TENTH ANNUAL REPORT TO THE ALUMNI:
ON THE STATE OF THE DEPARTMENT OF CHEMICAL ENGINEERING

April 16, 1957

Dear "JEMEIS":

Many and many a time, I have been accused of being either a "Hide-bound Vermonter", or a "Maine Republican", and sometimes a "Democrat of the Solid and Unmovable South" when I begin to extoll the virtues of the best "Buckeyes" that ever came out of our great University. The ones who have pioneered our chemical industry, and are now major "Torch Bearers" in the chemical industry which is one of the fastest growing and most dynamic of all the major industries. As Sherlock Holmes would say to his good man Friday, Dr. Watson, "the answer is very elementary". Or better still, as Al Smith would invariably say, "What does the record say?"

As I checked over the some 2,200 stickers of the names and addresses of our alumni to whom this report is being sent, the record indicated without a question of a doubt that I am 100% right - to think of all the persons represented by the names is the best tonic to make one's heart mellow and warm. In going over these names too, it could readily be seen that each class had a personality and character of its own. Each member of these classes coming into the department for the first time was like a new mineral specimen from a mine, containing pay dirt but covered with gangue, the latter so easily washed away by the long time philosophy of the Department of "blood", "sweat", "tears", a strong arm and the mop and bucket, spiced with a high spirit of cooperation and an enthusiasm which have marked our chemical engineers for so many years. And with our excellent staff there can be only one result - as our records show - the best "JEMEIS" in the country.

It is good to give to all of you the heartiest and warmest of greetings and once again we are privileged to extend to you, your colleagues, your wives, your children, all of your friends, a cordial invitation to come back to the

FOURTH ANNUAL CONFERENCE FOR ENGINEERS AND ARCHITECTS

THE TWENTY-EIGHT HOMECOMING OF THE DEPARTMENT OF CHEMICAL ENGINEERING

AND LAST, BUT BY NO MEANS LEAST


THE PROGRAM

THURSDAY, MAY 2, 1957

8:00 P.M. - "The Fort Worth Idea" - Illustrated Lecture Karl Van Leuven, Jr. Victor Cuen and Associates, Architects, Detroit and Los Angeles

FRIDAY, MAY 3, 1957

9:00 A.M. - Registration- Ohio Union- Second Floor

10:00 A.M. - Address: Mershon Auditorium - DR. PHILIP SPOEN
President, American Gas and Electric Service Corporation

"ENERGY AS A COMPONENT IN OUR CIVILIZATION"
11:30 A.M. - Luncheon Session - Ohio Union Ballroom.

Address: DR. EMMANUEL R. PIORI, Director of Research, International Business Machines Corporation

"THE IMPACT OF COMPUTERS ON ENGINEERING AND SCIENCE"

DEPARTMENT OF CHEMICAL ENGINEERING
McPherson Chemical Laboratories, Room 154

Presiding: Joseph H. Koffolt

2:00 P.M. - Welcome to the Alumni and Anniversary Classes of 1907, 1917, 1922, 1932, 1947, and 1952.

2:15 P.M. - Presentation of Student Awards in Chemical Engineering

1. American Institute of Chemical Engineers - Annual Chapter Scholarship Award.

2. Central Ohio Section, American Institute of Chemical Engineers National Student Contest Awards.

3. American Institute of Chemists Professional Award.

2:25 P.M. - Golden Anniversary Class of 1907

1. Arthur H. Flower
2. Dana J. Domorest
3. Harry C. Moore
4. Walter L. Sperry

2:45 P.M. - Recess

3:00 P.M. - Address - CHARLES R. HILL (OSU '46) - Consultant Group Supervisor, E. I. du Pont de Nemours and Company, Engineering Department, Wilmington, Delaware.

"ELECTRONIC COMPUTERS AND THE CHEMICAL INDUSTRY"

3:45 P.M. - Open to socializing, reunions with alumni, visits to laboratories of special interest, etc.

Dick Hall will also address The Ohio State University Student Chapter, American Institute of Chemical Engineers

Thursday, May 2, 1957 - 4:00 P.M.
Room 154 McPherson Chemical Laboratories

"REQUIREMENTS FOR ENGINEERS AND OTHERS TO BECOME PROFICIENT IN COMPUTER UTILIZATION"

A CORDIAL INVITATION IS EXTENDED TO ALL INTERESTED TO ATTEND THIS MEETING ALSO.

An abstract of Dick Hall's talk is given in this report.

We are indebted to the E. I. du Pont de Nemours and Company for this contribution to our Department of Chemical Engineering in making it possible for Dick Hall to be our speaker.
Associate Dean Harold Bolz has already mailed all alumni with B.S.,B.E. degrees a detailed program of the Fourth Annual Conference, together with a reservation card. Enclosed is the same material for alumni who have only graduate degrees from the Department. (I hope I have not missed any, but if I have, let me know. We will apologize in our next letter in the "IS OUR E.C.E RED DEPARTMENT").

We do hope and urge our many presidents, executives, plant managers, chief engineers, superintendents, research directors, and others who are responsible for the development of our chemical engineers, to see fit to send as many possible to this Fourth Annual Conference of Engineers. It will be a stimulating and educational meeting mixed with the good fellowship which always exist when our "JEWELS" get together.

I. PETROLEUM ENGINEERING IS NOW A DIVISION OF THE DEPARTMENT OF CHEMICAL ENGINEERING

Effective June 1, 1956, the Board of Trustees approved the shifting of courses and curriculum in petroleum engineering to the Department of Chemical Engineering. The courses, curricula, and degree will still retain the name of petroleum engineering. The curriculum deals with petroleum production and not refining. It is expected that this shift will further strengthen the training in petroleum engineering on the undergraduate and on the graduate level through closer cooperation with the staff in chemical engineering, and also join use of chemical engineering many laboratory facilities. The plans for the new chemical engineering and mineral industries unit of the engineering center integrates the petroleum engineering laboratories with chemical engineering laboratories.

Professor Edward O'Rourke is continuing his work on the evaluation of oil properties and other fundamental courses in petroleum engineering, and Professor H. C. Slider, will develop reservoir and water flooding work. Their work will be supplemented by staff members of the Department of Chemical Engineering, such as, Dr. Webster E. Kay, who is well known for the PVT thermodynamic work; Professor E. E. Smith, head of the liquid and solid fuels laboratory of the Engineering Experiment Station; Professor Charles E. Dryden, who heads up the Nuclear Engineering work of the Department of Chemical Engineering; and other staff members of the Department of Chemical Engineering whose interests border on the many phases of petroleum production.

Professor Edward O'Rourke has been on the Petroleum Engineering staff of The Ohio State University since 1925, during which time, he has been active in research, and as a consultant to some of the major oil and mining companies in the United States and Mexico. Before coming to Ohio State, he has had extensive experience as a mining and petroleum engineer in this country and in Venezuela and Chile, South America.

Professor H. C. Slider joined the staff of the Division of Petroleum Engineering, January 1st, coming from the Shell Oil Company where he worked since 1949. During this time, he has worked in six different oil producing states. This work has involved field work, research, design and supervision. His last position with Shell was that of Illinois Division Reservoir Engineer.

Professor Webster E. Kay has been a member of the staff of the Department of Chemical Engineering since 1947. He had spent over 20 years with the Standard Oil Company (Indiana), Research Laboratory, Whiting, Indiana. His work there was involved in obtaining physical and thermal data on petroleum hydrocarbons. He is recognized both nationally and internationally for his work on PVT relationships at high pressures and temperatures, phase relationships, and thermodynamic properties of hydrocarbons.
Mining Engineering is now a division of the Department of Metallurgical Engineering.

