No. 1855

ANNUAL REPORT OF THE COUNCIL 1922

FOREWORD

THE Society's activities cover a field so broad that in its annual report the Council can outline only the major actions taken during the administration year of President Dexter S. Kimball. All of the organization activities are fully reported semi-monthly, in the A.S.M.E. NEWS and in MECHANICAL ENGINEERING, issued monthly.

The detailed reports of the Standing Committees of the Council have been published and were distributed at the Business Session of the 1922 Annual Meeting.

The 1922 Council was elected in the same way as last year, that is, through the regular Nominating Committee selected by the Local Sections and confirmed by the Society at the Annual Meeting, and this Committee so selected, prepared the ballot for officers of the Society in open session at the Spring Meeting.

The personnel of the Council for the year is given on pages vii and viii of this volume.

Seven regular meetings of the Council were held during 1922, the first on adjournment of the Annual Meeting of 1922 in December, the second March 6, at Kansas City, Mo., in connection with an engineering congress on the petroleum industry in which fifty-four organizations participated; two sessions in Atlanta in May during the Spring Meeting of the Society; New York and Springfield, Mass., September 25 and 26; October 21 at Ithaca, New York, and December 4, beginning the forty-third Annual Meeting of the Society.

The Council records with deep regret the death in office of Vice-President Louis Edward Strothman, and would place on permanent record the resolutions passed at the Atlanta Meeting:

> WHEREAS: in the death of Vice-President Louis Edward Strothman, the members of the Council and Society have lost a highly esteemed officer, and
>
> WHEREAS: in the death of Louis Edward Strothman the community has lost a citizen of great charm and endearing personality, who had won the affection of all with whom he came in contact:
>
> RESOLVED: that the Council of The American Society of Mechanical Engineers, in recognition of the qualities of its fellow member, and in token of its regret that such a career could not have been longer continued, for the benefit of the Society, the engineering profession and the public, by a rising vote, directs that this record be spread upon its minutes, and that a copy of these resolutions be sent to the family of Mr. Strothman.

By unanimous vote the place of Mr. Strothman was filled by Council election of Arthur L. Rice of Chicago. Mr. Rice has served the Society long and assiduously, both in the East and at Chicago, with a devotion vital to the Society's interests. He has been an active member of the Constitution and By-Laws, Local Sections and other major committees, and came to the Council with an intimate knowledge of the Society's affairs.

In August the Council appointed the Secretary, Calvin W. Rice, to represent the Society at the International Engineering Congress in Rio de Janeiro in connection with the Brazilian Centennial and International Exposition. Mr. Rice was also a delegate of ten other professional engineering organizations of the United States and Canada, from several civic organizations by President D'Oliver of the Sesqui-Centennial Exposition, organizing the celebration to take place in Philadelphia in 1926. The Hon. Herbert Hoover as Chairman of the International. American High Commission appointed Mr. Rice to call upon each of the sections of the committee in South America. Major Fred J. Miller, Past-President, was appointed by the Council as Acting-Secretary during the absence of Secretary Rice.

A brief account of the Society's activities in the field of International Relations is included elsewhere in this report.

The Society has participated in an increasingly large number of functions and conferences. Representatives with the title of Honorary Vice-President were appointed to represent the Society at the following functions:

Electrical Safety Conference, John Price Jackson.

Advisory Board of the Bureau of Mines and Bureau of Standards, on Investigation of the Breakage and Heat Treatment of Rock Drill Steels, George T. Cousins.

National Rivers and Harbors Congress, Brig.-General Wm. H. Bixby.

DeLamater-Ericsson Tablet Committee, H. F. J. Porter, H. H. Suplee.

Commercial Engineering Conference, E. M. Herr, W. W. Nichols, W. H. Kenerson, R. L. Sackett, Walter Rautenstrauch.

Hobart College 100th Anniversary, Harte Cooke.

University of Southern California, Inauguration of Rufus Bernard von Kleinschmid, C. C. Thomas.

Virginia Agricultural and Mechanical College and Polytechnic Institute, Fiftieth Anniversary, J. S. A. Johnson.

Annual Meeting for the Industries of Pennsylvania, E. A. Fessenden.

