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EIC's Historical Notes and Papers Collection

(Compilation of Articles, Notes and Papers originally published as
EIC Articles, Cedar Grove Series, and EIC Working Papers)

ENGINEERING HISTORY PAPER #13

“The Engineering Journal, 1918-1987 – Some Notable Highlights”

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(previously published as EIC Working Paper 1/1995 – Dec 1995)

EIC HISTORY AND ARCHIVES

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Abstract

This paper discusses the origins of the Engineering Journal, published by the Engineering Institute of Canada, and some of the issues, events and people that have been covered in its pages between 1918, when it first appeared, and 1987, when publication ceased. This periodical has now become an important source of historical material on engineering as an activity and as a profession in Canada. It also provides some useful insights into the evolution and development of the Institute itself.

The front covers of a number of issues of the Engineering Journal appear as an illustration in the APPENDIX at the end of the paper, together with the relevant details for each.

About the Author

Andrew H. Wilson is a graduate mechanical engineer with training in economics. Currently a consultant in research policy and management, he served for almost 30 years in the Public Service of Canada. He has been President of the Canadian Society for Mechanical Engineering and the Engineering Institute of Canada. He has also been Chairman of the Canadian Engineering Manpower Council and, more recently, of the Canadian Association for the Club of Rome. He is currently serving as the Secretary for EIC History and Archives.

About the Working Paper Series

In June 1995 the Council of the Engineering Institute of Canada agreed that a series of Working Papers on topics related to its history and development, to the history and development of other Institutions serving engineering in Canada and elsewhere, and to engineering generally, should be published from time to time. The Papers may, or may not, be authored by members of the engineering profession.

The Papers will have limited initial distribution, but a supply will be maintained at EIC Headquarters in Ottawa for distribution on request. They may also be published later, in whole or in part, in other vehicles, but this cannot be done without the expressed permission of the Engineering Institute of Canada. The Series will be administered by the Executive Director and the Secretary for EIC History and Archives.

In the Beginning...

For the origins of the Engineering Journal, we must go back to 1917. That year, the Committee on Society Affairs of the Canadian Society of Civil Engineers, known as the Haultain Committee, made a number of recommendations to Society's Council. One was that its name should be changed. On the 25 April 1918, the Senate in Ottawa, following the House of Commons, approved a bill making this change - to the Engineering Institute of Canada - and it received Royal Assent shortly thereafter. Another recommendation was that the renamed Society should publish a monthly periodical - something it had not done before, preferring to use the semi-annual Transactions to maintain regular contact with its members. The rationale for this particular recommendation can be found among the objectives of the Society and the Institute, namely:

to facilitate the acquirement and interchange of professional knowledge among its members; to promote their professional interests; to encourage original research; to develop and maintain high standards in the engineering profession; and to enhance the usefulness of the profession to the public.

The President of the Institute, Henry H. Vaughan, wrote on page 1 of the Number 1 issue of the first Volume of the new Engineering Journal:

The change in name implies the attempt to unite all engineers in Canada, to whatever branch of the profession they may belong, into one Society...The Journal will afford us all a means of being better informed on the activities of the Society throughout the entire country, for keeping our members closely in touch with each other and with headquarters and for increasing the usefulness of the Institute to its membership...Our new development may be ambitious but it contains great possibilities....

The Number 1 issue was dated May 1918. It was published by the Institute whose address then was 176 Mansfield Street, Montreal. The Board of Management for it included the President, a Vice-President, and five Councillors of the Institute. The Editor and Manager was Fraser S. Keith, the Secretary of the Institute, and Associate Editors were appointed to represent its dozen or so Branches across the country.

The principal content of this buff-brown covered, 82-page first issue concerned the two-day First General Professional Meeting held two months earlier in the Chemistry and Mining Building at the University of Toronto. Its subject was 'The Fuel-Power Problem,' which was considered to be a question of general public interest. The report in the Journal covered more than 50 pages and included a group photograph of the participants.

The second and third issues carried messages from members of the Institute's Council and from Branch Officers. The fourth and fifth issues, in August and September 1918, reported on the Second General Professional Meeting held in August in Saskatoon when the subjects under discussion were problems in the Western Provinces associated with highways, community water supplies, concrete and fuels. The September issue included the landmark paper by F.H. Peters on 'Legislation Concerning the Status of Engineers.' This issue and the October one also covered the Third General Professional Meeting held in September in Halifax and devoted to the discussion of problems to do with harbours and shipping in the Maritime Provinces.

As might be expected, the December issue had quite a number of references to the end of what was later called 'World War I' - although the prevailing sentiments were more forward-looking than reminiscing. This issue also initiated a process followed for some years whereby the Annual Meeting of the Institute had two parts. The first was held in Montreal each January for the appointment of auditors and ballot scrutineers, and was then adjourned. The second was the Annual General and Professional Meeting 'proper' which was held in a major Canadian city several weeks later.

The early issues of the Journal gradually established a number of features and departments, in addition to papers and articles, that were to become standard in one form or another over the years - for example: editorials; lists of Council and Committee members; Annual, Council, Committee and Branch reports and news (often accompanied by photographs); financial statements; By-Law revisions; discussions of papers appearing in the same issue or in earlier ones; recent additions to the Library; preliminary notices of applications for admission or transfer, as well as actual elections and transfers; university graduations; personal notices of members; biographies; the announcement of honours and awards; obituaries; letters to the Editor; the employment bureau (a clearinghouse for engineering positions sought and vacant in Canada); the engineering index (covering the titles of papers from the current periodicals and published by arrangement with the American Society of Mechanical Engineers); business/consulting cards; and company advertising.

Among the earliest advertisers were Pratt & Whitney of Canada, the John Bertram Company, the Canadian Fairbanks-Morse Company, Canadian Ingersoll-Rand, Dominion Bridge, Canadian General Electric, the Neptune Meter Company, the Barrett Company, T. McAvity & Sons, E.G.M. Cape and Company, Dominion Iron and Steel, and Manitoba Bridge and Iron Works. They were later joined by companies such as Imperial Oil, Canada Cement, Westinghouse, the International Nickel Company, Hamilton Bridge Works, Goldie & McCulloch of Galt and Robb Engineering of Amherst, Nova Scotia.

As the new publication became better known, the number of pages

devoted to advertising increased, as did the number of articles, news and other items. Between May 1918 and September 1920, for example, the total number of pages per issue rose from 80 to 170. Volume 1 in 1918 had only eight issues since publication began in May. Come budget or other crisis, there were 12 single monthly issues in each Volume each year from 1919 until the late 1960's.

Most issues of the Journal in the early years published three or more papers that were mainly descriptive and of general interest to practitioners. For example, the July 1919 issue included papers on: 'The Bloor Street Viaduct, Toronto'; 'What is the International Joint Commission?'; and 'Overhead and General Costs in Manufacturing.' In some issues, all of the papers were related to a specific project, event, topic, or location. For example, in September 1920 there were five papers, one devoted to the Welland Ship Canal and the other four to various aspects of the nearby Queenston-Chippewa power development. The 230-page, advertising-free July 1924 issue was devoted to Canadian papers presented several weeks earlier at the First World Power Conference in London, England. Engineering education and management were topics included relatively often. The more specialized technical and theoretical papers appeared in volumes of Transactions which the Institute continued to publish separately from time to time. Until the mid-1970's, some of the papers that had been presented at Annual Professional and Branch Meetings and at specialist conferences appeared in the Journal over the months that followed their delivery.

The Durley Years

The April 1925 issue carried the notice of the appointment of Richard J. Durley as Secretary of the Institute, succeeding Fraser Keith. The masthead indicated that he became Editor and Manager in June, supported by N.E.D. Sheppard as Assistant Editor. The Board of Management at that time included the President, two Past Presidents, and two Councillors. Each of the 24 Branches of the Institute appointed an Associate Editor. However, the format and features of the Journal continued to be the same for another decade.

The editorial page in July 1927 explained how the Institute acquired - without moving - the address in Montreal for which it became so very well known:

The number of The Institute Headquarters building in Montreal has been changed from 176 to 2050 in accordance with the general renumbering of buildings on many of the streets in the city. Accordingly, while the location of The Institute Headquarters is not changed, the address in future will be...2050 Mansfield Street...

This same July issue commemorated the sixtieth anniversary of the Canadian Confederation and the fortieth anniversary of the founding of the CSCE with an editorial piece called 'The Origin and Development of the Canadian Society of Civil Engineers, now the Engineering Institute of Canada.' It was based on material written originally by R.A. Davy, T.C. Keefer, C.E.W. Dodwell and H.A. Lumsden. A second, related article appeared in September and dealt with membership. It concluded:

The results attained by The Institute and the benefits to be derived from membership in it are due entirely to the active and unselfish labour of its individual members, and those who get the most out of The Institute are those that contribute most by giving their time and energy in its service, whether by taking an active part in general or branch meetings, by discussing papers, serving on committees, or in other ways perhaps less prominent but equally useful. There is every reason to anticipate that with the cooperation and aid of our members the rapid development of the last five years will be continued and the results consolidated, and in the years to come The Institute will exert an ever-widening influence as the national engineering society of Canada.

In June 1928, the Journal paid tribute to one of the oldest of the world's engineering societies, the Institution of Civil Engineers, of London, England, then celebrating its Centennial.

The technical material in the April 1929 issue was devoted to an extensive analysis of what was called 'The St. Lawrence Problem' - the proposal to construct a ship channel 27 feet deep from Montreal to the open water of Lake Superior, to make a single unit of inland waterway 1,200 miles long which would also generate 5 million hp of installed hydropower. This was the first of many papers to appear in the Journal on the St. Lawrence River and the Great Lakes, ending only after the Seaway had been built in the late 1950's.

N.E.D. Sheppard, the Assistant Editor and Manager of the Journal left the EIC staff early in 1930, and was replaced by J.F. Plow as Assistant Editor and Manager. Durley's position became that of Editor. Sheppard returned in 1932 as Manager of the EIC's Publications Department, where he remained for six more years.

Early in 1931, on completion of arrangements with the Royal Aeronautical Society in England, Aeronautical Sections were formed within the Institute Branches in Montreal and Ottawa. From then until World War II, papers by members of these Sections appeared frequently in the Journal.

The February 1931 issue was devoted to papers describing the construction and the mechanical, electrical and other features of what became a notable downtown Montreal landmark - the Head Office

building of The Sun Life Assurance Company of Canada. In August of that year there was a biographical article on Lt. Col. John By, builder of the Rideau Canal, by Hamnett P. Hill, a lawyer. In March 1932 there was a paper on the construction of Toronto's Maple Leaf Gardens. It was noted in the October issue later that year that the Institute had established a Committee on Unemployment.