II. THE NEW CHEMICAL ENGINEERING BUILDING. We are very happy to report that plans for the new Chemical Engineering and Mineral Industries Building are well underway. The architectural firm of Small, Smith, Reeb, and Dras of Cleveland, Ohio have been commissioned to design this building. It will be located on Woodruff Avenue, just east of the Engineering Experiment Station and north of the present chemistry building. The construction of the building will be in three phases and will eventually hold the chemical phases of engineering, namely, chemical, metallurgy, ceramic, mineralogy, and mine and petroleum. The first phase will be the completion of new facilities for chemical and petroleum engineering and a portion of metallurgical engineering.

The building will be four stories. The new chemical, or Unit Operations Laboratory will be four stories and a portion of which will be a penthouse giving head room for a fifth story. The staff has worked diligently on this for the past year.

The bottleneck might be the furnishing of the various laboratories with laboratory tables, benches, hoods and furniture. It is hoped that this will be worked out eventually.

III. ENROLLMENT AND REQUIREMENTS FOR ADMISSION INTO THE COLLEGE OF ENGINEERING

Enrollment data for the College of Engineering and the Department of Chemical Engineering are given in this report. The enrollment for chemical engineering is given for a five year period. It is very gratifying to note that there has been a steady increase. We are now running double sections in our second, third and fourth year courses.

As a result of tightening the entrance requirements this past year, the mortality in the Freshman qualifying examinations decreased materially. The following table gives the entrance requirements into the College of Engineering.

For admission as a regular undergraduate student, a candidate must be a graduate of a first grade high school (or equivalent preparatory school). He must present a minimum of fifteen units and he must meet the special requirements as outlined:

Mathematics.................. 3 units required, 4 recommended
*Elementary Algebra (through quadratics) - 1 unit
Advanced Algebra - 1/2 or 1 unit
*Plane Geometry - 1 unit
Solid Geometry - 1/2 unit
Trigonometry - 1/2 unit

English...................... 3 units required, 4 recommended
Grammar, composition, and literature

History..................... 1 unit required, 2 recommended
*American History and/or U.S. Government - 1 unit
World History

Science...................... 1 unit required, 4 recommended
*Physics - 1 unit
Chemistry - 1 unit
Biology - 1 unit
General Science - 1 unit

Foreign Language (classical or modern)..... 2 units recommended

*Courses specifically required.

Note: 1 unit = 120-160 class periods of work requiring outside work.
These combined and graduate students come from the following 36 schools: Ohio State (21); Purdue (3); M.I.T. (5); University of Illinois (3); Rose Polytechnic Institute (*); University of Dayton (*); Santa Clara (*); Case (1); Cornell (1); Brooklyn Polytechnic Institute (1); University of Washington (*); University of Mexico (1); Louisiana State (1); Baldwin Wallace (1); Clemson (1); Notre Dame (1); Bombay (2); National University of Seoul (2); Catholic University of Chile (1); Syracuse (1); University of California (LA) (1); Rochester (1); Cairo (1); Lehigh (1); Arkansas (2); New York University (2); Northwestern (1); Penn State (1); Toledo (1); Wayne State (1); Oklahoma A and M (1); Catholic University (1); University of Latvia (1); St. John's (China) (1); Yale (1); Illinois Institute of Technology (1)

(* ) Indicates B.Ch.E. degree from one school and M.Sc. from another.

IV: THE EMPLOYMENT SITUATION.

A complete list of the graduates for the academic years 1955-1956, and a partial list for 1956-1957 are given, together with the names of the companies with whom they have accepted positions. A summary of salary offers are given. It will be noted that at this writing (and we are late this year) that all have not accepted positions as yet. But once again salaries were not the major factor. In some cases, they were the straw that tipped the scale. The major factor in the acceptance or refusal of an offer may be summarized as follows (in order of descending importance); (1) public relations; (2) promptness in letting the student know whether the company is interested or not; (3) a plant trip is important to many; (4) type of industry as petrochemicals, heavy inorganics, organics, petroleum refining, paper, rubber, etc.; (5) location as Ohio, the southwest, west coast, etc.; (6) type of work- some like a training program others do not; a shyness away from offers which involve work in the analytical or control laboratory for a period of time (personally, I believe this is one of the best ways to know the companies products and what can go wrong); (7) salary (a few exceptions); (8) the potential competition at a plant; (9) where is my best friend "Joe Doakes" going?; (10) "scuttlebutt" from one's third cousin, twice removed, about the policy that once he signs on the dotted line, he is just another employee; (11) offering of a position in a department or division of a company which is way out of line with the student's interest. This was the reason for at least six refusals of offers this past year. The companies were informed of this, however, only two were invited back for further interviews to plants for which they indicated an interest - offers were made and they accepted. In the other four cases, the companies did not follow through; (12) "A fur lined bath tub job" - a company which appears to be loaded with talent but no one moving up.
There must be other reasons too but thus far I have not been able to write an equation or obtain a correlation to answer the $64,000 question, "What do we have to do to get some of your good chemical engineers?" I am sure that, in those times, even Democritus would have a more difficult time in finding the answer to this question than he did an "honest man".

As stated many times, I believe, we do more than any other department on the campus to cooperate in the matter of publicizing companies who come here to interview but under no circumstances would I tell a young man which offer he should accept.

V. FELLOWSHIPS, SCHOLARSHIPS AND CONTRIBUTIONS TO THE CHEMICAL ENGINEERING DEPARTMENT BY INDUSTRY

We are very grateful indeed for the assistance given us this past year by many of the chemical companies. This has been in the form of grant-in-aids, fellowships, scholarships, establishment of lectures, furnishing speakers, equipment for research and teaching, and also the donation of chemicals for research and teaching purposes. If it was not for these, we would have been very much handicapped over these years. Our advanced and graduate work in Chemical Engineering would have been futile and sometimes impossible. Several chemical companies have been very helpful to us on our proposed new building.

1. Fellowships and Scholarships

Grateful acknowledgment was made to the following companies who have established fellowships and scholarships in the department this past and coming year. The names of the scholars and fellows for the year 1956-57 are given in this report.

<table>
<thead>
<tr>
<th>Fellowships</th>
<th>Undergraduate Scholarships</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Dow Chemical Co.</td>
<td>2. Cincinnati Milling and Machine Co.</td>
</tr>
<tr>
<td>3. Eastman Kodak Co.</td>
<td>3. Dow Chemical Co.</td>
</tr>
<tr>
<td>4. General Electric Educational and</td>
<td>4. Lubrizol Corporation</td>
</tr>
<tr>
<td>Charitable Fund</td>
<td></td>
</tr>
<tr>
<td>7. Shell Oil Co.</td>
<td>7. Standard Oil Co. of Ohio</td>
</tr>
<tr>
<td>8. American Chemical Society Rot.</td>
<td></td>
</tr>
<tr>
<td>9. University</td>
<td></td>
</tr>
</tbody>
</table>

2. DuPont Postgraduate Teaching Assistantship in Chemical Engineering

As stated in the report last year, this was established for the first time for the year 1956-57. We were able, by this generous grant, to obtain the services of an outstanding man, namely Edward Frech, for this. This helped much in our teaching load and especially at a time when the budget was tight.
3. Hercules Powder Company Grant-in-Aid

The Hercules Powder Company established a very generous rotating grant-in-aid in our department this past year. This grant-in-aid was used for the purchase of research equipment, travel expenses to technical meetings for members of the staff, equipment for teaching and for emergency needs of the department. There were many of the latter and this grant-in-aid helped us over the hump many times over. We were very thankful for this.