American Association for Advancement of Science, Annual Meeting, Boston, Dugald C. Jackson, in addition to Dr. Hollis the representative of this Society on the A.A.A.S. Council.

U. S. Chamber of Commerce, Annual Meeting, O. P. Hood.

Pan-Pacific Commercial Conference, Honolulu, S. N. Castle.

American Construction Council, observers, H. L. Whittemore and George A. Weschler.

Department of Commerce, Informal Conference on Lumber Sizes, H. H. Snelling.

Seventy-fifth Anniversary of the Koninklijk Instituut van Ingenieurs, The Hague, Holland, R. A. Vander Willigen.

U. S. Chamber of Commerce, Committee on Fire Waste, H. A. Lacount, Ira N. Woolson.

Syracuse University, Inauguration of Chancellor Charles Wesley Flint, E. N. Trump.

Lehigh University, Inauguration of President Charles Russ Richards, Arthur W. Klein.

Informal Conference on Traffic Signals, E. W. Swartwout.

Washington Award of the Western Society of Engineers, Charles Russ Richards.

Twenty-fifth Anniversary of the Society of Mechanical Engineers of Japan, and the Thirtieth Anniversary of the Society of Naval Architects, Tokio, Japan, E. A. Sperry.

Engineering Museum, Representatives on Joint Committee, H. F. J. Porter and Reginald Pelham Bolton.

Special Committee Appointments on Society matters:

Tellers of Officers Ballot and Ballot on Amendments to the Constitution and Code of Ethics, W. H. Greul, Chairman, E. L. Sherwood and J. F. Callaghan.

During the year the Society's facilities at headquarters have been placed at the disposal of its own committees and the committees and governing boards of other organizations. Our records of 1922 show the following schedule: Administrative committees 41, professional committees 101, non-professional 24; committees of other societies, including American Engineering Standards Committee and the American Society of Safety Engineers 101, making a grand total of 267.

The Society has also continued to accommodate the American Society of Safety Engineers with temporary offices.

FINANCES

For some years the A.S.M.E. has enjoyed the position of having no indebtedness either capital or operating. Each year the Finance Committee prepares careful estimates of the income expected during the following twelve months and, coöperating with all committees having charge of activities, prepares a budget recommending expenditures not exceeding at the beginning of the fiscal year eighty-five per cent of the income. The remaining fifteen per cent is available for adjustments which have to be made during the year and for accumulating a small reserve. This latter has been necessary since the Society transacts business in volume of about $50,000 a month and because at times during the year disbursements have to be made before the income is received. A small margin has, therefore, been provided each year to build up a cash working capital. Several distinct groups of members serving at different times on the Finance Committee

have independently canvassed the situation and have reported that the minimum cash capital should not be less than one-third of the annual turnover. It will take several years to build up this reserve properly. Hereafter a minimum of fifty per cent of the initiation fees is to be immediately put in the Reserve Fund.

The average yearly amount paid in by a member in dues is between thirteen and fourteen dollars, whereas the corresponding gross expenditure per member is over thirty dollars.

The Auditor's Report, covering the fiscal year September 1921–October 1922, with detailed figures, is made part of the Report of the Finance Committee.

An important step was taken by the Council in the approval of a special committee report on solicitation of funds from the industries, and under the restrictions here outlined, the Council feels there can in no way be any reflection on the dignity of the Society. The Council finds a splendid precedent in the successful, and enthusiastic support of the industries in researches now being carried on in gears, steam tables, standardization of pipe fittings and fatigue of metals, partially financed also by the Engineering Foundation.

The Committee consisting of George A. Orrok, Chairman, W. C. L. Eglin, Arthur M. Greene, Jr., D. S. Jacobus, Fred J. Miller, C. T. Plunkett and W. L. Saunders, suggested the following restrictions which have been adopted by the Council as the policy in financing special researches and activities of the Society.

a Each suggested research must be presented on its individual merits, for approval by the Council that will in turn refer the matter to the appropriate authority or committee.

b Specific requests to the Council are to be accompanied with full details of proposed scope, method of solicitation of funds and budget.

c To favor and strongly urge the closest possible coöperation with universities and technical schools qualified and equipped to assist in the development and conduct of special research work.

d Coöperative, not competitive methods, to be worked out with existing research laboratories and activities in other organizations. Such coöperation could take the form of publication of papers and groups of papers where a definite industry desired to bring to the attention of engineers for the development of the industry, any problems of special research, without commercial bias.

e No exception is to be made to the Society being the custodian of all funds and having complete knowledge and control of the distribution and assignment of such funds through the Council, with the understanding always that no contributor is to be specially favored on account of any contribution for a research in which he is interested and that such contribution can be received only on the basis of general benefit to the industry.

