and expensive) course in Professionalism in addition to the present registration requirements. It may prove to be a fact, although not a noble thought, that those presently registered are protected from rising registration standards by maintaining their membership. To digress somewhat, it follows that those not presently registered, may find registration more of a problem at a later date, when their job responsibility requires registration, or if they wish to change jobs, or if they wish to move to another Province which may adopt more stringent registration requirements. Transfer from province to province is a relatively simple matter. Initial registration in this other province may present problems.

If we observe closely we may find a few more reasons to justify the expenditure of \$25 per year, excluding such items and events as the Bulletin, the Salary Survey, the topical smokers, the dances, the golf and curling events.

The A.P.E.M. has been instrumental in the establishment of the M.S.C.E.T.T. Inc. and continues to support this Incorporated Society. The certification of technicians and technologists benefits not only the Society members but the Professional Engineers as well. The role of the professional engineer will become more important. In large companies, we frequently find sections or project groups comprised of one relatively contented engineer in charge of four or six relatively frustrated engineers. As qualified technicians become available, I foresee one relatively contented engineer responsible for four or six relatively contented technicians or technologists. The technicians and technologists are well qualified, hard working individuals. Be sure you are qualified to lead such a group.

The Association has established contact with the personnel departments of many of the larger firms employing engineers in Manitoba. Seldom does a day pass when a call is not received by the Registrar from a member of a personnel department or an engineering firm with respect to the qualifications of a prospective employee. Engineers are increasingly using their Association facilities to discuss job opportunities, remuneration, engineering titles, ethics, inequities, advertising, contraventions of the Act. If the problem or question cannot be solved by the Staff, the advice of another member of the Profession can readily be obtained.

Although many members and potential members may not be aware of the fact, the Association has been fairly successful in protecting the use of the word "Engineer" and "Engineering" where contact with the public is involved. Most problems of this nature can be resolved without court action and are not publicized.

Just to use up the balance of your annual fee, I would like to point out that the Association can be used to provide excellent business training for its members. Take the positive approach; request to be put on a committee; learn what the Association does, or make it do more; observe how the fellow who "has it made" operates; contribute; and you will have your annual fee refunded in the form of self-confidence and make a lot of good friends in the process. — T.W.A.



USE OF SEAL

Section 18 of The Engineering Profession Act reads as follows:

Every person registered under this Act shall have a seal, the impression of which shall contain the name of the engineer and the words "Registered Engineer, Province of Manitoba," with which all estimates, specifications, reports, working drawings, plans and other documents issued from his hand shall be sealed.



CODE OF ETHICS

The new Code of Ethics has now been distributed to all members and will be provided to all new members of the Association. In addition, the Preamble to the Code of Ethics has been printed separately in a form suitable for framing and copies are available for \$1.00 at the Association office. There is space provided for the Professional Engineer to sign and seal this document following the statement: "I hereby subscribe to the above Code of Ethics to which I set my seal and signature." Members are urged to procure a copy and to display it prominently in their offices.

MOVING?

PLEASE let us have your change of address.