4. Glidden Lecture in Chemical Engineering

The Glidden Company established two lectures in Chemical Engineering to bring to the campus an outstanding speaker in Chemical Engineering. Dean W. Robert Marshall of the University of Wisconsin will be the first speaker. A notice of this meeting is given in this report together with an abstract of the two lectures to be given and a biographical sketch of Dean Marshall. A very cordial invitation is extended to all of you, your colleagues and your friends to attend these lectures on Thursday, May 16.

The second Glidden lecturer will be Dr. Richard Wilhelm, Chairman of the Department of Chemical Engineering, Princeton University. Dr. Wilhelm will give two lectures on Chemical Engineering Kinetics this coming Fall, a date for which has not been set.

5. Inspection Trips

We appreciate very much the contribution many of the companies have made over these many years in permitting our students to visit their plants. I wish space was available to name each of these.

6. Speakers

Again, many chemical companies have contributed much in making available to us their technical men for lectures before our students. Some of these are: Atlantic Refining, Carbide and Carbon Chemicals, DuPont, Esso Research and Engineering, Procter and Gamble, Diamond Alkali, Monsanto, Goodyear.

VI. AMERICAN INSTITUTE OF CHEMICAL ENGINEERS

Once again, our Department of Chemical Engineering is in the #1 position, concerning our students becoming members of the A.I.Ch.E. We are happy that two other schools in the country are 100%—namely Michigan School of Mines and Brooklyn Polytechnic Institute.

ANYONE DESIRING AN APPLICATION BLANK FOR MEMBERSHIP IN THE INSTITUTE, KINDLY LET ME KNOW.

VII. REUNIONS WITH ALUMNI

This past year was a very pleasant one indeed. Reunions were held with alumni of the department on Inspection Trips and also last summer when I was in California. I had a very delightful and interesting time with the American Potash and Chemical Company, Trona, California. It was good to see all of the alumni again. Reunions were held in the following cities: Akron, Niagara Falls, Rochester, Pittsburgh, Charleston, Midland, Wyandotte, and Los Angeles.
At the Annual meeting of the A.I.Ch.E. in Boston, some 40 alumni of the department got together for an Ohio State Day Luncheon. We are hoping that we will be able to do this again in Chicago this coming fall.

WITH BEST WISHES TO ALL OF YOU AND HOPING THAT YOU WILL BE WITH US ON FRIDAY, MAY 3RD.

Cordially yours,

Joseph H. Koffolt

P.S. I am sorry that this report is two weeks late this year. We have been swamped with an overload of work, especially the new building.
Once again it is fitting and good to give the histories of the graduating class of 1907. The members of this class are and where:

Dana James Demorest - Retired  
(Chairman, Department of Metallurgy, Ohio State University, Columbus, Ohio).

Harry R. Drackett - Deceased 1948  
(President, Drackett Manufacturing Company, Cincinnati, Ohio).

Arthur H. Flower - Retired  
(Technical Director, Inland Mfg. Division, General Motors Corp., Dayton, Ohio).

Harry C. Moore - Retired  
(Vice-President, Armour Fertilizer Works, Atlanta, Georgia).

Walter L. Sperry - Superintendent, Aurora Sanitary District, Aurora, Illinois.

Henry Earl Surface - Deceased

DANA J. DEMOREST

Dana J. Demorest graduated from Marysville High School in the year of 1900 and spent the next year and a half as a carpenter until he accumulated enough money to enter college at The Ohio State University in the Fall Quarter of 1901. At that time there was no degree given in Chemical Engineering, but he took the courses which later were offered in the Chemical Engineering curriculum. For several years he was also a student assistant in the Department of Metallurgical Engineering under N. W. Lord and graduated in Chemical Engineering in 1907. He was married the same month. He then became one of the fuel chemists of the United States Bureau of Mines at their Pittsburgh laboratory.

During the fall of 1908, Dana got typhoid fever and returned to Marysville with his wife. Upon recovering he took a job with the Union Pacific Railroad as chemist in their laboratory at Omaha, Nebraska. The following summer, he received a job offer of teaching metallurgy at The Ohio State University, starting in September of 1908. He spent the following two summers as fuel chemist of the Ohio Geological Survey and, in the summer of 1911, was fuel chemist for the United States Steel Corporation at Gary, Indiana. He continued as a teacher of metallurgy in the Department of Metallurgy at The Ohio State University for a total of forty-four years.

In 1917, he was called to Washington, D. C., to become a part of the infant Chemical Warfare Organization of the United States Army. In the spring of 1918 he was made Commanding Officer of the Toxic Gas Plant at Edgewood arsenal, which plant was designed, built and operated under his command. He was discharged from the Army, February 1919 as Major C. W. S.

Upon returning home, he resumed teaching at the beginning of the third quarter because of personal health. The war being over and the students coming back in large numbers, the courses in Metallurgy were redesigned and instituted a curriculum in Metallurgical Engineering, (one of the finest in the country).
During 1916, before going into the Army, Dana spent much time at the Portsmouth Plant of the Wheeling Steel Corporation reorganizing their steel making methods which were in serious difficulty, making shell steel.

After returning from the Army, he spent a great deal of time and energy in consulting work such as examining the gold producing possibilities of the Hillabee Schist formation in north eastern Alabama and mineral formations in northern Ontario. In 1922 he went to the Dome Plateau Region of eastern Utah to evaluate the vanadium bearing Morrison sandstones, which also contained visible uranium minerals and was strongly impressed by the possibilities there, and returned several times later. A small group of Columbus people bought the claims of the Pittsburgh Radium Company and carried out more examinations and, finally, started operating as the Utah Alloy Ores Company which has been actively working since 1935. When World War II came on, uranium became so important, operations were stepped up. Dana has been president of this company for quite a few years and goes to Utah four times a year. (He has doctors permission so long as he promises not to climb any cliffs).

He has been president of the Godman Guild Association for a good many years, a trustee of the Methodist Church (Indianola) for over forty years and an adult class teacher there.

He has also been a trustee of the Tin Research Institute for a number of years with offices and laboratories connected with the Battelle Memorial Institute. He has been editor of the metallurgical section of Chemical Abstracts for about thirty years. Dana states, "I have been and done many things which I don't care to record here, since I don't want to dim the luster of Chemical Engineering."

HARRY C. MOORE

Following graduation from Ohio State University in 1907, with the degree of Bachelor of Science in Chemical Engineering, he was employed as assistant Chemist by the Atlanta Steel Company (now Atlantic Steel Company) of Atlanta, Georgia, and remained in that position until December 1907. At that time the steel Companies all over the United States were closing down due to money panic. He then joined Armour Fertilizer Works in Atlanta as assistant Chemist for the Atlanta Division.

In the Spring of 1908 he became Chemist in charge of the laboratory and in charge of the chemical control of fertilizer manufacture for the Atlanta or Southeast Division.

In May 1920 he was transferred to the Executive Offices in Chicago as Chief Chemist and in charge of Chemical Control for all Armour Fertilizer Works.