At the time of the 15th anniversary of its publication, in May 1933, changes were made to the material and design of the cover of the Journal. Coated paper was used, and the principal contents of each issue were listed on the outside of the front cover under the heading 'In this Issue.' Further changes, particularly in regard to content and layout, would have been made at this time - as a result of the recommendations of a Special Committee - had not the adverse economic conditions in Canada at the time made them financially unaffordable. It was April 1940 before the cover design was changed again.

Western Canada's drought problems attracted a great deal of attention in 1935 and a series of papers on aspects of them were presented at the Institute's Annual General and Professional Meeting in Toronto in February, some to be published in the Journal later in the year.

At this same Annual Meeting, a Committee was established to examine how the 'consolidation' of the engineering profession in Canada might be brought about. Gordon M. Pitts was appointed Chairman, and Robert F. Legget, Secretary. In the weeks following the AGM, a great deal of discussion took place all across the country, involving to a large degree the Branches of the Institute and representatives of the Provincial Associations. A questionnaire was developed later in the year and responses sought through the Branches. Each stage was reported in the Journal. This matter was not resolved until 1937, when a ballot vote turned it down. A later By-Law amendment enabling the Institute to make agreements of cooperation with the individual Provincial Associations was, however, successful.

The November 1935 Journal included a full list of active members of the Institute, both alphabetically and geographically. This issue also noted that a member, Clarence D. Howe of Port Arthur, Ontario, who had recently been elected to the House of Commons, had been appointed Minister of Railways and Canals and Minister of Marine.

A very special issue of the Journal was published in June 1937 to celebrate the Semicentennial of the founding of the CSCE/EIC in 1887. It was, at only a few pages short of 300, the largest one ever to appear. It is easily recognized on a shelf filled with Journals as it has a gold cover. Its textual content was in three parts: the story of the Society/Institute from 1887 to 1937; biographical material on the Presidents, lists of Honorary Members and winners of the Kennedy Medal; and the Semicentennial Papers.

This last part was by far the longest, covering developments over the 50 years in 17 sectors/sub-disciplines of engineering, each with its individual author - for example: C.D. Howe wrote on 'Waterways Development'; Fraser S. Keith on 'Industrial and Manufacturing Development'; K.M. Cameron on 'Public Works'; J.R. Donald on 'Chemical Engineering'; and C.R. Young on 'Bridge Building.' This issue of the Journal is now a collector's item, but it is also one of the few to provide a general account of the early development of engineering in Canada and of some of the people who were then prominent in the profession.

The celebrations associated with the Semicentennial, were reported in the Journal in July 1937, and the papers presented at the associated Professional Meetings in Montreal and Ottawa appeared in it and in later issues. The address at the Semicentennial Banquet held in Montreal on 16 June was given by Lord Tweedsmuir, the Governor-General of Canada.

Statistics on the registration of students in the Faculties of Engineering and Applied Science in the Canadian Universities were included in the January 1938 issue for the first time. They were repeated annually for many years, providing a useful time series for comparative and historical purposes.

In March 1938 the announcement was made that J.F. Plow had resigned from the EIC staff to accept a position in industry. He was later replaced as Assistant to the General Secretary by Louis Trudel.

The Austin Wright Years, including World War II

The April issue that followed announced that Leslie Austin Wright had been appointed General Secretary of the Institute, succeeding R.J. Durley, who became Secretary Emeritus. Austin Wright also became Editor of the Engineering Journal.

About this time, the names of members and others who had recently visited the Institute's Headquarters in Montreal began to be listed monthly in the Journal, and this practice was followed for the next twenty years. The December 1938 issue was chosen to carry an updated members list, together with a list of those who had been Officers or Members of Council since 1887. This issue also announced that changes to the physical characteristics of the Journal were imminent.

These began appearing in January 1939. For example, the 'Contents' page at the front now included the masthead. The names of the Editor (Austin Wright) and the Advertising Manager (N.E.D. Sheppard) remained. The list of Associate Editors from the Branches was replaced by the Institute's Publications Committee and a list of some 35 advisory members to this Committee. The outside front cover design and the listing for the Council remained unchanged,

but the listing of the Branch Officers was moved to a page of its own and replaced by lists of the current Special and Standing Committees of the Institute. Among the former were those for Finance, Legislation, Papers, Library and House, and Publications. The latter included Committees for the Gzowski, Duggan, Leonard and Plummer Medals, and the Past-President's and Students' and Juniors' Prizes, International Relations, Western Water Problems, Deterioration of Concrete Structures, and Professional Interests.

As before, the published papers and articles were written principally by practitioners who were also Institute members and had usually been presented earlier at a Professional or Branch Meeting or at a meeting of another Learned Society. But the 'Branch News' department became 'News of the Branches' and a second department for 'News of Other Societies' - including the Provincial Associations - was added. The 'Annual Branch Reports' were now 'Abstracts,' but tabulations of the membership and finances for all of the Branches were added. If anything, the numbers of photographs increased, and especially group photographs taken at Institute meetings and functions. Beginning in February 1939, an almost full-page photograph of someone distinguished engineer or notable achievement in engineering occupied a full page between the Council/Committees and the Branch Officers pages.

In February 1939 it was reported that considerable repair work had been done to the Headquarters building in Montreal although, due to continuing financial constraints, not all the needed work had been undertaken. The Montreal Branch, which used the building for its meetings, contributed to the cost of these repairs. In July the establishment of an Institute Committee on the Young Engineer, to provide advice on training and related problems, was announced by the Chairman, Harry F. Bennett.

The October 1939 issue, not surprisingly, included editorial comment on the beginning of World War II. The Institute continued to publish the Journal throughout the War and managed to maintain the page content and coverage in spite of increasing paper shortages. But the War did not curtail the visits of Presidents to the Branches across the country and, with the exception of regional and specialist conferences, their meeting schedules remained remarkably active and continued to contribute papers for publication. However, some format changes were introduced. For example, beginning in April 1940 the monthly 'almost full-page' photographs mentioned above were moved to the outside of the front cover. Also in that issue, a new department - 'From Month to Month' - brought together editorial comment, Institute and other professional news, letters to the Editor and other correspondence, and elections and transfers. 'Preliminary Notices' and 'News of the Branches' continued to be published separately as before.

The War drew attention to a number of special engineering projects. In May 1940, the Journal carried papers on the war potential of

Canadian industry and on the Alaska Highway. The August issue noted the promotion of Institute member A.G.L. McNaughton to Lieutenant-General and his appointment to command an Army Corps. The November and December issues carried the texts of six radio broadcasts made by senior members of the Institute on: 'Engineer in the War' (T.H. Hogg); 'War Research - An Engineering Problem' (C.J. Mackenzie); 'Aircraft Engineering in Wartime Canada' (Elsie G. McGill); 'Radio in Canada' (A. Frigon); 'Industrial Development in Canada to Meet the War Emergency' (W.D. Black); and 'The Training of Engineers at the Ecole Polytechnique' (A. Circé). A second paper by Dr Hogg on 'Canadian Engineers and the War' was published in April 1941.

In July the long list of Advisory Members of the Publications Committee was dropped from the masthead. This issue also had more to say about the recent repairs to the Headquarters building in Montreal. Increasingly, the front cover photographs reflected military rather than civilian engineering and Institute members were more frequently photographed in uniform.

There was a message from EIC President C.J. Mackenzie in the Journal in January 1942. He wrote:

We as engineers have also, I suggest, a particular responsibility in this struggle of machines, power and technical devices. Not only must we as a body design, manufacture and operate innumerable engines of war but we must see to it that the industrial and technical resources of the country, both human and material, are utilized in the most effective way. We must avoid uninformed criticism of delays in 'getting into production' for we know how inexorable is the time factor when new designs have to be prepared, new factories built and tooled for new processes, but on the other hand we must demand that there shall be no self-satisfaction and that every week and every month efficiency and production must be greater and still greater. We are now entering the phase of the conflict when we must insist that nothing short of the most intelligent and effective utilization of our total human resources can be accepted.

In March 1942 the Journal published articles by General McNaughton and Minister Howe, as well as another on the Alaska Highway. In April, Louis Trudel's name appeared on the masthead as Assistant Editor for the first time, and there was an announcement that General Secretary Wright would be taking leave of absence to go to Ottawa to assist Elliott M. Little, the Director of National Selective Service. Also in April, the first of a series of four papers on the design and construction of Vancouver's Lions' Gate Bridge appeared.

It was about this time that interest within the Institute in regard to post-war engineering education, industrial relations, and

planning became increasingly evident. Examples of this were the papers by Dean C.R. Young and by E.A. Allcut and J.A. Coote on the first two subjects that appeared in the Journal in October 1942, and the proceedings of the special open meeting of the Toronto Branch of the Institute that appeared in the December issue. As well, the Institute set up a Special Committee on Post-war Problems which, almost two years later, sent a Brief to the House of Commons Committee on Reconstruction under the signature of its Chairman, Warren C. Miller.

In January 1943 it was reported that General Secretary Wright had returned from Ottawa to full-time duty at the Institute. Louis Trudel remained as Assistant Editor of the Journal. The March issue announced that the Mr. Wright had delivered the Commencement Address at Rose Polytechnic Institute, Terre-Haute, Indiana, and had also received the degree of Doctor of Engineering from this institution in recognition of his services to engineering in the United States and Canada.

In May 1943 the Engineering Journal celebrated its 25th Anniversary of publication. There were messages of congratulation from the Prime Minister, General McNaughton, the Presidents of the American Civil and Mechanical Societies, and the current EIC President, Kenneth M. Cameron. This issue also carried some 23 papers by individual authors describing progress over the 25-year period in Canadian industry and science, as well as a retrospective editorial article on the origins and earlier years of the Journal and some personal recollections by the founding Editor, Fraser S. Keith. This particular issue is also easy to recognize. It has a silver-and-blue cover.

An editorial article appeared in October 1943 recounting the development of the relationships between the Engineering Institute and the Provincial Associations, as well as the formation of the Dominion Council (now the CCPE) by the Associations and the work of the Institute's Committee on Consolidation. There was also a report of the joint EIC-ASME meeting at the Royal York Hotel in Toronto, which was attended by more than 800 members and guests and was organized by a local joint committee drawn from the Toronto Branch of the Institute and the Ontario Section of ASME. The discussions were focussed on 'engineering questions vital to the war effort of the United Nations.' This meeting also led to the adoption and signing of the first Cooperation Agreement between the EIC and the ASME, as reported in the Journal in January 1944.