MEETINGS

The Stated Meetings of the Society are the Annual New York meeting and the Spring Meeting, this year held in Atlanta, Georgia.

The visit to Atlanta was preceded by a visit to the University of Virginia, May 5 and 6, under the auspices of Local Sections and Student Branches. The Atlanta Meeting, May 8 to 11, included six strong Professional Sessions provided by the Professional Divisions, six miscellaneous papers presented at two general sessions and an important welding meeting. The self-supporting plan adopted at this meeting was a success. The splendid hospitality of the South was shown in the social events and visits to industrial centers.

To relieve the Society of the pressure at Annual and Spring Meetings and further, to provide important meetings for a larger proportion of membership, there has been developed through the initiative of the Local Sections and with the coöperation of the Meetings and Program Committee regional meetings, additional to the Spring and Annual Meetings. These regional meetings are organized by the Local Sections.

LOCAL SECTIONS

The Society has 57 Local Sections. These are listed in detail in the YEAR BOOK.

There have been coöperative meetings developed in the New York Sections of the A.S.M.E., A.I.M.E., A.I.E.E., and A.S.C.E.

Affiliation with the Engineering Society of Western Massachusetts has also been consummated.

President Kimball has been untiring during his year in his visits to the Sections and was able to get as far as the Pacific Coast. The Secretary also made several trips, individually, and with the President, and members of the Local Sections Committee have covered a wide territory. As the result of these visits to all sections of the United States, enthusiasm and interest have been developed in all parts of the country, particularly where local sections had not previously been so active.

A plan has been recently outlined and approved by the Council to care for publicity for papers before Local Sections.

PUBLICATIONS

The publications of the Society constitute an important agency in advancing its objects and nearly half of the Society's income is expended on them.

Two volumes of TRANSACTIONS have been issued this year, Volume 42 and Volume 43. The preparation of these volumes has been carefully supervised by the Committee on Publication and Papers who endeavor to make the selection of papers cover what will be of value for permanent record.

MECHANICAL ENGINEERING has twelve issues a year, which include technical papers, a survey of engineering progress, an engineering index, the monthly guide to current technical literature, the last later gathered into an annual volume THE ENGINEERING INDEX ANNUAL. During the past fiscal year 850 pages of text have been published.

CONDENSED CATALOGUES OF MECHANICAL EQUIPMENT this year has been changed to the larger and more impressive size, 9 by 12 inches, uniform with MECHANICAL ENGINEERING and the leading publications in its field. It covers the product of 372 leading American manufacturers; also a Buyer's Guide of manufacturers of equipment—approximately 4200 firms are listed; 1000 engineers are classified under 400 different headings in the Directory of Consulting Engineers. Condensed Catalogues having now advanced to the position where it can carry free listing of all leading firms in certain departments, it is by that feature an inclusive publication of wide usefulness.

THE YEAR BOOK for 1922 was brought out within this year, the issue for 1921 having been omitted.

The establishment of the A.S.M.E. NEWS marked a step forward in the publication policy. It has been issued twice a month since its start with the December 22, 1921 issue. It was planned that this publication become a means of serving the membership and a better means for publishing news of the ever-increasing and so-called human activities of the Society. It supersedes the Society Affairs column of MECHANICAL ENGINEERING.

MEMBERSHIP

The year's record of membership tells only a steadily increasing enrollment. Its deepest message is read in the obligations to united service on the part of members. The membership during the fiscal year has reached 16,696. The Changes in Membership are shown in Table 1.