In 1926 he began the development of the first actual commercial ammoniation of fertilizers which is now widely practiced by the entire Fertilizer Industry. This included the addition of Ammoniacal Liquors (aqua ammonia, liquid anhydrous ammonia and later ammoniacal liquor containing dissolved salts such as ammonium nitrate and urea) to other fertilizer materials in the manufacture of mixed fertilizers. These solutions are now generally known as "Nitrogen Solutions". This was the beginning of ammoniation in the manufacture of fertilizers. He was the author of several patents in this connection. He also was first to add mineral acids, sulfuric and phosphoric along with ammoniacal liquors and other fertilizer materials to make "Granular Fertilizers", which are now so popular throughout the Fertilizer Industry.
In 1933 Armour Fertilizer Works' executive offices were moved to Atlanta.

In 1938 he was appointed Director of Purchases for Armour Fertilizer Works, and later Vice-President of Armour Fertilizer Works, and also Assistant Vice-President of Armour and Company. (Armour Fertilizer Works is a wholly owned subsidiary of Armour and Company). This position was held at the time of his retirement in April 1955.

Ohio State University conferred on him the degree of "Chemical Engineer" in June 1935.

He has been a member of The American Chemical Society, and for the past twenty three years a member of the Capital City Club of Atlanta.

WALTER A. SPERRY

Walter A. Sperry was born and raised in Columbus, Ohio. He graduated from Central High School in 1900 and from The Ohio State University's College of Engineering with the degree of Bachelor of Science in Chemical Engineering in 1907.

For the first 13 months out of school he was employed in the laboratories of the Union Pacific Railroad at Omaha, Nebraska partly to make bacteriological tests on Dining Car waters and partly to make the tests for the control of the many Kennicott Water Softeners the railroad used on its system to the Pacific coast. The Union Pacific Railroad were pioneers in establishing water softening at its several round-houses for treating the boiler water of its locomotives. During this same period the railroads of the country were also uniting in an intensive study of the reason for "pipes" in steel ingots and its relation to track failures. John Hoffman, also of Ohio State, was Chief of the Laboratory and during most of that period Dan Demorest and Arthur Flower, both of the OSU class of 1907, were also working in these laboratories.

After 13 months he was invited back to join Charles Hoover, as assistant Chemists, under William R. Copeland who had been appointed Superintendent to start and operate the Columbus Water Treatment Plant. Columbus in those days was the mecca of Sanitary Interest in the United States. In addition to the then largest water treating plant in the country there was also building a Sewage Treatment Plant and a Garbage Reduction Plant. Charles Hoover of Columbus fame, an Ohio State student and Sperry were suggested to William Copeland by Professor C. W. Foulk. The Columbus Water Treatment Plant was started in operation in August 1908.

In 1912 Charles Hoover succeeded to the superintendence of the Columbus plant, and Sperry went to Grand Rapids, Michigan, to start up and operate a similar softening and filtering plant receiving water from the Grand River. Work was terminated here in 1929. During the 17 years at Grand Rapids and for some 6 or 7 years he acted as Public Service Director under a City Manager form of government. During this period Grand Rapids planned and build a Sewage Treatment Plant, the general supervision, of which, fell in the Public Service Director's Office.

For some 6 months during 1929 he started up and coached the operators of a similar water treatment plant in Saginaw, Michigan. Following this he was appoint-

ed as the first Secretary of the Steam Control Commission for the State of Michigan with offices at Lansing, Michigan. This year was a bit unpleasant due to his incompatibility with certain political phases of the work.
On November 30, 1930 he was appointed the Superintendent of the Sanitary District of the City of Aurora, Illinois, which position he still occupies. Illinois is noted for its many non-political Sanitary Districts and the consequent high quality of plant operation and management.

He is a life member of the American Water Works Association, a member of the Federation of Sewage and Industrial Wastes Association, a member of the Central States Sewage and Industrial Wastes Association and for many years a member of the American Chemical Society. He has also contributed a number of papers to the Association's Journals and been the recipient of a number of awards from both the Federation and Central States Association as well as from the State of Illinois.

ARTHUR H. FLOWER

After his graduation in Chemical Engineering in 1907, he spent a short time as gas-works chemist at the Denver Gas and Electric Co., Denver, Colorado. The opportunity came to transfer to the laboratories of the Union Pacific Railroad Company at Omaha, Nebraska. N. F. Harriman, nephew of E. H. Harriman, was director of the laboratories at that time. Dana Demorest and Walter Sperry were there during part of his stay. The work consisted mostly of chemical testing and inspection of all the materials purchased by the railroad Company.

His next move was to the Engineering Department of the Ohio State Board of Health at Columbus. The duties there consisted in setting up a special laboratory and conducting the chemical studies in this work on a special report of a study of the collection and disposal of city wastes in Ohio. The work was completed and a report published by the State Board of Health in July 1911.

His next experience was as an analytical chemist for Burgess and Long - Consulting Engineers and Chemists at Columbus, Ohio. While at his above position he received an appointment at the Columbus Water Filtration Plant, as one of the control chemists in the softening and filtration of the drinking water for the City of Columbus. He was associated with the late Charles P. Hoover, chief chemist, and Walter A. Sperry.

The next move was into the chemistry of rubber, going with the Falls Rubber Co. at Cuyahoga Falls, Ohio, manufacturers of automobile tires, tubes and mechanical rubber goods.

After this he went to Dayton, Ohio with the Inland Division, one of the accessory groups of the General Motors Corporation. Their plan was to set up laboratories for the development and application of rubber and plastic parts to be used in the modern automobile. This plan worked out to be very extensive in that it required a large personnel and extensive equipment; and, as technical director, his work became largely executive, consulting and director of research projects.

He was the co-author of several articles presented before the Rubber Section of the American Chemical Society on rubber accelerators, theory of rubber vulcanization and a chemical analytical method of determining the amount of combined sulphur in rubber vulcanization. This method was adopted as a standard by the American Society of Testing Materials.
He was active as a sub-committee chairman with the American Society of Testing Materials in obtaining the adoption of a method for testing the adhesion of rubber to metal.

He maintained a long membership in the American Chemical Society, American Society for the Testing of Materials and the American Association for the Advancement of Science. In 1935 The Ohio State University conferred on him the degree of Chemical Engineer.

The latter part of his time with the General Motors Corp. was devoted to the directing of research projects in cooperation with the Research Foundation of Ohio State University and also with the Applied Science Research Laboratory of the University of Cincinnati. Several patent applications came out of the work on these projects.