The April 1944 issue also had a specially designed cover, this time of the generator room at the Shipshaw Power Plant near Arvida, Quebec. All of the five papers in it were devoted to the story of this Plant. As well, the 'From Month to Month' department included a piece called 'The Saga of the Saguenay' which said, revealingly, and by way of explanation:

The story of Shipshaw, the great adventure in engineering, is told herewith for the first time. Previously there have been occasional outbursts of publicity of a non-technical nature consisting of pictures and scant general descriptions, but these papers are a complete record in detail. This number of the Journal brings to engineers throughout Canada the story for which they have been waiting.

Since the beginning of engineering history in Canada, the Institute has been the repository of the records of the achievements of the profession. Therefore it is appropriate that the brilliant story of Shipshaw should be presented by the Engineering Journal. To record the story properly, both for immediate reading and for future reference, it was agreed that all parts should appear together, as they do in this April issue.

It has not been a simple thing to accomplish. The arrangements began over 16 months ago. There have been complications of various kinds, not the least of which was censorship, but 'all's well that ends well' - and this has ended very well indeed.

To the Aluminum Company of Canada, and to the authors, the Institute is greatly indebted for this monumental co-operative effort. It constitutes the largest and finest record of engineering accomplishment that has been presented to Canadian engineers...

This same edition of 'From Month to Month' reported that, at long last, the Department of National Defence had announced the formation of a new Army Corps - the Canadian Electrical and Mechanical Engineers - for the lack of which in the Canadian Army had been adversely criticized in the pages of the Journal following the formation of the corresponding Corps in the British Army. Yet the critics were still not fully satisfied. The Army Order establishing the Canadian Corps had not specified that the officers were to be professional engineers.

The Journal in June 1944 had a paper on 'Problems in the Design of Alaska Highway Bridges.' It also had one on 'A Subway Plan for Montreal' which described such a subway and suggested it might be built as part of the city's post-war reconstruction plan. As we now know, this subway - or Metro - had to wait for the infrastructure changes made in Montreal prior to EXPO 67 before becoming a reality.

The 'From Month to Month' department in September 1944 included an analysis of the Institute's 6,000-odd membership (other than Students) by discipline: 46% civil; 23% mechanical; 21% electrical; 5% chemical; 3% mining; and 2% others. A comment was added to the

effect that, starting in 1887 when there were few engineers in Canada other than civils, the discipline numbers near the end of World War II appeared to reflect the national industrial development that had taken place over the past 60 years.

For some reason, the papers that appeared in the Journal in 1945 were more sociological, management-oriented and descriptive of the parts played by engineers in the War than they were of purely technical matters. And when the War was over, the editorial staff turned its attention to such problems as the rehabilitation of those returning from service, the expansion of the number of Branches, the restarting of regional and specialist conferences, and the new technologies that were emerging in Canada. The September 1945 issue, for example, carried papers on diesel-electric transportation and the atomic bomb; November had papers on radar as an aid to navigation and meteorology; December had one on atomic power; and January 1946 one on gas turbines.

The April 1946 issue reported something unusual. Under the heading of 'Unsolicited Testimonial' were these words:

Headquarters was much surprised and not too displeased to receive a press release from the Technical Advertisers' Association of Montreal which indicated that the Engineering Journal was the most read publication in Canada within the field surveyed.

The May issue that followed announced that the first list of Institute members since 1938 would be tabulated in the near future, the shortage of paper having prevented the publication of these lists during the War. In fact, except for news items, the whole of the November Journal was devoted to this list. Among the news items, however, was a report on the first meeting of engineering organizations within the British Commonwealth, held in London, England, in September 1946. The EIC was represented by President Hayes and General Secretary Wright. The Institute also took advantage of the occasion to host a reception for members then resident in Britain.

In January 1947 some changes were made to the outside front cover of the Journal, principally in regard to the size of the photograph and the lettering. Generally speaking, the majority of the technical papers published in the years right after the War were still written by practitioners for practitioners, but more than before were concerned with theory. The number of papers in French remained quite low.

The Journal for March 1947 published an analysis of the subscribers - done by the Audit Bureau of Circulations in collaboration with EIC Headquarters, for the benefit of the advertisers - in terms of their occupational and functional characteristics. The results of this analysis reflected the Institute's membership. They showed

that over 1,300 - or about 16% of the 8,300 subscribers surveyed - were government employees at the three levels, over 400 were in educational institutions, and over 1,100 were owners of their own businesses or managers of businesses. The mechanical, electrical and industrial fields accounted for 3,500, and over 1,500 were recent graduates or students. The Provinces of Quebec and Ontario together accounted for 65% of the total, 8% resided outside Canada (including Newfoundland), 6% in British Columbia, and the remaining 21% in the other six Provinces. On an industry basis, the majority were in metal products, consulting practice, and power and public utilities.

In the May 1947, the President's annual message appeared in both official languages. In June it was announced that, after eight years of service, Louis Trudel had accepted another appointment and would be succeeded by W. Douglas Laird as Assistant to the General Secretary of the Institute and Assistant Editor of the Journal.

The technical papers in this June issue - all of which had been presented at the Diamond Jubilee Annual General and Professional meeting of the Institute in May - were on aspects of the development and control of atomic energy, with the introductory contribution being made by General A.G.L. McNaughton. The July Journal included the paper on the jet propulsion gas turbine also delivered at the same meeting by Air Commodore Frank Whittle. The August issue printed three further addresses from the 1947 AG&PM which, together, had provided the material for a Symposium. They were: 'The Past - A Chronology of Early Canadian Engineering Activities' by J.G.G. Kerry; 'The Present Aspects of Engineering' by Lesslie R. Thomson; and 'Engineering a World that Works' by H. Birchard Taylor. The banquet speaker at the EIC Diamond Jubilee Meeting was Past President C.J. Mackenzie, then President of the National Research Council. His address was reprinted in the Journal in December and its subject was 'Applied Science in a Changing World.' He ended it with these words:

Altogether I feel confident about the future of Canadian industry and Canadian engineering, and I prophesy that when the younger men in this audience attend the Centennial anniversary of this Institute in 1987 they will be able to look back upon the last forty years as the best years of that century.

E.J. Blandford became Publication Manager of the Journal in January 1948, replacing N.E.D. Sheppard on the masthead. A number of small changes were also made to its appearance, mostly in relation to the format and headings, and the type used for them. The President's name was placed on the masthead shortly thereafter.

The technical papers appearing in January 1948 were devoted to land and sea transportation. Those in the February issue were specially prepared for the Journal as a Symposium on the design and

construction of the new Laurentian Hotel in downtown Montreal, which was the first multi-storey building in North America to be faced with aluminum. Future issues would include other Symposia specially prepared at the request of the Institute.

The May issue carried the headline: 'Journal Wins Important Award.' The explanation was as follows:

Just as this issue was going to press, the Editor was informed by W.B. Saunders, 1948 Contest Chairman of the International Council of Industrial Editors, that the Journal had been judged the leader in its class in the International Industrial Publication Contest, which is sponsored by the Association.

Judging was based on accomplishment of purpose, editorial achievement, appearance achievement and production achievement. Out of a possible score of 100 points, the Journal was awarded 97 points. 650 publications were submitted for judging.

A series of papers on oil and gas and water resources presented at the 1948 Annual General and Professional Meeting the previous May at Banff, Alberta, appeared in August and September. The October issue published the first of a several reports - condensed by the authors from their originals specially for the Journal - on wartime aeronautical R&D in Germany. The authors, J.J. Green, R.D. Hiscocks and J.L. Orr, had been members of the Canadian group that visited Germany after World War II ended to study the scientific and technical achievements of the former enemy. The fourth and last of these reports appeared in January 1949, and the discussion in the February.

By 1949 it was clear from increases in the size of the Journal, in the numbers of advertisers, in the use of coated paper and colour printing for the advertisements, in the 'News' departments (for the winter and spring months particularly), and in the other ways that the Institute itself was participating in a period of expansion. A new department - 'Notes on Management' - began in January 1949. Also, the numbers of specialist and other technical meetings sponsored and organized within the Institute and its Regions and Branches continued to increase. A Field Secretary, working out of Toronto, was added to the Institute's staff in April to visit and, in particular, to work more closely with the Institute's smaller Branches.

The Journal won another award in June 1949, this time for editorial excellence.

Following the new Province's entry into the Canadian Confederation, it was reported in August 1949 that the first stage in the setting up of a Newfoundland Branch of the EIC had been completed. The

Corner Brook Section of this Branch was formed some months later.

The technical content of the October 1949 issue was devoted to the Proceedings of the First Western Hemisphere Conference of the International Committee on Scientific Management (CIOS), which had been held in Quebec City the previous May in conjunction with the Institute's Annual General and Professional Meeting.

The masthead in January 1950 included the addresses of advertising offices for the Journal in Montreal, Toronto, Vancouver and London, England. The March issue included a 'Report on Television' by J.A. Ouimet, then Chief Engineer of the CBC. The April issue reported that Lt-Col L.F. Grant, a Past President of the Institute had been appointed Field Secretary, succeeding the first appointee, C.E. Sissons, who had died suddenly shortly after his appointment. The September issue included a history-based paper intriguingly titled 'The Romance of Vertical Transportation' by the Chief Consulting Engineer of the Otis Elevator Company in New York. In October the Journal printed a copy of the first photograph of the Chalk River NRX Reactor released for publication. And in December there was a paper on the design and construction of the Toronto Subway.

In a paper published in January 1951, General McNaughton explained the current organization and responsibilities of the International Joint Commission. There was also a note on France's oldest engineering school, L'Ecole Centrale des Arts et Manufactures, and in March an article on the recently established Athlone Fellowships. In April, Richard L. Hearn described the steam generating plants of Ontario Hydro. In May, the founding - in Havana, Cuba - of the Union of Pan American Associations of Engineers (UPADI) was announced. President Vance and General Secretary Wright represented the Institute at this meeting. More information about it, and some photographs of those who attended, were published in June. This issue also included the paper by J.G.G. Kerry on 'The St. Lawrence Waterway: An All-Canadian and Very Deep Route' which proposed among other things that an ice-free, all-season seaway might just be feasible. The first flight of the first all-Canadian designed and built military aircraft - the Orenda-powered Avro CF-100 - was reported in August.