Life Membership was awarded to Major Fred J. Miller by Special Council ballot. The presentation was made at the Business Session of the Annual Meeting with the following vote from the Council:

> The Council of The American Society of Mechanical Engineers desire to extend their thanks to Major Fred J. Miller for his recent service to the Society, and above all, to express their satisfaction in offering to him Life Membership in the Society, of which he has been for thirty-two years a member and supporter. They are conscious of his service as President and as a wise adviser and servant under all circumstances. Not the least of his service has been as Secretary of the Society, which he voluntarily assumed without pay, in order to permit Mr. Rice to represent the Engineers at the meeting in Rio de Janeiro.
>
> It is through such generous dedication of self that this Society has flourished and that will give it in the future a great influence upon the life of the Nation.

Other Life Membership awards are reported under the Awards and Prizes Committee.

The Council approved the policy of permitting such Local Sections as desire to comment on the qualifications of candidates from the respective Sections for admission provided comments are forwarded within twenty days. This will help the Membership Committee in its recommendations to the Council of desirable candidates, and should be of assistance in maintaining the highest standard of membership.

TABLE 1 CHANGES IN MEMBERSHIP

	Oct. 1, 1921	Oct. 1, 1922	Losses				Additions		Totals		
			Transferred from	Res'ig.	Dropped	Death	Transferred from	Elect.	Loss	Gain	Total
Honorary Members	19	19	...	...	...	1	...	1	1	1	....
Life Members	79	77	...	...	...	4	...	2	4	2	2
Members	7168	7733	...	42	66	65	140	597	173	737	564
Associate Members	3450	4023	90	22	30	5	152	568	147	720	573
Associates	744	844	11	3	10	3	7	120	27	127	190
Junior 15's	675	680	117	32	27	10	191	....	186	191	5
Junior 10's	2880	3265	272	47	18	5	...	728	343	728	385
Affiliates	.....	55	...	...	...	..	...	55	...	55	55
Totals	15015	16696	490	146	151	93[1]	490	2071	881	2561	1680

[1] The names of members and memorial notes appear in this volume.

PROFESSIONAL DIVISIONS

To encourage the group professional activities within the Society, the Council last year authorized Professional Divisions on

Aeronautics	Materials Handling
Forest Products	Ordnance
Fuels	Power
Gas Power	Railroads
Machine Shop	Textiles
Management	

Pending the organization of a Professional Division a Professional Group on Printing has been authorized and is in operation.

The Divisions enjoy complete autonomy. Each Division elects its own Executive Committee by letter ballot and the Chairmen of the Executive Committees of all the Divisions automatically constitute the Standing Committee on Professional Divisions, which in turn elects its own Chairman who has a seat on the Council. Members of the Society may enroll in any or all of the Divisions, but usually a member finds that his special interest is confined to one and not more than two Divisions.

The Divisions have with splendid enterprise assumed the task of providing papers for Annual and Spring Meetings of the Society, for the Regional Meetings, and for meetings of Local Sections. In addition the Management Division has sub-committees working on special subjects with one representative from the Society of Industrial Engineers, the Taylor Society, Investment Bankers Association and the National Association of Cost Accountants, such as Management Terminology, Standards for Graphics, Measurement of Managerial Ability. The Ordnance Division has devoted special attention to coöperation with the Ordnance Department of the U. S. Army concerning technical matters.

Other activities in research and standardization in the several subjects are contemplated as funds and interest develop.

CONSTITUTION AND BY-LAWS

The Committee on Constitution and By-Laws has continued most faithfully its work on the new Constitution, expressing the advanced concept of the Society's mission. The revised document simplifies terminology, and removes incidental inconsistencies. Fundamentals only are included, the administration details being relegated to By-Laws which can be adjusted also by Council without necessity of Society action.

The best authorities in the Society served as sub-committees of the Constitution and By-Laws Committee who have also given the phraseology the benefit of their many years of experience in the work of the Society. The Local Sections throughout the country have been particularly helpful, and in order that no mistakes be made, the attorneys of the Society and a well-known corporation lawyer have passed on the validity and completeness of the document.

The new Constitution went into effect with the announcement by the Presiding Officer at the 1922 Annual Meeting stating its adoption by letter ballot.

As a preliminary to the new Constitution, two amendments to the existing Constitution were carried during the year. The first extended the privilege of voting to Juniors, and the second simplified the manner of amending the Constitution.