In July 1947, he retired after having been with the General Motors Corporation for twenty years, and has recently been making his home in Miami, Florida.
FORTIETH ANNIVERSARY (CONT'D)

15. Henry H. Thompson
Chief Chemist, Xylos Div., Firestone Tire and Rubber Co., 2525 Firestone Blvd., Los Angeles 54, California

17. William A. Wirth
(Deceased)

ALUMNI REUNIONS - MAY 3

THIRTY-FIFTH ANNIVERSARY

CLASS OF 1922

Doctor of Philosophy

1. Andrew Karsten
Prof. Chemical Engineering
South Dakota School of Mines and Tech.
Rapid City, South Dakota

Master of Science

1. Gaylord B. Estabrook
Prof. of Physics, Uniy. of Maryland
Baltimore 1, Md.

2. Anthony George
Sinclair Valentine Co., 611 W. 129th St.
New York, New York

3. En-Fou Lee-Toma - no information

4. Harry K. Linzell
Tayler Corporation, 46 Trinity Place
New York 6, New York

5. John D. McBurney
Chemist, E.I. DuPont de Nemours and Co.
Wilmington, Delaware

6. Marion C. Reed
Columbus, Ohio

7. George H. Vander Borgh
Vanderborgh and Son, Native Blue Point Oysters, West Sayville, Long Island New York

8. Norman E. Woldman
President, Engineering Alloys Digest, Inc.
356 N. Mountain Ave., Upper Montclair New Jersey

9. Bachelors of Chemical Engineering

Insurance Co. of America
Philadelphia, Pennsylvania

11. Rodney A. Bell
Gra-Bell Finance Co., Sec-Treas.
63 S. High St., Columbus, Ohio

12. Benjamin Almenenthal
Wiley Carbide Tool Co., 7715 W.7Hile Rd., Detroit, Michigan

13. Horace B. Cooke
Patent Counsel, Gulf Oil Corp.
P.O. Box 1166, Pittsburgh 30, Pa.

14. Curtis F. Eagle
Special Agent, The Mer. Insurance Co.
Columbia Bldg., Dayton 2, Ohio

15. Ferdinand P. Fischer (Retired)
Res: 64 Cleveland Dr., Avon Lake, Ohio

16. Robert J. Gotter
Inspector, Air Material Command USAF
Wright-Patterson AFB, Ohio

17. Robert F. Heald
Colgate Palmolive Peet Co., 105 Hudson Jersey City 2, New Jersey

18. Paul R. Mines
(Deceased)

19. Webster B. Kay
Professor, Chemical Engineering Dept.
OSU, Columbus, Ohio

20. Lehr F. Kissling
Columbia-Southern Chem. Co.
Barberton, Ohio

21. Walter J. Klaiber
(Deceased)
THIRTY-FIFTH ANNIVERSARY (CONT'D)

15. Clarence A. March
   The Detroit Edison Co., 2000 2nd Ave.
   Detroit 26, Michigan

16. Victor R. Morris
   New Hampshire

17. Harold G. Osborne (retired)
   330 Van Buren St., Fort Myers, Fla.

18. Richard D. Osgerichian — no information

19. Chang Yuen Pang — no information

20. Clarence A. Litchie
   Mgr. Processing Tech. B.F. Goodrich
   500 S. Main St., Akron, Ohio

21. Irvine C. Staeuble
   Sup't., Process Division
   Standard Oil Co., Sugar Creek, Mo.

22. Robert H. Schmidt
   Republic Steel Corp.
   Millersburg, Ohio

23. James H. Wilson
   Rocket Design Engineer
   U.S. Naval Ordnance Test Station
   Code 4022-NOTS
   China Lake, California

24. Wallace E. Wing
   Marblehead Lime Co., President
   Chicago, Illinois

TWENTY-FIFTH ANNIVERSARY

CLASS OF 1932

Doctor of Philosophy

1. Tod B. G. Dixon
   Chm. and Prof. Chem. Eng. Dept.
   Fort Wayne, Indiana

2. Robert A. Fisher
   Prof., Va. Polytechnic Inst.
   Blacksburg, Virginia

3. L. A. Parker
   Coordinator of Chem. Eng. and Develop.
   Shulton, Inc., Route #6
   Clifton, New Jersey

4. Shou - Chen Yang
   Prof. in Chemistry, College of Agric.
   Nan Tung University, Nan Tung, China

5. Alfred E. Galloway
   (Deceased)
   Master of Science

1. Robert C. Innis
   Dept. Head, The Upjohn Co.
   Kalamazoo, Michigan

2. William B. Abele
   Plant Chemist, Kanawha River Plant
   Appalachian Elec. Power Co., Box 790
   Montgomery, West Virginia

3. LeFever M. Lee
   Ass't. Dir. Indust. Engineering
   Fedders-Quigan Corp.,
   58-01 Grand Ave., Maspeth, L.I., N.Y.

4. Ivan A. Planck
   Chairman, Mechanical Engineering
   Indiana Tech. College, 221 E. Wash. B.
   Fort Wayne 2, Indiana

5. Waldron D. Sheets
   Ass't. Prof. Chem. Eng. and Exp. Station
   OSU, Columbus, Ohio

6. Ralph K. Child
   534 Columbus Avenue
   Washington C.H., Ohio

7. William M. Davis
   South High School Instructor
   Columbus, Ohio

8. Ralph N. Gibbs
   Head, Dept. of Science, Edison Tech.
   High School, 725 Clifford Ave.
   Rochester, New York

9. Lehr F. Kissling
   Columbia-Southern Chemical Co.
   Barbton, Ohio

10. William P. Koontz
    Chem. Eng., U.S. NOTS, China Lake
    California

11. Clair O. Throne
    The Glidden Co., 11001 Madison Ave.
    Cleveland, Ohio
TWENTY-FIFTH ANNIVERSARY (CONT'D) - 36 -  

12. Ralph B. Vogel  
   Chief Chem. Eng., The National Lime and Stone Co., Carey, Ohio

13. Carl W. Lundgren  
   Supt., Rubber Dept. and Golf Ball Dept.  
   MacGregor Golf and Sports Products, Inc.  
   4861 Spring Gove Ave., Cincinnati, Ohio

14. Lawrence S. Wells  
   Hooker Electrochemical Co.  
   Niagara Falls, New York

15. Homer R. Gill  
   Goodyear Tire and Rubber Co.  
   St. Marys, Ohio

16. Elmer C. Piotter  
   Babcock and Wilcox Alliance, Ohio

17. Cyril R. Porthouse  
   President, The Pyramid Rubber Co.  
   Ravenna, Ohio

18. Harold W. Quigley  
   Wyandotte Chemicals Corporation  
   Wyandotte, Michigan

19. Charles E. Roth  
   Rayonier, Inc., Jesup, Georgia

20. Hyman H. Weinberg  
   Advanced Tool Stamping and Die Corp.  
   Columbus, Ohio

21. John Poast  
   Armco Steel Corp., Middletown, Ohio

BACHELORS OF CHEMICAL ENGINEERING

1. Paul W. Blume  
   Ford Motor Co., Deerborn Iron Finery  
   Deerborn, Michigan

2. Lewis W. Chubb, Jr.  

3. Conrad F. Daum  
   (Deceased)

4. David M. Goodfriend  
   (Deceased)

5. Harry J. Green, Jr.  
   Stromberg-Carlson Co., Rochester, N.Y.

6. Samuel S. Johnston  
   Weirton Steel Co., Weirton, W.V.

7. John C. March  
   Aluminum Co. of America  
   Alcoa, Tennessee

8. John P. Metzler  
   Sun Oil Co., Marcus Hook, Pa.

9. Paul E. Mong  
   Pacific Gas and Electric Co.  
   San Francisco, California

10. Frederick L. Mueller  
    The Pure Oil Co.  
    Crystal Lake, Illinois

11. David G. Schepp  
    Lt. Col. USA - Office of Sec. of Defense  
    Washington 25, D.C.

    Chr'm. Chem. Eng. Dept., North Carolina  
    State College, Raleigh, N.C.