The appointment of Col. H.G. Thompson as Assistant General Secretary of the Institute - replacing Douglas Laird - was announced in October. He also replaced Laird as Assistant Editor of the Journal. The December issue reported on the recently concluded revised Agreement of Cooperation between EIC and ASME. The Prince Edward Island Branch of the Institute was inaugurated at a meeting held in Charlottetown on 12 December. There were now EIC Branches in all ten Provinces.

The Journal published the paper by E.A. Allcut and F.C. Hooper of the University of Toronto on 'Possibilities of the Heat Pump in Canada' in June 1952. The July issue had an article on transistors

by D.J. Watson of the Northern Electric Company. The Hon. Robert Winters' paper on the engineer's place in the development of Canada's natural resources - delivered to the Montreal Branch of the Institute in March - appeared in August, as did the paper by George Govier on engineering problems related to Alberta natural gas. September saw the publication of a statistical analysis of the membership of the Institute that had been presented to the Branch Officers' conference in Vancouver in May. The September issue also included a report on the panel discussion at the same Vancouver meeting on 'Management, Safety and the Engineer.' This panel was chaired by Dr. Lillian Gilbreth, an Honorary Member of the Institute.

In November, this paragraph appeared in the Journal with regard to the ASCE:

The great thing about the centennial of the American Society of Civil Engineers was not the 66 ring circus held in Chicago in September to mark the occasion, but the realization that a society on this continent had given 100 years of service and of leadership to the profession. This great society, organized by a few enthusiasts and pioneers, had grown from a scrawny childhood to a robust adulthood, reaching in its hundredth year a membership of 34,000 served through 73 sections.

The address by former US President Herbert Hoover - an Honorary member of the ASCE - was printed in the Journal in December.

A report by Lt-Col. Grant as Field Secretary for the Institute appeared in March 1953. It covered the period from the establishment of this office in Toronto, through Grant's appointment to it in 1950, and beyond. A couple of paragraphs are worth quoting as they help to demonstrate the writer's sense of humour - as well as some of the pitfalls of running an organization such as the EIC:

In February 1950, the writer succeeded to the post, and at once decided that a most urgent task was to provide some service to the non-resident members of Branches herein referred to as orphans. Council cordially approved the suggestion that the field secretary should visit the orphans and entertain them as guests of the Institute.

The first of such visits was made to Brantford in May 1950. Here a good deal was learned: first of all that a good many members do not notify headquarters of change of address; secondly, that even in small places many of the members do not know each other; and finally that invitations must be carefully worded. As an indication of the need for the last precaution, the field secretary was

somewhat tardy in making it clear that the party was 'on the Institute' much to the annoyance of one of the guests who had just ordered a sandwich and a glass of milk in the expectation of having to pick up his own check. To avoid a repetition of this embarrassing incident, a system of formal invitations was introduced which is used except when it seems more suitable to ask some local member to send 'the fiery cross through the heather' to call the clansmen...!

Beginning in May 1953, the 'From Month to Month' department carried a regular series of notes and comments on material published in the Journal 35 years earlier, beginning with the very first issue in May 1918. This was continued for several years.

The Event-of-the-Year in 1953 was, of course, the Coronation of Queen Elizabeth II in London. EIC President Ross L. Dobbin was invited to represent the Institute, and was seated in Westminster Abbey during the ceremony. The Institutions in Britain arranged a full program of events for the President - some technical, some more social, including a visit to the grave of Lt-Col. John By in company with Mayor Charlotte Whitton of Ottawa. The trip was written up in the Journal in August. This issue also carried the news that the Duke of Edinburgh had accepted Honorary Membership in the EIC. His certificate was presented to him at Rideau Hall, Ottawa, on 29 July of the following year at a ceremony over which Governor-General Massey presided.

Sir Robert Watson-Watt addresssed the Annual Banquet of the Institute in Halifax in May and his speech, 'Fictions in the Story of Radar,' appeared in the September 1953 issue of the Journal. In October, a paper by J.L. Gray on the reconstruction of the NRX reactor after the accident nine months earlier was published. This issue also carried the first of six monthly articles dealing with the history and development of the ASME Boiler Code, condensed from the longer series by Arthur M. Green Jr. that had appeared earlier in Mechanical Engineering. The Journal series was intended as a preface to the regular publication of regulations associated with the Boiler Code. The December issue reprinted an article from the Royal Bank of Canada Monthly Letter of October 1953 on 'Engineering in Canada.'

The Journal in its Heyday

During 1953, the twelve issues of Volume 36 of the Journal had, between them, over 1700 pages of text and advertising - the largest number to date. A few years later this figure would exceed 2,000, and remain at this level until 1960. A year later, it was down to 1,700, and continued to decrease from then on.

In February 1954 the masthead showed that Margaret Griffin had

joined Col. Thompson as an Assistant Editor of the Journal, and Philippa King had joined the Publication Manager, E.J. Blandford, as his assistant.

In April 1954, three papers appeared on aspects of the construction of the Toronto Subway, as well as an article on the 100th anniversary of engineering education at the University of New Brunswick. In May a new department of the Journal began, devoted to 'News of the Associations and the Corporation.' The June issue had a paper on transistors and the electrical industry, and the September one, a paper on the application of computers (note spelling!) to industry.

In 1954 the Institute began, once again, the search for a basis for the 'confederation' of the engineering profession in Canada. As happened with the exercise carried through in the 1930's, this one took years to complete, and was again unsuccessful. But to begin the process, a Committee was struck by the Institute to study proposals and comment on how the exercise might be carried out. Its report was published in the Journal in June 1954. In it the Committee, undoubtedly with hindsight from the previous exercise, said:

It must be recognized that some engineers will not approve (at least in the beginning) any fundamental change in the existing organizations. They may be prompted by loyalty to one organization or by prejudice against another. They must be convinced eventually that proposals for cooperation deserve their support. Above all they must not be aggravated into active opposition against the proposals.

In this same issue the Editors said that changes to the Journal were planned for the future. These affected principally the design of the cover, the masthead, the typesetting, and the arrangement and format of the departments inside the periodical - including a new one called 'Canadian Developments' - and were spread over the next two years.

EIC Past President C.J. Mackenzie received the prestigious British Kelvin Medal from the hands of Earl Alexander of Tunis in London, England, on 2 June 1954, after which he presented a paper on 'The National Significance of Two Decades of Engineering Research in Canada' at the Institution of Mechanical Engineers. This paper was included in the Journal in October 1954.

All of the technical papers that appeared in November 1954 dealt with aspects of the Nechako-Kemano-Kitimat development of the Aluminum Company of Canada in northwestern British Columbia. The December issue noted the formation of the Canadian Aeronautical Institute some months earlier. This new Institute had evolved from the Aeronautical Sections of the EIC formed in Montreal and Ottawa

in 1931.

News of developments in the 'confederation' exercise appeared regularly during 1955, as did news of the construction of the St Lawrence Seaway. In April, E.C. Luke replaced H.G. Thompson on the Journal's masthead, and became Associate Editor. In May, Peter C. Bell was added as Technical Editor. The June issue had a paper on the gas turbine as an industrial prime mover, and the November issue had Frank Hooper's paper on the solar heating of Canadian buildings.

There was editorial comment in February 1956 on the absence of an engineer within the membership of the (Gordon) Royal Commission on Canada's Economic Prospects, in spite of the requirement that the Commission study future developments involving power and natural gas, the need for more roads, schools and universities, and that it survey Canada's energy resources and raw materials. The General Secretary was asked by the Council to bring this omission to the attention of the Prime Minister. However, in his reply Mr. St. Laurent said he was satisfied that the Commission was already competent to handle its task satisfactorily. Nevertheless, the President, on the instruction of the Council, appointed a small committee to prepare a Brief for the Commission. This Brief was presented on 8 March, according to the report in the April issue of the Journal. It stressed, among other things, the need for a complete study to be done of the needs in Canada for engineering education.

In June 1956 the Journal published the paper by J.J. Brown on 'Automation, Men, and Machines' that he had read at the Annual General and Professional Meeting in May. This paper traced the history of automation and discussed its economic and social effects. Later, in 1967, Brown published a book called 'Ideas in Exile: A History of Invention in Canada' in which he was very critical of the inventiveness of Canadians generally and of the ability of Canadian governments and companies to capitalize on such inventions as became available. In some ways, the EIC paper anticipated the book.

The September 1956 issue carried an article reviewing the history of the St. Lawrence Seaway, with particular reference to the contributions made by members of the CSCE and the EIC - going back to the first President, Thomas Coltrin Keefer. Three authored technical papers followed this review. In November there was a paper by General McNaughton on problems in the development of international rivers, and another, by Eckenfelder, Harland and Webb, on the survey of the Hamilton (later the Churchill) River in Labrador.

The EIC announced in the March 1957 issue that, on the recommendation of the Publications Committee, it was resuming the publication of Transactions which, with the exception of five

separately published technical papers, had not appeared since the volume covering the period from 1926 to 1930. Papers submitted for publication by the Institute would, henceforth, appear in the Journal if they were of general interest or, if of a more fundamental or specialized nature or too long for it, in the Transactions. It was also announced that the Institute would be publishing separately the biographies of several eminent Canadian engineers.

The May 1957 Journal, which marked the 70th anniversary of the founding of the CSCE/EIC, reprinted a letter of congratulation from Prime Minister St. Laurent. The technical papers in this issue were devoted to a review of Canadian engineering and industrial achievement during 1956 and were based on material from the Dominion Bureau of Statistics, trade journals, financial statements, and information supplied by industry executives. This review covered mineral resources, power development, communications and transport, construction, industrial production, pulp and paper, national defence, government works, and engineering research. It was repeated as a feature of the May issue for several years.

The technical papers in August 1957 were devoted to nuclear power, and those in September to oil and gas. All of them had been read at the 71st Annual General and Professional Meeting of the Institute held at Banff in June. Four of the five papers in the October issue dealt with the St. Lawrence Seaway, and all of the November papers were on aspects of engineering in Canada's North.

November 1957 was also the month in which Garnet T. Page, who had recently joined the Institute staff, became Associate Editor.

A number of changes to the format and arrangement were introduced in January 1958, as the Journal's own 40th anniversary approached. The page numbering - instead of being cumulative throughout the year and distinguishing between technical/editorial material and advertising - was consecutive from the first to the last page of each issue. The masthead/contents page was modified, and became page 3 of each issue, instead of the one before the special or technical papers. To the previous editorial staff of Wright, Page, Griffin, Bell, and Blandford were added Namona Thorley as Assistant Editor (Production), E. McAllister as Advertising Production Manager, and Christine Abraham as Circulation Supervisor. A new 'Meet the Authors' department, on page 5, was added with photographs and some biographical information. The designs of the departmental headings were changed. A new 'International' one was added to cover developments in other countries - featured one at a time - that were of interest to Canadian engineers. A series of articles describing the physical development of the facilities associated with Engineering Faculties across the country began in the January issue. However, the layout of the outside of the front cover remained unchanged.