RESEARCH, STANDARDS AND TECHNICAL COMMITTEES

The work of the professional committees covers a great variety of engineering subjects. For example, the Research Group is composed of thirteen committees; a second large group is that which at present is revising the A.S.M.E. Power Test Codes, of 1915. This group numbers 125 men and is sub-divided into 20 committees, a central or main committee of 25, and 19 individual committees of from five to thirteen specialists. Five of its revised codes are in final form.

The subject of dimensional standardization is each year receiving more and more of the Society's attention. At present 15 Sectional Committees are organized under the rules of procedure of the American Engineering Standards Committee for which the Society is sponsor and are at work on specific projects or are in process of organization.

The Society has one or more representatives on 13 additional Research Committees, Standards and Safety Codes.

The American Engineering Standards Committee is now in close touch with the National Standardizing bodies of thirteen foreign countries. The world-wide movement is still young but already there are indications that at least one international standard will soon be announced.

The Research and Standardization activity is likely to be considerably helped during the coming year with the inauguration of the policy of solicitation of funds from the industries recorded under "Finances" in this report.

BOILER CODE

The Boiler Code Committee comprises a body of twenty-three members with eleven sub-committees investigating various problems connected with the work. It is a continuing body and is constantly interpreting the Code to meet the application to various situations and the ever-changing conditions in the manufacture and operation of boilers and other pressure vessels.

The A.S.M.E. Boiler Code is operative as a legal construction code in the 17 States of

Arkansas	Minnesota	Oregon
California	Missouri	Pennsylvania
Delaware	New York	Rhode Island
Indiana	New Jersey	Utah
Maryland	Ohio	Wisconsin
Michigan	Oklahoma	

Cities: Detroit, Mich.; Erie, Philadelphia, Scranton and Allegheny County, Penn.; Kansas City, St. Louis, St. Joseph, Missouri; Los Angeles, Cal.; Chicago, Ill.; Nashville, Tenn.; Seattle, Wash.; Parkersburg, W. Va.; Omaha, Neb.; District of Columbia; Panama Canal Zone; Ontario, Canada; Shanghai, China, and the Hawaiian Islands have also adopted the Code.

It is also used as a standard by fifteen of the leading boiler manufacturers and by many of our foremost consulting engineers. The U. S. Government now specifies that boilers for many important Departments are to be constructed in accordance with the A.S.M.E. Boiler Code.

The Committee is now extending its activities to cover unfired pressure vessels, and during the year the Council has appointed members to serve on a special committee of the Boiler Code Committee to formulate this Code.

The Committee is planning to publish a new edition of the Code in 1923, and has ready the revision of the Heating Boiler Code.

EDUCATION AND TRAINING

The membership of the Student Branches totals 69 over a widely distributed area of colleges in the United States. The detailed list appears in the YEAR BOOK.

Student Branch members do not pay dues directly to the Society but are encouraged to subscribe to MECHANICAL ENGINEERING at the special rate of two dollars per year, which is less than the actual production cost. The privilege of purchasing technical papers is extended to them on the same basis as members. Through this activity approximately 3,000 students are enrolled.

As an encouragement to student participation in Society affairs, two student prizes of twenty-five dollars each were established by Henry Hess, a member of the Council of the Society in 1915, to be awarded each year to members of Student Branches presenting the best two papers.

Dr. W. H. Kenerson, Chairman of the Committee on Relations with Colleges, has given most freely of his time and energy in visiting various colleges, since February of this year. His report is now in the hands of a special committee appointed by the President to take up certain suggestions of how best to secure the enthusiastic interest and coöperation of the great body of engineering students, to be helpful to them and they helpful to the Society. Opinions are now somewhat divided between maintaining Student Branches of the Society and encouraging Student Engineering Societies with representation for each of the national societies, and next year may see a coöperative plan worked out along these lines.

AWARDS AND PRIZES

Prof. Robert C. H. Heck was awarded life membership in the Society at the recommendation of the Committee on Awards and Prizes for the paper on Steam Formulas appearing in the 1920 Volume of TRANSACTIONS.

Two Junior prizes were awarded this year. This prize was awarded for "the best paper or thesis submitted by Junior Members." These prizes went to R. H. Heilman for his paper on Heat Losses from Bare and Covered Wrought-Iron Pipe at Temperatures up to 800 Deg. Fahr., and to F. L. Kallam for a Preliminary Report on the Investigation of the Thermal Conductivity of Liquids. Mr. Heilman is an industrial fellow at the Mellon Institute in Pittsburgh, and Mr. Kallam is a graduate student at Leland Stanford Junior University.