13. Roy E. Smith  
    Process Engineer, General Electric Co.  
    Waterford, N.Y.

14. Lawrence S. Wells  
   Hooker Electrochemical Co.  
   Niagara Falls, New York

15. Homer R. Gill  
   Goodyear Tire and Rubber Co.  
   St. Marys, Ohio

16. Elmer C. Piotter  
   Babcock and Wilcox Alliance, Ohio

17. Cyril R. Porthouse  
   President, The Pyramid Rubber Co.  
   Ravenna, Ohio

18. Harold W. Quigley  
   Wyandotte Chemicals Corporation  
   Wyandotte, Michigan

19. Charles E. Roth  
   Rayonier, Inc., Jesup, Georgia

20. Hyman H. Weinberg  
   Advanced Tool Stamping and Die Corp.  
   Columbus, Ohio

21. John Poast  
   Armco Steel Corp., Middletown, Ohio

TENTH ANNIVERSARY

CLASS OF 1947

DOCTOR OF PHILOSOPHY

1. Michael A. Bobel  
   National Carbon Co., Cleveland, Ohio

   Master of Science

1. Marion F. Dick  
   (Deceased)

2. John A. Gurklis  
   Battelle Memorial Inst., Columbus, Ohio

3. Harold C. Klassen  
   Jones Dabney Co., Louisville, Ky.

4. Leland J. Lutz  
   Food Machinery Chemical Corp.  
   New York, N.Y.
TENTH ANNIVERSARY (CONT'D)

5. Alexander K. Mikulski
   Procter and Gamble Co.
   Ivorydale, Cincinnati 17, Ohio

6. Roy E. Schneider
   U.S. Gypsum Co., Chicago, Illinois

7. Donald A. Vorum
   M. W. Kellogg, Transvaal, U. of S. Africa

8. Donald S. Arnold
   National Lead Co., of Ohio
   Cincinnati 31, Ohio

9. Allan W. Baum
   Enjay Co., Inc., N.Y., N.Y.

10. Wallace W. Beaver
    Brush Serylum Co., Cleveland, Ohio

11. James G. Byerly
    West Va. Pulp and Paper Co.
    Covington, Va.

12. Robert P. Cahn
    Esso Research and Engineering Company
    Linden, N. J.

13. Felice J. Celli
    OSU Research Foundation, Col., Ohio

14. Arthur S. Covert
    E. R. Squibb Co., Flushing, N.Y.

15. Kurt M. Dobowski
    Iowa Methodist Hosp. and Raymond Blank
    Memorial Hospital for Children, Des Moines 14, Iowa

16. L. A. Eddy
    Lt. Col. USAF, HQ AFSWP, Wash., D.C.

17. Howard W. Goard
    Phillips Petroleum Co.
    Bartlesville, Oklahoma

18. Ernest C. Grabill
    DuPont, Polychemicals Dept.
    Wilmington 99, Del.

19. Thurman L. Graves
    American Anode, Div. B.F. Goodrich Co.
    Los Angeles 22, California

20. Walter D. Hunter
    Olin Mathieson Chemical Corp.
    Niagara Falls, N.Y.

21. William G. Knapp
    Monsanto Chemical Co.
    St. Louis, Missouri

22. Arthur H. Kuhlman
    B.F. Goodrich, Tire Division
    Textile Develop., Akron, Ohio

23. Hugh R. Lehman
    Los Alamos Scientific Lab.
    Los Alamos, New Mexico

    Dow Chemical Co., Midland, Michigan

25. Elwood Mead
    Boeing Airplane Co., Seattle, Wash.

26. Sidney Miller (no information)

27. Clifford F. Mohr
    Lt. Col. - 2357A - HQ WADC, (Area B)
    Wright-Patterson AFB, Ohio

28. J. K. Petry
    Address Unknown

29. Daniel Simon
    Abbott Labs., North Chicago, Ill.

30. Herman L. Sturza
    Nichols Engr. and Research Corp.
    New York, N.Y.

31. Maxwell P. Sweeney
    United Engineers and Constructors
    Philadelphia 5, Pa.

32. Carl E. Trexler
    Lt. Col., Departinent of Defense
    Military Liaison Commm., Wash., D.C.

33. Robert Q. Wilson
    Battelle Institute Limited
    London, W.I., England

34. Phillip Rose (no information)

35. C. Bemiss

36. Victor Betts
    Olin Mathieson Chemical Corp.
    Niagara Falls, New York

37. W. T. Harbeson
    North Amer. Aviation, Inc., Col., Ohio
38. J. V. Hearm, Jr.
Chief Materials Laboratory
Wright-Patterson AFB
WADC, Dayton, Ohio