A letter of congratulation from Prime Minister John Diefenbaker on the Journal's 40th anniversary appeared on page 4 of the 274-page April 1958 issue, of which nearly 20,000 copies were printed. Its outside front cover followed the design of that time, except for the announcement that it was a special issue. Its technical content was devoted to a review of Canadian engineering and industrial achievement similar to the one published in May of the previous year. It also included two pages of editorial reminiscences on the 40 years of publication.

The retirement of the General Secretary, Dr. L. Austin Wright, was announced in June 1958, as was the appointment of Dr. Garnet T. Page to succeed him. Dr. Page also became Editor of the Journal.

The technical papers in September 1958 were, once again, devoted to the St Lawrence Seaway. The 'News of the Branches' department in this issue included an item from the new Chalk River Branch reporting on its inauguration as the 50th Branch of the Institute.

Largely as a result of several recent international meetings on aspects of power generation - for example: the Canadian Section of the World Power Conference; the International Conference on Long Dams; and the Geneva Conference on the Peaceful Use of Atomic Energy - the technical papers in October 1958 were devoted to a review of recent power developments across Canada. It subsequently became the Journal's practice to devote the October issue each year to a review of developments in the power generation field.

The technical papers in the November 1958 issue were concerned with engineering in British Columbia in celebration of that Province's 100th Anniversary, and included was a letter to the Institute from Premier W.A.C. Bennett.

During 1959 the Journal carried an article each month on instrumentation and control engineering in a particular industry. The February issue included a review by several authors of fifty years of aeronautical engineering in Canada.

In April 1959 the Institute began awarding a 'Certificate of Advertising Merit' to one of its advertisers each month. Fifty readers - picked at random, and five per Province - were asked to study the advertising pages of an issue and to select the advertisement which, in their opinion, was best from the points of view of accuracy, information, and attraction. The results were announced three months after the ads had appeared.

The June issue included the joint report of the Committees of EIC and CCPE on Confederation. Progress reports on the work of these Committees were published in the Journal over many of the coming months.

By January 1960 the editorial team of the Journal, with the

exception of Editor Garnet Page and Publication and Advertising Manager E.J. Blandford, had changed. The Assistant Editor was now Deborah Wood, the Technical Editor Basil Wood, the Assistant Editor (Production) John Cherer, the Circulation Supervisor Robert G. Hungate, and the Advertising Production Supervisor Ann Moore. The EIC Publication Committee still kept watch over its - and their - operations.

A paper by Robert F. Legget, based on a talk he had given on the historical development of the St. Lawrence Waterway at an ASCE meeting in Cleveland, Ohio, a year earlier, appeared in May 1960. In a paragraph printed separately, he conveyed the following message:

A few months ago, standing on top of the great earth dyke which flanks the Canadian part of the immense new power house at Barnhart Island on the St. Lawrence, the writer had by his side a close friend, a distinguished scientist and engineer from a distant land. The Director of the St. Lawrence Project for the Hydro-Electric Power Commission of Ontario...told how this vast construction project had been carried out by two countries, working independently but side by side, without the slightest difficulty or real argument from the very start of the actual work. The foreign guest was amazed. 'How can such things be?' he asked. 'How can two great countries such as yours co-operate so closely? And if you can do it, why cannot other countries do the same? What is the secret?' These questions are worth considering, but without launching into the usual eulogy about the more than five thousand miles of undefended frontier.

While he was EIC President from 1960 to 1961, George Dick wrote a 'President's Column.' Some of his successors preferred to write 'Messages' from time to time and others, later on, wrote some of the editorials.

In January 1961 the outside front cover of the Journal was changed, most of it now being covered by a large photograph. The masthead/contents on the third page were laid out differently. And once again the editorial staff had changed. 'Meet the Authors' was replaced by 'In This Issue' which was descriptive of the papers as well as biographical about the authors. There were now fewer 'Personals' in each issue, and less Branch News.

In March 1961 an editorial article was published outlining the history and operations of the Institute's Committee on Technical Operations (or CTO) which, six years earlier, replaced the Papers Committee. The CTO was charged with streamlining the flow of technical information to Institute members. Its members included the leaders of the EIC's Technical Divisions, which represented the various disciplines of engineering. It also had links to the

Publications Committee, to the Committees organizing the Annual, Regional and Divisional Conferences, and to the Branches across the country. It was the CTO that was given the responsibility several years later by the EIC Council to provide the forum for the discussions leading to the founding of the Institute's Constituent (later Member) Societies.

The Years of Many Changes

One of the experiments tried out in the revisions to the layout of the Journal in 1961 was the insertion of yellow pages for specific purposes. The first of these appeared in March and was devoted to an editorial article describing the Institute, its purpose, benefits, facilities and services. The second yellow insertion was the Annual Report of the Council for 1960, which appeared in April. The third was the Final Report of the Confederation Commission (of EIC and CCPE), which was in the September issue. These particular applications were not pursued, but yellow pages were used later for other parts of the Journal.

As noted above, the 'slimming down' of the Engineering Journal began in 1962 as advertising, the contents of the various departments, and the numbers of event and activity photographs were gradually reduced, although the numbers of papers and articles remained much as before. However, the June 1962 issue was large and special - with 178 pages - since it marked the 75th Anniversary of the founding of the CSCE/EIC. The special and technical material in it was representative of Canadian engineering since 1887, and included a short editorial piece on the Institute. The message from President Lawton was written in French and English. The long list of Sister Societies sending greetings and congratulations was published in July, along with photo-reproductions of several of them. This issue also carried two additional technical papers for the 75th Anniversary collection. One was on structural steel. The other was the first part of a two-part paper on engineering education that was based on brief histories of engineering schools across Canada, with the second part appearing several months later.

The slimmed-down Journal also got a new outside front cover format - a full-page photograph with the title and a small box announcing the feature technical papers - in January 1963. The masthead/contents page was re-arranged, but remained as page 3. 'In This Issue' remained on page 5. All of the technical papers were given reference numbers (for example, EIC-63-CIV 1), and there were usually four per issue. Except perhaps for the Annual Meeting, there were still fewer photographs of Institute activities published. The regular departments remained much the same, although some had different titles and most were shorter. The 'New Papers Available' department listed the EIC Transactions and the new CTO Division Papers series. 'Obituaries' were limited to the names of deceased members, their schools and years of graduation - except

for Past Presidents whose obituaries were usually placed separately. Advertising was slimmed down, too, but still included business/consulting cards. A new section, called 'Late Engineering News' appeared on coloured paper (mostly blue) beginning in October 1963. The papers from the Journal, the Transactions, and the Divisions were available for single-copy purchase from the Institute as part of what was called 'an ambitious new publishing scheme...to provide vehicles for the ever-increasing number of papers being written by Canadian engineers.'

It was noted in the September 1963 issue that the ballot on the EIC-CCPE Confederation proposals had been defeated by a narrow margin in the EIC, and that it had also been rejected by the Associations in Newfoundland, Manitoba, Alberta and British Columbia and by the Corporation in Quebec.

Page 3 was redesigned again in time for the April 1964 issue. An 'Editorial Page' began in this issue. At first it was used by the Editor himself but, later on, Presidents and Committee Chairmen would also use it for their messages. The 'Branch News' department was also changed, and the Editor was authorized to edit the news submitted by the Branches into a format that reported their activities by Regions. The Editor was also authorized to publish a regular calendar of forthcoming Branch meetings.

The outside front cover design changed again in January 1965. Basically, the size of the photograph was reduced, the space for the title enlarged, and the features put into a circle rather than a rectangular box. The formats of pages 3 and 5 were also changed, slightly. Advertising, except for the cards, diminished further, as did the 'Personals,' but a new 'Undergraduates' Page' was started.

The Message from President Humphries published in February included the proposal that the Institute would build a new Headquarters on the site of the old one in the form of a multi-storey office building. The Institute would own the land, but would lease space within the building. After 60 years, it would own both. This Message also explained the recent chop-and-change that appeared to be taking place in regard to the Journal:

At the beginning of 1960, on the advice of the agent responsible for the sale of advertising space, Council approved the free distribution of the Journal to all engineers in Canada. This involved the elimination of the yearly subscription fee of \$4.00 previously paid by members, resulting in a substantial loss of revenue. It was felt at the time that the greater circulation would result in much increased revenue from advertising and that this would more than compensate for the extra expense involved and the loss incurred by no longer charging members for their subscriptions.

However, the increasing competition for advertising and the generally declining amount of money invested by advertisers in business publications as an advertising medium defeated this aim. The result was that we were thus left with an average yearly reduction in net revenue of about \$60,000, which had been the amount we received from the subscription fees. Attempting to publish a worthwhile Journal within the financial resources available from the advertising has been a difficult job and has had some adverse results in the quality of the magazine.

The Publications Committee felt that they should be given an opportunity to produce a better Journal without over-emphasis on advertising revenue as the sole determinant of quality and content. It also recommended that the Journal should be distributed only to Institute members and paying subscribers. The free distribution of the Journal to non-members now costs more than \$45,000 a year.

The recommendation to reduce the circulation and to make the Journal more member-oriented were approved by Council. The new look in appearance and contents of the Journal began last month. Although allowance has been made in the budget for a possible drop in advertising revenue, it is hoped that this will be kept to a minimum.

A fold-out incorporating pages 53 to 56 of the December 1965 issue of the Journal laid out the current organization charts for the Institute and the Headquarters.

In the January 1966 issue, President Côté discussed the Institute's long-standing objectives - as spelled out in the By-Laws, and noted at the beginning of this paper - in relation to the directions its activities should be taking and in order to ensure that maximum service would be provided from a viable and financially stable organization. Some of these directions were identified as follows:

- * improvement in the organization and operation of the Committee on Technical Operations, with the object of involving every member (in the activities of the EIC);
- * fostering an expanded program of organized continuing education and technical development;
- * working closely with government, industry and education to ensure the optimum utilization of both engineering technology and engineers themselves;
- * continuing the development of the best possible Engineering Journal;

- * investigating the best method for publishing research-type papers, either alone or in cooperation with other interested agencies, such as the NRC, and of issuing the resulting journals to all members;

- * investigating the possibility of publishing separate monographs, or special issues of regular publications, on special subjects;

- * strengthening the Institute's participation in international technical associations;

- * assuming an improved publication to replace the Transactions, ensuring that it is properly abstracted in the international abstracting and indexing publications.