Announcement of the awards was made at the Business Meeting of the Society on Wednesday, December 8. In regard to the Life Membership Award the Committee says:

"Invitations were sent to all of the members of the Society (over 16,000 in number) to send in a statement as to the opinion of individual members on the best paper which appeared in this volume of the TRANSACTIONS. It was a great disappointment that very few replies were received. The Committee feels in making such an award as this that its work will be greatly facilitated if it can have the hearty coöperation of the membership of the Society."

Columbia University in New York through its governing bodies, has extended to the A.S.M.E. the naming of the recipient of a scholarship in mechanical engineering.

The membership of the Committee on Awards and Prizes consists of Walter M. McFarland, Chairman; Ira N. Hollis, Spencer Miller, Henry B. Sargent and R. Sanford Riley.

JOINT ACTIVITIES

The Society shares in joint relation with the Founder Societies in the following interests:

Code of Ethics. The Code of Ethics voted on by the members of the Society resulted in a ballot of 3334 for, and 35 against adoption. This was the product of a report of a Joint Committee with representatives of four other national engineering societies. Our members of the Committee are A. G. Christie, Chairman, H. J. G. Hinchey, Chas. T. Main, J. V. Martenis, Robert Sibley. Professor Christie, Chairman of the Joint Committee, has labored for nearly ten years to achieve this result and received a special vote of thanks from the Council.

The John Fritz Medal for 1923 was awarded on July 6, 1922, to Senator Guglielmo Marconi, Honorary Member of the A.I.E.E., for his invention of Wireless Telegraphy.

Affiliated Societies. At the March meeting of the Society a petition from the American Society of Safety Engineers asking affiliation with the A.S.M.E. was received and granted.

The Engineering Foundation. This fund initiated at $500,000 in 1914 by Ambrose Swasey, Past President and Honorary Member of the A.S.M.E., it is hoped will be augumented soon by others. Alfred D. Flinn, also Secretary of United Engineering Society, has been appointed Director of

the Foundation. Mr. Flinn made a six weeks' tour to the Pacific Coast and intermediate points, with the object of interesting and securing the aid of engineers in a nation-wide plan for research relating to engineering and the industries. Among active projects are a research in fatigue phenomena of metals, investigation of arch dams, and the study of wood preserving processes, including paints and varnishes. The Foundation published annual reports and semi-monthly *Research Narratives.* During the year it also printed a Directory of Hydraulic Laboratories in the United States. It coöperated with National Research Council in establishing the Personnel Research Federation which publishes the *Journal of Personnel Research.*

National Research Council was established in 1910 under the auspices of the National Academy of Sciences with the coöperation of the engineering societies and Engineering Foundation. Through our connection with the Engineering Foundation we now have a permanent link between the engineering profession and the national organization of the men of science. The Engineering Division of the national Research Council includes representatives of fourteen national engineering societies. Its work has been financed in part by the Engineering Foundation. It has many active committees engaged in research projects connected with mechanical, electrical, welding, metallurgical, mining and civil engineering.

The term of Professor Greene on the Research Council expired this year, Albert Kingsbury was nominated and the appointment duly confirmed by the National Academy of Sciences. Professor Greene has contributed most effectively to advance and establish on a permanent basis the research work of the Society. He was Chairman of the Advisory Board of Mechanical Engineering Research connected with the Division of Engineering of National Research Council. He has been succeeded in this office by Professor Walter Rautenstrauch.

The F.A.E.S. and American Engineering Council. The F.A.E.S., the governing body of which is American Engineering Council, comprising 28 member organizations, in January, 1922, completed the first year of service.