39. Thomas M. Hutt
Waterford High School
McConnelsville, Ohio

40. Harry M. Iwata
Fairfield Chemical Division
Baltimore 3, Md.

41. Bryce H. McMullen
National Lead Co.
Titanium Division
South Amboy, New Jersey

42. Ehud Pascal
Koppers Co., Kobuta Plant
Monaca, Pa.

43. Lowell E. Thompson
Lt. Col., Ft. Leavenworth, Kansas

44. R. J. Rathi
Rothi Bus. Ltd.
Poona, India

45. Edwin E. Smith
Assistant Professor OSU
Engineering Experiment Station
Columbus, Ohio

46. V. S. S. Gopalan
Standard Vacuum and Refinery Company
India Ltd., Post Bay No. 6516
Bombay 26, India

47. D. G. Schroeter
American Oil Company
Texas City, Texas

48. Fred Applegath
Lion Oil Company
El Dorado, Arkansas

49. William J. Bryan
Rayon Department, DuPont Co.
Richmond, Virginia

50. Charles Clifford
Oak Ridge, Tenn.

51. Fred W. Elliott
Box 216

52. Charles K. Hall
E. I. DuPont, Wilmington, Delaware

53. Robert H. Hill
Monsanto Chemical Company
Nitro, W. Va.

54. J. James Hur
The Atlantic Refining Co.

55. Vahab Khamneizadeh (no information)

56. Harold E. Knowlton
California Research Corporation
Richmond, California

57. Herbert C. McKee
Southwest Research Institute
San Antonio, Texas

58. Boyd L. Mahan (no information)

59. John B. Martin
Procter and Gamble
M.A. and R. Bldg., Ivorydale
Cincinnati 15, Ohio

60. Richard D. Mitchell
Naval Officer, M.C. B., #6
C/o F.P.O. New York, N.Y.

61. Lewis E. Parker
E. I. DuPont de Nemours and Company
Camden, South Carolina

62. Samuel A. Riccardi
Pilot Plants, Olin-Mathieson Chem. C.
Niagara Falls, New York

63. George A. Uhl
Sinclair Research Lab., Inc.
Harvey, Illinois

64. George H. Whipple
E. I. DuPont, Polychemicals Dept.
Experimental Station
Wilmington, Delaware
<table>
<thead>
<tr>
<th>TENTH ANNIVERSARY (CONT'D)</th>
</tr>
</thead>
<tbody>
<tr>
<td>65. Wade Wolfe, Jr.</td>
</tr>
<tr>
<td>Clin Mathieson Chemical Corporation</td>
</tr>
<tr>
<td>Niagara Falls, New York</td>
</tr>
<tr>
<td>66. Dalton F. Drake</td>
</tr>
<tr>
<td>DuPont Co., Grasselli Chem. Dept.</td>
</tr>
<tr>
<td>Richmond 25, Virginia</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Bachelors of Chemical Engineering</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Richard N. Ballard</td>
</tr>
<tr>
<td>F. H. Perry and Company</td>
</tr>
<tr>
<td>Cincinnati, Ohio</td>
</tr>
<tr>
<td>2. Alvin G. Cooper</td>
</tr>
<tr>
<td>Shellmär Products, Co.</td>
</tr>
<tr>
<td>South Gate, California</td>
</tr>
<tr>
<td>3. William K. Fell</td>
</tr>
<tr>
<td>Esso Research and Engineering Co.</td>
</tr>
<tr>
<td>Linden, N. J.</td>
</tr>
<tr>
<td>4. Andrew L. Beeson</td>
</tr>
<tr>
<td>United States Steel Corporation</td>
</tr>
<tr>
<td>Clairton, Pa.</td>
</tr>
<tr>
<td>5. Howard M. Galloway</td>
</tr>
<tr>
<td>Semet-Solvay Company</td>
</tr>
<tr>
<td>Ashland, Kentucky</td>
</tr>
<tr>
<td>6. Raymond W. Garris</td>
</tr>
<tr>
<td>E. I. DuPont</td>
</tr>
<tr>
<td>Baltimore, Md.</td>
</tr>
<tr>
<td>7. Theodore J. Hamilton</td>
</tr>
<tr>
<td>Carbide and Carbon Chemicals Co.</td>
</tr>
<tr>
<td>Charlotte, North Carolina</td>
</tr>
<tr>
<td>8. James Geary Henlin</td>
</tr>
<tr>
<td>Latex Corp., Goodyear Tire and Rubber</td>
</tr>
<tr>
<td>Akron, Ohio</td>
</tr>
<tr>
<td>9. Jack E. Hoskins</td>
</tr>
<tr>
<td>General Electric Company</td>
</tr>
<tr>
<td>Coshocton, Ohio</td>
</tr>
<tr>
<td>10. Lewis C. Hullinger</td>
</tr>
<tr>
<td>Owens-Corning Fiberglas Corporation</td>
</tr>
<tr>
<td>Newark, Ohio</td>
</tr>
<tr>
<td>11. Keith S. Jacobs</td>
</tr>
<tr>
<td>Ironsides Company</td>
</tr>
<tr>
<td>Columbus, Ohio</td>
</tr>
<tr>
<td>12. John M. Kolbas</td>
</tr>
<tr>
<td>Bristol Laboratories, Inc.</td>
</tr>
<tr>
<td>Syracuse, New York</td>
</tr>
<tr>
<td>13. Louis A. Kovreg</td>
</tr>
<tr>
<td>Owens-Corning Fiberglas Corporation</td>
</tr>
<tr>
<td>Dallas, Texas</td>
</tr>
<tr>
<td>14. Herbert G. Krane</td>
</tr>
<tr>
<td>Standard Oil (Indiana)</td>
</tr>
<tr>
<td>Whiting, Indiana</td>
</tr>
<tr>
<td>15. Billy L. Larcamp</td>
</tr>
<tr>
<td>Carbide and Carbon Chemicals Co.</td>
</tr>
<tr>
<td>South Charleston, W. Va.</td>
</tr>
<tr>
<td>16. Chester F. Milewski</td>
</tr>
<tr>
<td>Veterans Administration Hospital</td>
</tr>
<tr>
<td>Lexington, Kentucky</td>
</tr>
<tr>
<td>17. Clinton A. Mohler</td>
</tr>
<tr>
<td>The Foxboro Company</td>
</tr>
<tr>
<td>Knoxville, Tenn.</td>
</tr>
<tr>
<td>18. Roy F. Quinn</td>
</tr>
<tr>
<td>Diamond Crystal Colonial Salt</td>
</tr>
<tr>
<td>St. Clair, Michigan</td>
</tr>
<tr>
<td>Los Alamos Scientific Laboratory</td>
</tr>
<tr>
<td>Los Alamos, New Mexico</td>
</tr>
<tr>
<td>20. Edward J. Ronay (Kornatowski)</td>
</tr>
<tr>
<td>E. I. DuPont</td>
</tr>
<tr>
<td>New York, New York</td>
</tr>
<tr>
<td>21. Alloysius M. Sebian</td>
</tr>
<tr>
<td>Diamond Alkali Company</td>
</tr>
<tr>
<td>Kearny, New Jersey</td>
</tr>
<tr>
<td>22. Thomas Shimrock Anco, Division of G. L. F.</td>
</tr>
<tr>
<td>New York, New York</td>
</tr>
<tr>
<td>23. Robert M. Kell</td>
</tr>
<tr>
<td>Battelle Memorial Inst., Col., Ohio</td>
</tr>
<tr>
<td>24. Charles M. Kincaid</td>
</tr>
<tr>
<td>American Can Co., Maywood, Illinois</td>
</tr>
<tr>
<td>25. Frank S. Kirkman</td>
</tr>
</tbody>
</table>
TENTH ANNIVERSARY (CONT'D)

26. Allan L. Sluizer
   The Herbert Kohn Co., Chicago, Ill.

27. Robert W. Stevenson

28. David G. Thomas
   Oak Ridge National Laboratory
   Oak Ridge, Tennessee

29. Raymond F. Uber
   Phillips Petroleum
   Bartlesville, Oklahoma

30. Raymond E. Wells
   E. I. du Pont de Nemours and Co.
   Toledo, Ohio

31. Marion P. Wiant
   Parke, Davis and Co., Detroit, Mich.

32. William F. Andrews
   The Nestle Co., Inc. Marysville, Ohio

33. Thomas R. Atwood
   U. S. Gypsum Co., Gypsum, Ohio

34. David G. Black
   Battelle Memorial Inst., Col., Ohio

35. John C. Cobb
   General Electric Co., Richland, Wash.

36. Leroy A. Dunham
   Devoe Reynolds Paint Co.
   Louisville, Ky.

37. Harold E. Fife
   Drackett Co., Cincinnati, Ohio

38. Roe Hawkey
   Lubrizol Corp., Euclid, Ohio

39. William J. Kalmbach
   Glass Technologist, Kimble Glass Co.
   Toledo, Ohio

40. Paul H. Lenhart
    Standard Oil and Gas Co.
    Ellinwood, Kansas

41. Myron E. Merry
    O. H. Pickenpaugh, Caldwell, Ohio

42. Richard W. Parkinson
    Ass't. Prof. Engr. Drawing OSU
    Columbus 10, Ohio

43. Ernest W. Paskell
    Battelle Memorial Inst., Col., Ohio

44. Roy F. Quinn
    Diamond Crystal-Colonial Salt.
    St. Clair, Michigan

45. Jorge F. Rosenthal
    Fabrica De Productos Delta
    Lima, Peru

46. Robert M. Rownd
    Dow Corning Corp., Midland, Michigan

47. Donald F. Stauffer
    Hercules Powder Co., Wilmington, Del.

48. Doran E. Swartzmiller
    DuPont, Sabine River Works
    Orange, Texas

49. Luis E. Talisa
    Case de Cambio Espanola
    Bodegones 340, Lima, Peru

50. Robert Babich
    Marion Iron and Metal Co., Pres.
    Marion, Ohio

51. Dallas D. Dupre
    Columbia-Southern Chemical Corp.
    Barberton, Ohio

52. Dennis D. Foley
    Battelle Memorial Inst., Col., Ohio

53. Myron Kratzer
    Atomic Energy Commission
    Washington 25, D. C.

54. L. J. Paoloetti
    O. M. Scott and Sons Co.
    Marysville, Ohio

55. Leroy P. Streett
    North American Aviation, Col., Ohio

56. Samuel R. Thrush
    Dover Chemical Corp., Dover, Ohio

57. Charles F. Price
    Union Oil Co. of California
    Wilmington, California
FIFTH ANNIVERSARY
Class of 1952

Doctor of Philosophy

1. Robert H. Hill
   Monsanto Chemical Co., Nitro, W.Va.

2. Ralph E. Morningstar
   Olin-Mathieson Chem. Corp.
   Niagara Falls, New York

3. Carl John Setzer, Jr.
   Chemstrand Corp., Decatur, Alabama

Master of Science

1. William Hueller
   Battelle Memorial Inst., Col., Ohio

2. Alan H. Smith
   Univ. of Calif., Radiation Lab.
   Livermore, California

3. Seward Bazler
   General Electric Co., Coshocton, Ohio

4. Allan Heidenreich
   Diamond Alkali Co., Cleveland, Ohio

5. Geoffrey Snelling
   DuPont, Polychemicals, Wilmington, Del.

6. Richard Sudak
   General Electric Co., Hanford, Wash.

7. Richard Hang
   Assistant Prof., Eng. Drawing OSU
   Columbus, Ohio

8. Roy Choudhury
   Graduate Work

   COMBINED B.Ch.E. and M.Sc.