While progress may have been made in some of these directions in the years that followed, the Journal and the Transactions remained the EIC's main publication media. The CTO's Division papers were discontinued when the Constituent Societies were formed, as described briefly below. Also, in 1964, the EIC's Geotechnical Division (later one of the Societies) had joined with the National Research Council to create the Canadian Geotechnical Journal.

The April 1966 issue of the Journal carried photographs of the demolition of the old building at 2050 Mansfield Street, presided over by President Côté and attended by the Hon. Robert H. Winters, the federal Minister of Trade and Commerce and a member of the Institute. The June issue for the same year had photographs of novel equipment being used to install excavated caissons to help speed the construction of the new multi-storey building. The photographs of the 'topping-off' ceremony for the building had to wait for the May 1967 issue.

Meanwhile, Garnet Page wrote his editorial for the July 1966 Journal in both official languages. This issue also carried a report of the discussion of Professor Edward Kuiper's paper on 'Canadian Water Export' by General McNaughton - one of his last public appearances. His obituary appeared later in this same issue, which also honoured V.C. Blackett - who had just retired after completing 40 years as Secretary of the Moncton Branch of the Institute. The October issue - the Power issue, as usual - announced Dr. Page's impending departure for a federal public service appointment. His last editorial appeared in January 1967.

Dr. Page was replaced by Pierre Bournival, with the title of General Manager and Secretary, who became Editor of the Journal beginning with the February issue. M. Bournival joined an editorial and production team that had been changing over the past two years and now included J.H. Shepherd as Associate Editor, E.H. Tomiuk as Production Supervisor, H.M. Basara as Editorial Assistant, F.C. Cawkell, as Manager of Advertising Sales, F.A. Stamos as Co-

ordinator of Montreal Sales, and with Robert G. Hungate continuing as Circulation Supervisor. The Publications Committee at this time was chaired by Harold L. Macklin, with W.A. McDill as Secretary.

As one might expect, the Engineering Journal in 1966 and 1967 paid particular attention to the design and construction of the buildings, facilities and infrastructure for Montreal's EXPO 67, as well as to the arrangements that were being made for the Annual General Meeting of the Institute to coincide with the Centennial Congress of Canadian Engineers being held in Montreal from May 29 to June 2. The October 1966 issue included an article on the construction of the Montreal Metro. The technical papers published in November were all devoted to aspects of EXPO. And an article in the April 1967 issue discussed the program for the Meeting and the Congress - photographic evidence of which was published in June.

Meanwhile, in March 1967 the Journal carried a long editorial article on the EIC Brief - prepared by the Committee chaired by R.C. Quittenton - which proposed a new policy for research and development for Canada. This 34-page bilingual document was presented to the Hon. C.M. Drury, the Minister of Industry and Chairman of the Privy Council Committee on Scientific and Industrial Research, by Institute President, Dr J. Mervyn Hambley. It was also widely distributed, and was the subject of debate at a special session during the Annual General Meeting in Montreal.

By 1968 much about the appearance and content of the Journal had changed - once again. Overall design had been entrusted to the firm of Gottschalk + Ash Ltd. The cover illustrations could now be designs as well as photographs, and the outside of the covers were a different colour each month. The masthead/contents started out together page 2, with the printing being white-on-black instead of the other way around. The editorial started out on the opposite page, but was soon combined with the masthead/contents on a single page. 'In This Issue' disappeared and was replaced by an 'Author's Page' with photographs as well as short biographies. The papers themselves - on average, four per issue - were still numbered, and most were authored by Institute members. The October issues continued to be the 'Power' issues. The regular departments - not all of which appeared every month - were much as before. Photographs and news of Institute activities and meetings, except for the Annual ones, almost disappeared. Advertising was also sparse, but there were still a quite a few business/consulting cards. However, the monthly award of an EIC Certificate of Advertising Merit was discontinued after the February issue. The average size of the issues of the Journal over the next six years was 60-70 pages. Bournival, Stamos and Hungate were the only three names remaining from the editorial staff listed a year earlier. Editas (of Montreal) had been appointed editorial consultants, John Gossip was Managing Editor, Ernest Naef was Associate Editor, and Pierre L'Africain the Art Director.

In January 1968, Pierre Bournival took as the title of his editorial 'The EIC and the Two Cultures.' In it, he effectively addressed not only the C.P. Snow paradigm but the Canadian cultural fact. He wrote, in part:

The title of this editorial and the new format and content of the Engineering Journal of which this issue is the first example are not entirely unrelated. We are entering a new field of engineering communications which, we hope, will add to the stature of the Institute and to the interest which members will display in the ideas, experiences and opinions which the Journal will bring to them.

In undertaking this broader communication program we must assume that engineers are educated men and women with tastes and interests which often extend beyond their purely professional practice...

To accommodate the two cultures requires, among other things, an exchange of ideas with professionals of other callings...

An effort at generalization will gradually be introduced into the Journal as a supplement to the technical papers...

This exchange/generalization process began right away, in the February 1968 issue. The 'Feature Article' (later called the 'General Paper' - which might or might not be written by an Institute member) - as well as 'Special Reports' on Institute affairs, were inserted before the 'Technical Papers.' And beginning in April 1968, the EIC's Transactions were published regularly as a detachable section of the Journal.

The cover 'colour' of this same April issue was the Nova Scotia plaid, to help sell attendance at the forthcoming Annual General and Professional Meeting in Halifax to the membership. The editorial in it was written by C.H.R. Campling, the Chairman of the EIC Committee on Technical Operations, who added emphasis to this invitation and to Bournival's January editorial. But he also drew attention to the recent changes in Institute policy, and ended with this paragraph:

At this (Halifax) meeting you will feel the new sense of vitality in the Institute. Exciting things are happening. There are new people. There is a new Engineering Journal. There is a new By-Law structure. There is a new and realistic approach to the Institute's financial affairs. It is a lean, tight-belt approach, and it has created a surplus for the first time in several years. There are new proposals for organizational structures to meet the

specialized technical needs of our members. Come and see and hear for yourself about these things. And, if you are not on the program yourself with a paper this year, give some serious thought to getting yourself there in 1969.

To reinforce what Campling had said about the organizational structure of the Institute, the department on 'EIC News' in this April 1968 issue carried the announcement of a major new Institute policy - approved by the Council at its January meeting - to the effect that the EIC would now encourage the development of the Technical Divisions of the CTO into specialized Constituent Societies with their own publications, special dues and separate services.

The September 1968 issue was designated as the 50th Anniversary issue of the Engineering Journal. But apart from the editorial and an article on Samuel and Thomas Keefer, there was little that was commemorative in it. Pierre Bournival's editorial said that the first Editor, Fraser Keith, had sought to interest the membership in active participation in the production of the Journal - but neither he nor any of his successors had succeeded in this regard. He went on to say:

Since (1918), during its first half century, the Journal has waxed and waned. It has had its good days and bad days, but if it has never done superlatively well, the fault has never lain as much with its editors as with its readers. The Journal, as Fraser Keith realized even before today's use of the term had been accepted, must inevitably present the 'image' of the engineer and as such must be the product of the combined thinking, hoping, planning and dreaming of all Institute members.

The January 1969 issue announced the organizing of the First Annual Congress of Engineering Students, to be held in February at McGill University, having as its theme 'The Engineer in Society.' 16 schools were scheduled to participate. The February issue reported on an EIC membership drive designed to attract registered, but non-member, engineers in Canada to the Institute.

Rémy Dussault, the EIC's Manager of Membership Services, wrote the Journal editorial in May 1969. In it, he said:

There has, I am convinced, been a change in membership attitudes during the past one or two years. There is evidence that more and more engineers are becoming aware that great changes in our professional associations are about to take place. The Institute membership is more and more concerned about what the nature of these changes is going to be and how they as individuals are going to benefit by them.

A second Brief by the Institute's Engineering Research Committee - prepared at the request of the Council - was submitted to the Senate Special Committee on Science Policy in June 1969, according to that month's issue of the Journal. The highlights from this brief were also reported as a 'Feature Article.'

In June 1969 the subscription rates for the Journal were increased. EIC Fellows, Members, Associate Members and Affiliates paid \$5 a year, as did Members of other Engineering Societies with which EIC had exchange agreements. Students paid \$2 a year. Others in Canada, the Commonwealth, France, the US and Mexico paid \$12, and \$14 in all other countries. Single copies cost \$1.50.

And the Changes Continued...

The issue for July/August 1969 was the first joint monthly issue, and was designated as Volume 52/7-8. In it, the 'EIC News' department was largely devoted to a description of the background and process for creating the CSME.

In September 1969 the Journal carried a photograph of the six participants in a two-day EIC-CCPE meeting called to discuss - once again - the possibilities for achieving greater unity and effectiveness in the organization of the engineering profession in Canada. No substantive changes emerged from it. The October issue - on Power - was, at 158 pages, the largest for some years and would only be approached again in size by the very last issue which commemorated the Centennial of Engineering in 1987.

In his editorial for March 1970, Pierre Bournival commemorated the 50th Anniversary of the founding of the first of the Provincial Associations - in Alberta, British Columbia, Manitoba, New Brunswick, Nova Scotia and Quebec. The 'EIC News' in May 1970 recorded the 'birth' of the Canadian Society for Mechanical Engineering as the Institute's first Constituent Society. Appropriately, the May editorial was written by C.N. Downing who had chaired the CSME Steering Committee. In it he expressed his view on at least one point that would become important for this new Society in the years ahead:

Most of the readers of this Journal are aware of the Constituent Society concept which could serve engineers and technical affiliates of all disciplines and major specialisations. This may not be a problem in the highly industrialized centres of Toronto, Montreal and Vancouver, but is a very real problem in the areas of low engineering density and in the remote communities that have been established to develop natural resources. I believe that Constituent Society concept has been structured in a manner which will meet the needs of all of the above and that, where a choice has to be made,

preference must be given to a technical society structure which anticipates and challenges future needs.

However, the masthead in May 1970 included a 'downside.' Page charges were to be levied on papers requiring more than five pages to print, at a cost of \$75 per page for the sixth and subsequent pages. These charges remained in place for the next five years.

In August/September 1970, the Annual Report of the Institute - and proposed revisions to its By-Laws - appeared for the first time in the Journal in both English and French. And as President W.L. Hutchison noted in his editorial in the October issue that followed, the Institute - with the approval of these revisions at the recent Annual Meeting - became more akin to a federation of Societies, each more or less autonomous in its own right.