To convey an idea as to the purpose, character and scope of the work of the F.A.E.S. a partial list follows of activities in which it has been engrossed through special committees, in many cases, giving untiring attention to the work in hand:

> Government Departments in Forms and Adjustments of Contracts; U. S. Civil Service in Classification and Compensation of Engineers; Department of Commerce, Elimination of Waste; Conference Boards in Jurisdictional Awards, Material Markets Conference, Bureau of Economic Research, Paving Bricks Standardization, Unemployment, Licensing of Engineers, and in Federal Legislation on Patents and Patent Office relief. Department of Public Works, Typographic Mapping, Reforestation, National Hydraulic Laboratory, Dyes Embargo, Kenyon Bill, having to do with the stimulation of industries and reduction of unemployment during period of cyclical depression. Revision of the Mining Laws; Research in Waste in Industry, the

Twelve-Hour Shift, Basic Wage Rates, and a study of the Muscle Shoals project.

International Engineering Congress of 1926. The Council has approved an International Engineering Congress in 1926, preferably in connection with the proposed Sesqui-Centennial in Philadelphia. An informal joint committee of representatives from the Founder Societies and the Engineers Club of Philadelphia has been appointed. Our representatives are L. P. Alford, representative of the President of the A.S.M.E., A. G. Christie, F. R. Low, I. E. Moultrop, D. Robert Yarnall, and Calvin W. Rice, Secretary. Representatives of the Society on the Board of Management are Governor James Hartness, Past-President, alternate H. P. Liversidge, and D. Robert Yarnall.

South American Trip of Secretary Calvin W. Rice. By appointment of the Executive Committee of the Council, the Secretary left for Rio de Janeiro on August 24, 1922, to represent by joint arrangement the principal Engineering Professional Societies of the United States and Canada at the International Engineering Congress, held in connection with the Centennial of Brazilian independence. He sailed on the *S. S. Pan-America* which also carried the U. S. Government official delegation to the exposition headed by the Secretary of State, Hon. Charles Evans Hughes.

In addition to our own Society, Secretary Rice bore credentials from

American Society of Civil Engineers
American Institute of Mining and Metallurgical Engineers
American Institute of Electrical Engineers
John Fritz Medal Board of Award
The Engineering Foundation
The United Engineering Society
The Engineering Division of National Research Council
The Federated American Engineering Societies
The Engineers' Club of New York
The Engineering Institute of Canada
The Engineers' Club of Philadelphia.

The Congress was formally opened on September 17, 1922, by Dr. Pires do Rio, Honorary President of the Congress and Minister of Public Works in Brazil. Sessions continued throughout October and the principal accomplishments of the Congress are indicated in the following resolutions:

PERMANENT ORGANIZATION OF THE INTERNATIONAL ENGINEERING CONGRESS

The first International Engineering Congress of the Americas, convened at Rio de Janeiro in September, 1922, is today and now declared to be a permanent organization which will devote itself to the establishment of more intimate relations with the engineers and industrial workers of the Americas for the purpose of furthering engineering and conferring an unbounded service on humanity.

The International Engineering Congress declares that the board of directors of this permanent organization consist of the presidents of each and every one of the scientific, technical and industrial organizations of the Americas, or a representative named by the president, once the directors of the organization and the president of the International Engineering Congress of the Americas have authorized the admission of his society into the body, and

That the general secretary be at once named who will occupy the post until the next meeting of the International Engineering Congress, or until a substitute shall be elected by vote of the presidents of the adherent societies, and

That the name of this permanent organization be "International Engineering Congress of the Americas," and,

That the secretary be authorized to communicate this resolution to the proper authorities through the proper channels, and

That at the same time he may be authorized to delegate his powers to competent persons whom he may elect to represent him when he cannot be present, and

That the general secretary elected, fully authorized to act, is Mr. Verne Leroy Havens.

STANDARDIZATION OF STATISTICS

Railroads and Ports

Standardization of Statistics for Customs, Ports and Railroads.

Considering that it is universally admitted that modern economic life cannot be carried on without well-kept, reliable statistics of customs, ports and railroads, and

Considering that it is also universally admitted that the acquisition, dissemination and interpretation of statistics pertains to government administration, and

Considering that it is a recognized fact that an extensive work of this kind should not be scattered but administered by a central organization,

The first International Engineering Congress approves the preliminary work that has been done in this regard by the International High Commission and respectfully asks the respective governments, through the International High Commission to draw up a general agreement on this subject, so that a measure which is so highly desirable may be accomplished without further delays.