The new logo of the CSME appeared for the first time alongside that of the Institute on the outside front cover of the January/February 1971 Journal. In time, the logos of the other Societies would also appear. Until they developed their own publications, the new Constituent Societies used the Journal as the principal means of communication with their members. For example, CSME News became a 'department' in the January/February issue of 1971, a CSME President's Message also appeared in it, and CSME-oriented technical papers would be identified using a numbering system similar to the Institute's.

The May 1971 the Journal was published as a Special Issue on the CSME, and its rust-coloured cover bore the Society's logo. Inside, President Conn reported on progress made during the first year, Clifford Downing contributed an article on 'Guidelines for Regional Organization,' and several others reported on Committee, Region and Section activities across the country. In one of these, it was announced that the Society was actively considering the separate publication of its own CSME Transactions. The remainder of this issue was devoted to the usual technical papers and departments.

The Annual Report of the Institute's Council, published in the August/September 1971, included the following paragraph:

The Journal is one of the major activities of the EIC. Its format needs to be re-examined as well as its content. During the year an ad hoc committee considered the possibility of combining the Journal and the publication of the Association of Professional Engineers of Ontario at the request of the latter. The project has not been abandoned and the (1971-72) Publications Committee should be prepared to consider fundamental changes to make the Journal less expensive and still more interesting for the majority of its readers.

In time, the Journal would become part of another magazine, but it

would be commercially-oriented rather than one serving another institution within the profession. Meanwhile, it was announced in December 1971 that the first issue of the CSME Transactions would be published in the near future and that subscriptions were being solicited.

In his editorial - 'Adieu & Au Revoir' - in the January/February 1972 issue of the Journal, Pierre Bournival announced he would be stepping down as General Manager of the Institute. After almost five years at the helm of the Institute's staff, he was following his predecessor, Garnet Page, to Ottawa and would be joining the recently created Ministry of State for Science and Technology.

This first issue of 1972 also carried more information on the leaders of the EIC Branches across Canada than had been published in recent years, as well as photographs of the members of the 1971-1972 Council. And it noted the recent death in Arizona, at the age of 93, of Dr. Lillian M. Gilbreth, who had been an Honorary member of the Institute since 1949 and a participant in a number of EIC-sponsored management-oriented meetings and conferences.

The March 1972 Journal carried the 'CGS News' and the 'CSCE News' for the first time. Both the Canadian Geotechnical Society and the Canadian Society for Civil Engineering would officially become Constituent Societies of the EIC a few months later. The April issue announced the appointments of Byron T. Kerr as the new General Manager of the Institute and James G. Ripley - who was also the Chairman of the EIC Publications Committee - as the Editor of the Journal, work he would be doing on a voluntary basis while a graduate student.

The Journal in May 1972 was the 'founding' one for the CSCE, as the issue of the previous May had been for the CSME. It announced that Institute's Annual General and Professional Meeting would be renamed the Annual Congress which would, if asked, also accommodate the Annual Meetings of the Constituent Societies. And it conducted a poll, inviting readers to answer a three-part questionnaire: the first concerning the influence of the United States on Canadian engineering; the second on possible subjects for future polls; and third on the background data of the respondents. The consolidated responses would appear in a later.

The June 1972 issue combined, for the first time, the news of Institute affairs, the Constituent Societies, Branch activities and professional events into a single 'Progress Report' department and printed it on distinctive yellow pages. Also with this issue, responsibility for the Journal was now shown on the masthead to belong to the EIC's new Communications Committee, which had absorbed the old Publications Committee. Jim Ripley remained Chairman.

The Journal for September 1972 included a paper on 'One Hundred

Years of Engineering at McGill' by Professor Peter Collins. Of particular interest was the photograph of the six members of the engineering class of 1873 on the outside front cover, including Clement H. McLeod, later Professor of Engineering at McGill, and Secretary of the 'old' CSCE from 1891 until 1916. The yellow-paged 'Progress Report' in this issue announced a joint EIC-Federal Government initiative, to be called the Canadian Engineering Heritage Program, which would undertake a national survey of engineering landmarks. The announcement was made jointly by President Dinsmore for the EIC and the Hon. Jean Chrétien for the Government.

The 'Progress Report' in the October issue reported that the EIC's first Congress, in Saskatoon, had attracted 1,000 delegates and was one of the best attended and most successful meetings ever held by the Institute. This Report also mentioned that the EIC had been asked formally by the Federal Government for its views on the recently published two-volume report of the Canadian Computer/Communications Task Force. The new Technical Operations Board was asked to assist with this task. This Board, which was 'descended' from the former Committee on Technical Operations (CTO), was another manifestation of the changes resulting from the formation of the Constituent Societies.

There were in fact only nine issues of the Engineering Journal during 1972. But, as in other years when double-month issues appeared, they were given two numbers within the appropriate Volume to bring the total to twelve. The November/December issue carried the Council's Annual Report for 1971-1972. From an analysis of the Journal pages during this year (October to September), the breakdown by page allocation was:

Features and special articles.....	36	pages
Technical papers.....	155	"
Transactions.....	114	"
Editorials, advertising and other...	317	"
Total...	622	"

The 'Progress Report' in the January 1973 issue noted that the Headquarters staff had been reduced from 24 to 17. However, one of the staff positions retained was assigned to Charles G. Southmayd, as Manager of Constituent Society Services, and another was to W.A. (Bill) McDill as Manager of Technical Services.

The results of the May 1972 poll were published in the January 1973 issue of the Journal in an article written by the Editor, James G. Ripley. There were 274 responses, and the answers had been:

In general, 58% of the respondents thought that US control of the Canadian economy had an adverse effect on Canadian engineers, while 76% felt that this outside control limited the employment opportunities for Canadian

engineers, and an overwhelming 80% felt that there was a need to develop engineering Societies in Canada to meet the technological needs of this country...

According to 50% of the respondents, the two most important national engineering issues for future polls were industrial development and foreign control...

One in three respondents was a civil engineer; 44% came from engineers in executive or administrative positions; about 33% worked for manufacturing organizations.

No future polls were, however, conducted.

Into the Shadows...

The technical papers published in the March 1973 issue covered a wide field of engineering and were illustrative of the breadth being sought for the latest 'new-look' Journal. These were their subjects (and their authors): Canadian Nuclear Power Development (A.M. Aikin); Pollution and the Natural Environment (K.C. Lucas); The Arctic Railway - Environmental Aspects (E.R. Corneil, C.E. Law, R.W. Lake); Energy for Buildings in the Future (C.K. Rush, P.H. Osthuisen, P.G. Hill); Coming Changes in Construction Management (J.E. Breeze); Interdisciplinary Research Within the University (G.S.H. Lock); and Low Voltage Electric Boilers (M. Eaton).

The April 1973 issue included an article on the Canadian metrication program. The 'Progress Report' in the May/June Journal published the terms of the new agreement approved unanimously by the Council of the EIC and the Directors of the CCPE. The July/August issue provided a detailed program for the 87th Annual Congress of the Institute and its Constituent Societies. The October 1973 issue was the exception to the rule. It was not a 'Power' issue. Instead, it included the EIC's bilingual Annual Report for 1972-1973, three technical papers, and one Transactions paper. It also announced the founding of the Canadian Society for Electrical Engineering and its official inauguration on October 3 at the Annual Congress.

These issues in 1973 represented, as did the March issue mentioned above, progress of a sort in contemporary terms. But there was also the downside to be considered - for example: all of issues were 'slim' with around 50 pages each; the number of people in the 'People' departments were few; News of the Branches, Regions and Committees was largely absent, and even the 'News Review' department had few items; and advertising, apart from the cards, was just about non-existent. The overall evidence seems to suggest that, as the end of 1973 approached, the Journal had become a shadow of its former burgeoning self of the 1950's and early 1960's.

However, the very last issue for 1973 - the one for November/December - held out some promise of better things and times. The appointment of J. Clive Reade as Editor and Publisher, and a full-time member of the EIC staff, was announced by General Manager Kerr. Reade was a former editor in the trade publication field and had experience in public relations. Jim Ripley remained as Chairman of the Communications Committee. The Progress Report lost its yellow pages - for white ones - and had some more interesting coverage. The paper given by Peter H. Bennett, the Director of the National Historic Parks and Sites Branch of Parks Canada, the Annual Congress was included, affording some hope - unfulfilled, unfortunately - that at long last the Institute would become involved in serious historical research into Canadian engineering. There were a few photographs from the Congress and, as had been the practice for some years, an almost full set of photographs of those elected as Fellows of the Institute. Yet the 'People' department was still relatively sparsely populated, and the 'News Review' disappointing, although advertising was up just a little bit. Reade obviously had an uphill task in an administrative environment where finances - for a variety of reasons - were strained, although not yet to the breaking point.

There were only four issues in 1974. The first two - for January/February and March/April - were edited by Reade, assisted according to the masthead by Sharon McGrath as Advertising Coordinator and Robert Hungate as Circulation Supervisor. They were both 60-pages long, carried several papers and Transactions as well as many of the usual departments, including the annual statistics for recent Undergraduate Registrations. But advertising was still disappointing. And then Clive Reade was gone.

For the third issue, for May/June, Byron Kerr replaced Reade as Editor and Moira Meddings replaced Robert Hungate as Circulation Supervisor. It was 80 pages long, carried 'Special Reports' as well as 'Technical Papers' and Transactions, had fewer photographs, and again almost no advertising. The 'Progress Report' was amalgamated with the 'News Review.' 'People' and several other departments survived. Perhaps the most noticeable feature was the number of EIC, Constituent Society and 'outside' activities included under 'Coming Events.'

The Fall issue, the last for 1974, was also edited by Byron Kerr. It was largest of the four, extending to 136 pages, and was livelier, had more news about the Institute and the Societies, a lot of photographs - especially of people and events - and a good variety of technical papers, but little by way of advertising and no Transactions. This issue also carried a note on a revised publication policy, based on the report of a special committee on the role of the Journal and adopted by the Council in October at the Annual Congress. This policy was to the effect that, since the Constituent Societies of the Institute had specialist technical journals of their own, the Journal would only carry high quality

papers of general interest in addition to news of the Institute and the Societies. It would appear six times a year, and an attempt would be made to increase the income from advertising.

The first issue under the new regime - Volume 58, Number 1 - appeared in March/April 1975. Byron Kerr remained as Editor, but James D. Hilborn was listed on the masthead as Managing Editor, along with an Assistant Managing Editor, Contributing and Assistant Editors, an Advertising Coordinator, and a Circulation Supervisor from the Corpus Publishers Services Ltd. editorial team - and all under the watchful eye of the Institute's Communications Committee. The principal contents were the special reports and articles (some by the Corpus people, and some by Institute or Society members), and sections on education and employment and the papers available from recent conferences. There was advertising, but not much of it, and editorial comment. The departments included the usual Institute, Society and other Society news, coming events, personals and necrology, and employment opportunities. Page charges for longer articles were still levied. Subscription rates were \$10 for Society Members, and \$2 for Students - the same as the single copy price. Some financial support was also being received from the National Research Council. The cover designs became more colourful, and a fair number of photographs accompanied the text inside.

The very next issue, May/June 1975, added yellow paper for the 'Institute and Society News' and the 'General News Review' departments. In order to boost circulation, the EIC and Canadian Council of Professional Engineers (CCPE) agreed that the Journal would be made available to members of the Provincial Associations at a reduced rate. All of the five 1975 issues had 112 or more pages.

The full six issues appeared in 1976. Byron Kerr was designated as both Publisher and Editor, and Jim Hilborn as Assistant Publisher and Managing Editor. The majority of the issues had 80 pages. The Constituent Society Presidents began to contribute editorials or messages.

There were five issues in 1977, most having fewer than 80 pages, and there was a small increase in the material published in French. A series of articles on engineering in the individual provinces was begun in the July/August 1976 issue and continued into 1977, but was not completed. Instead, the Journal began a series of special reports on a variety of aspects of engineering, such as nuclear power, biomedical engineering, ocean engineering and remote sensing. And the Presidents of the Societies continued to contribute to the editorial page.

In 1978 the publication rate was reduced to once-a-quarter, but a fifth issue was added in 1979. All of these issues had 48 pages. The editorials from the Society Presidents continued during this period, as did the special reports which covered - for example -

Canadian engineering overseas, manufacturing processes, and electric vehicles.

In May 1979, Robert J. Thibault replaced Byron Kerr as General Manager of the Institute and as Publisher and Editor of the Journal. In the August issue, the 'General News Review' department disappeared and the number of pages allocated to EIC and Society news doubled to sixteen, allowing for greatly expanded inputs from them as well as for contributions in both English and French. This issue brought another change of note. Up until then the Journal had been published by the Engineering Institute of Canada, but from August 1979 (until September 1983), this responsibility lay with EIC Publishing Inc., a newly created and separate entity incorporated by the Institute.

The six issues in 1980 and four of the five in 1981 had 48 pages and, from the point of view of content, all of them carried on much as before. However, in the August 1981 issue the appointment of J. Denis Barry as Communications Director of the Institute was announced and, in the Fall/Winter 1981 issue which followed, Thibault was named Publisher and Barry as Editor, with Hilborn as Assistant Publisher and Managing Editor. Thibault resigned as General Manager of the Institute, and as Publisher of the Journal, at the end of 1981 and was succeeded by M. Saeed Mirza.

The Journal in the Spring of 1982 had the smallest number of white pages ever published - 32. But it also had a 24-page yellow insert which carried the Institute and Society news, with a significant number of the items appearing in both languages. Advertising material was scanty to say the least. The April 1982 there were again 24 yellow pages, and the masthead named Marta Meana and Denis Barry as Editors. This was also the last issue to which Jim Hilborn and the Corpus Group contributed.

Barry had resigned from the EIC staff by the time the July Journal appeared, leaving Ms Meana as Editor. O.J. Silva took over responsibility for Production and Artwork, and Moira Meddings for Circulation. The yellow pages disappeared - but not the Institute and Society news, which reverted to white paper. The remaining two issues for 1982 followed this same format.

The financial and circulation problems for the Journal became serious indeed in 1983. The February, March and May issues were published in newspaper - rather than a magazine - format, and garnered much criticism as a result. In September 1983, however, it returned to being a magazine. The masthead had the Institute as Publisher, and Marta Meana as Editor. The content was a mixture of technical articles and Institute and Member Society news and reports, employment information and coming events, with lots of pictures but practically no advertising beyond business/consulting cards. The Chairman of the new EIC Communications Board, Ernest Zucker, explained that he had in mind for the Journal a magazine

format that would include both technical articles and news - come January 1984.

But financial problems took a firmer hold than ever before, and this was not to be. While the Engineering Journal continued to appear, it did so as a newsletter with commentaries in a six-page insert format in the Engineering Digest - a commercial publishing venture that also carried the National Newsletter of the Canadian Council of Professional Engineers. Technical articles did, in fact, appear, but as part of the Digest rather than the Journal. This arrangement continued until February 1987 when financial support for regular publication simply dried up.

The very last issue of the Engineering Journal - Volume 70, Number 3, 1987 - was the Centennial Edition, published early in 1988 for the Institute by Kerrwil Publications Ltd., of Downsview, Ontario. The Editorial Director was James A. Weller, and the Editor was A. Raymond Burge. The members of the Societies received copies, as before, and single copies were offered for sale at \$4.50 each.

It contained: a message of congratulation to the Institute on achieving its Centennial from HRH The Duke of Edinburgh, one of its senior Honorary Members; a copy of the CSCE's original 1887 Charter and the 1918 Amendment; a membership listing for the five Member Societies; listings of the Institute's Presidents and of the recipients of Sir John Kennedy and Julian C. Smith Medals; descriptions of the Canadian engineering achievements judged to be the ten best over the past one hundred years; and a series of articles, essays and reviews dealing with the past, the present and the future of engineering in Canada. The cover design was based on the stamp issued by Canada Post - created by Design Source of Toronto in eight colours, a record for a Canadian stamp - to commemorate the Centennial and the fact that the first-ever Canadian postage stamp had been designed by Sandford Fleming, a founding member of the Canadian Society of Civil Engineers in 1887.

In spite of being published after the fact, this Centennial issue had very little to say about how the engineering profession as a whole celebrated the founding of its first permanent institution, or about how it reflected on the almost 70 years that had passed since it became the Engineering Institute and the Engineering Journal first appeared. And C.J. Mackenzie's challenge of 1947 to engineers attending the Centennial - to look back and decide that the intervening years had been the best years of the century - was completely forgotten.

In Summary...

The Engineering Journal served its intended purpose well for around 40 years from its appearance in 1918, and achieved a good measure of the possibilities to which President Vaughan alluded at that

time. Its heyday came towards the end of this period - in the 1950's and early 1960's. From then on, the trend for this former award-winning publication was downwards. The turning point appears to have been the gamble taken at the beginning of 1960 when a wider, freer circulation policy was implemented, but failed to produce adequate additional advertising revenue. Later, there were other influences. One of these - inflation - has not been discussed since its effects have been sufficiently pervasive and have affected behaviour on both the production and readership sides of the equation that tracing its influence would require a special study. Others have been the technological and social changes that have affected engineering as an activity and as a profession - and engineers as people. And there were the administrative, financial and other consequences for the Institute as the result of the founding of the Constituent (later Member) Societies, again a subject deserving special study.

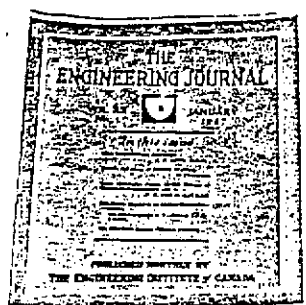
Having said all this, it would seem that - however hard it tried - nothing the Institute did after 1960 succeeded in rescuing the Journal from its slide towards eventual disappearance.

APPENDIX

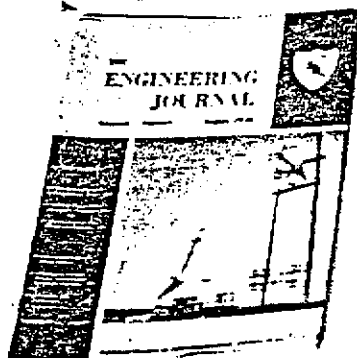
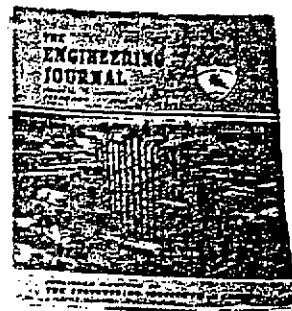
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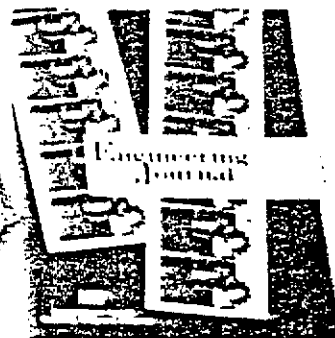
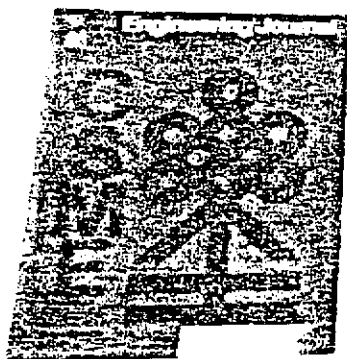
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The outside front covers of 11 issues of the Engineering Journal are shown (in black and white) on the previous page. The following is a very brief description of each of them:

(1) The buff-covered early issues of the Journal had dark brown printing, and were standard for the years from 1918 until 1933.

(2) From 1933 until 1940 the buff-colour and the brown printing were still standard, but the paper was coated.

(3) The issues from 1949 until 1951 also had buff backgrounds and coated paper, but also had half-page photographs and black printing.

(4) From 1956 to 1960, during much of its heyday, the outside front cover of the Journal had two buff-coloured panels with black printing, a photograph covering 40 percent of the space, and two further panels - either red or green - with white printing.

(5) In 1963 and 1964, the outside front cover pages had full-page photographs, with limited overprinting which varied in colour from issue to issue.

(6) From 1968 to 1973 the outside of each issue was a different colour, occasionally two colours, and even a plaid in April 1968 (shown on page 39), and each front had a large photograph or design in colour or blended with the main cover colour.

(7) The golden issue of June 1937 celebrating the Semicentennial of the CSCE/EIC.

(8) The blue and silver issue celebrating the 25th Anniversary of the Journal.

(9) The rust-coloured special CSME issue of May 1971.

(10) One of the last regular magazine issues of the Journal, for September 1982. Around this time, the colours used for the outside front covers - as well as the printing - varied from issue to issue.

(11) The Centennial - and very last - issue: Volume 70, Number 3, 1987. Centennial stamps provided the design on the front.