Standardization of Methods and Technical Nomenclature

Considering that uniform definition of terms and specifications with regard to materials, whether natural resources or manufactured products, is the necessary basis for efficient production and is

likewise essential for the development of international commerce and industry, and

Considering also that in the engineering profession the preparation of nomenclature and specifications is the province of international congresses and of the national societies that take part in them,

It is resolved that the Congress appoint a permanent committee to study proposed definitions and specifications and present them to future sessions of the Congress to be approved and embodied as forms for international use.

The accomplishments of the Congress were actually tangible in that acting upon the recommendation, the Government of Brazil requested the Government of the United States to loan an officer of the Bureau of Standards to introduce the methods proposed by Mr. Hoover and transmitted through Mr. Rice. Further, there was a development by a group of engineers from the United States in Rio de Janeiro, under chairmanship of Col. C. H. Crawford, member of A.S.M.E., of a list of technical words and phrases in the Portuguese language, and it is possible that a similar list of Spanish technical words and phrases will later be prepared by other centers visited by the Secretary.

Through introductions furnished by the Secretary of Commerce, Hon. Herbert Hoover, acting as Chairman of the Inter-American High Commission and by Dr. L. S. Rowe, Director-General of the Pan-American Union, the Secretary continued his trip through the other countries of South America, thus developing further engineering society affiliations, visiting the cities of Montevideo, Buenos Aires, Santiago, Lima, San José and Havana.

In spite of the brevity of his visit, Mr. Rice was convinced by the "teamwork" that was done that engineers in South America are eager to work with engineers of other countries in service to the profession and to the public. In each of these centers he urged an amplification of the domestic policies of the Society, namely —

1. That every professional man from the United States affiliate with the local engineering society of the country where he is residing, even if only temporarily
2. That they form within or under the auspices of the local society groups of members of the National Engineering Societies of the United States for purposes of service to the local society
3. That the local society link up with its government
4. That the organizations of engineers — members of U. S. societies link up —

   a With their country's government through the embassy and commercial attaché and with the Inter-American High Commission

   b With the National Engineering Societies of the United States.

Throughout his entire trip the Secretary reported a lively interest in engineering and in organizations of engineers. A complete account of this

trip was published in MECHANICAL ENGINEERING in January, 1923, and in the A.S.M.E. NEWS.

EMPLOYMENT SERVICE

During the first part of the year the Employment Bureau Service was turned over to the F.A.E.S., but after a short term turned back to the management of the Founder Societies of the United Engineering Society.

The number of men registered and placed is indicated below:

	Jan	Feb	Mar	Apr	May	June	Jul	Aug	Sept	Oct	Nov	Dec	Total
No. of men reg'd.	142	138	141	122	152	152	89	100	83	121	138	98	1,477
Total men placed	131	114	170	218	263	315	209	263	250	252	226	193	2,604

The total 1,477 refers only to the number of men registered during the year, the number of names on file being from 3,000 to 4,000.

A joint committee has been organized that is to report on the possibility of making this service self-supporting. Meanwhile, the service is being conducted by the Secretaries of the four societies as it was before it came under the F.A.E.S. A more detailed report is made a part of the Standing Committee Reports.

LIBRARY

Some statistics of the Engineering Societies Library not given in the annual report of our committee will be of interest:

During 1922 a total of 3,353 volumes (1,769 by gift, 1,584 by purchase), 616 pamphlets (601 by gift, 15 by purchase), and 25 maps and plans, making a total of 155,207 now in the permanent collection.

Expenditures for books, periodicals, supplies, and salaries were approximately $30,000. In addition about 8,000 non-visitors were assisted by mail or telephone. The average daily attendance was 86.

The Service Bureau made 226 searches and translated 103 articles totaling 343,130 words. It prepared 22,087 photoprints for 2,421 persons. The receipts for this work were about $14,500.

The task of recataloging the collection still occupies the chief attention of the Library Staff. During the year 16,678 volumes were recataloged and 149,980 cards prepared and added to the catalog. The catalog now contains specific references to 50,312 subjects.

Special attention has been given to reduce the accumulation of unbound material in the Library and more than 3,000 volumes were bound during the year.

The Carnegie Corporation and the National Electric Light Association have continued their contributions to the maintenance of the Library and the Society of Naval Architects and Marine Engineers has also become a contributor.