1. M. O. Abdullah
   Office of Admission, Univ. South. Cal.
   Los Angeles 7, Calif.

2. James Froning
   Procter and Gamble Co., Iowa City, Iowa

3. Vance Koerner
   Union Oil Co. of California
   Wilmington, Calif.

4. Jack Ramsthaler

5. Alfred Kusciili
   Standard Oil of Indiana,
   Wood River, Ill.

6. Carl Schlea
   DuPont, Explosive Div., Savannah
   River Plant, Augusta, Georgia

7. Charles Schmitz
   Standard Oil of Indiana
   Chicago, Illinois

8. David Stephan
   U.S. Public Health Service
   Cincinnati 26, Ohio

9. Clark Temple
   DuPont, Savanna River Project
   Aiken, So. Carolina

10. Philip Walden
    Union Carbide and Carbon Corp.
    Charleston, West Va.

11. Harvey Vogt
    Columbia-Southern Chem. Corp.
    Corpus Christi, Texas

Bachelors of Chemical Engineering

1. Clayton Fetter (no information)

2. Hamid Al-Ahmad
   Industry in Iraq

3. Robert Aldrich
   Columbia-Southern Chem. Co.
   Barberton, Ohio

4. Bill Bottenfield
   Mead Corp., Chillicothe, Ohio

5. Ed Bonsalv
   Dow Corning, Midland Michigan

6. Medro Brodeur
   American Bitumuls and Asphalt Co.
   Howell, Mich.

7. John Cheney
   Wyandotte Chemical Corp., Wyandotte,
   Michigan

8. Ramon DeCenzo
   General Elec. Co., Coshocton, Ohio
<table>
<thead>
<tr>
<th>No.</th>
<th>Name</th>
<th>Company and Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td>Donald Farrar</td>
<td>Battelle Memorial Inst., Columbus, Ohio</td>
</tr>
<tr>
<td>11</td>
<td>William Glancy</td>
<td>General Elec. Co., Coshocton, Ohio</td>
</tr>
<tr>
<td>12</td>
<td>James Gough</td>
<td>222 West 6th, Port Clinton, Ohio</td>
</tr>
<tr>
<td>14</td>
<td>Paul Hatfield</td>
<td>Koppers Co., Inc., Monaco, Pa.</td>
</tr>
<tr>
<td>15</td>
<td>Donald Haupt</td>
<td>Shell Chem. Co., N.Y., N.Y.</td>
</tr>
<tr>
<td>16</td>
<td>Richard Hazelton</td>
<td>Shell Chemical Co., Long Beach, Calif.</td>
</tr>
<tr>
<td>17</td>
<td>C. Richard Heil</td>
<td>c/o Charles Hill, Sorg Paper Co., Middletown, Ohio</td>
</tr>
<tr>
<td>18</td>
<td>Dwight Jeffrey</td>
<td>General Tire and Rubber Co., Akron, Ohio</td>
</tr>
<tr>
<td>19</td>
<td>William Kaiser</td>
<td>General Tire and Rubber Co., Akron, Ohio</td>
</tr>
<tr>
<td>20</td>
<td>Eldon McCue</td>
<td>Union Bag and Paper Company, Savannah, Georgia</td>
</tr>
<tr>
<td>22</td>
<td>Steven Orfanedes</td>
<td>The Criscom-Russell Co., Massillon, Ohio</td>
</tr>
<tr>
<td>23</td>
<td>John Palkovic</td>
<td>B.F. Goodrich Chem. Co., Louisville, Kentucky</td>
</tr>
<tr>
<td>24</td>
<td>Leland Patterson</td>
<td>Shell Oil Co., Houston, Texas</td>
</tr>
<tr>
<td>25</td>
<td>Elmer Pendleton</td>
<td>Dow Chemical Co., Freeport, Texas</td>
</tr>
<tr>
<td>26</td>
<td>Frank Rummel</td>
<td>E.I. duPont Co., Electrochemicals Dept., Niagara Falls, N.Y.</td>
</tr>
<tr>
<td>29</td>
<td>Paul Sieving</td>
<td>Columbia Southern Chem. Corp., Barberton, Ohio</td>
</tr>
<tr>
<td>30</td>
<td>Gordon Taylor</td>
<td>Union Carbide and Carbon Corp., National Carbon Company, Clev., Ohio</td>
</tr>
<tr>
<td>31</td>
<td>Fred Vandaveer</td>
<td>Taylor Instrument Co., Rochester, N.Y.</td>
</tr>
<tr>
<td>32</td>
<td>George Zeiters</td>
<td>Taylor Instrument Co., Rochester, N.Y.</td>
</tr>
<tr>
<td>33</td>
<td>Farjallah Zind</td>
<td>National Carbon Co., Cleveland, O.</td>
</tr>
<tr>
<td>34</td>
<td>Wilbur Knapp</td>
<td>Babcock and Wilcox Co., Alliance, Ohio</td>
</tr>
<tr>
<td>35</td>
<td>Paul Schramm</td>
<td>USS Mackenzie DD-836 c/o FPO, San Francisco, California</td>
</tr>
<tr>
<td>36</td>
<td>Gary Higinbotham</td>
<td>O.M. Scott and Sons, Marysville, Ohio</td>
</tr>
<tr>
<td>37</td>
<td>Jerry R. Baker</td>
<td>DuPont, Barksdale Works, Barksdale, Wisconsin</td>
</tr>
<tr>
<td>38</td>
<td>Donald Vincent Cosgrave</td>
<td>Resistance Weldes Corp., Bay City, Michigan</td>
</tr>
<tr>
<td>39</td>
<td>Richard A. Slyker</td>
<td>Shell Chemical Corporation, Deer Park, Texas</td>
</tr>
</tbody>
</table>
## DEPARTMENT OF CHEMICAL ENGINEERING

### LIST OF STAFF MEMBERS, FELLOWS, SCHOLARSHIPS, AND RESEARCH FOUNDATION STAFF

**1956 - 1957**

### I. PROFESSORS
1. Joseph H. Koffolt (Chairman)
2. Webster B. Kay
3. Aldrich Syverson
4. L. Kermit Herndon (Part-time - R.F.)

### II. ASSOCIATE PROFESSORS
1. Thomas H. Kerr (Emeritus)
2. Peter O. Krumin (Research)
3. Christie J. Geankoplis
4. Charles E. Dryden
5. Edwin E. Smith

### III. ASSISTANT PROFESSOR
1. Waldron D. Sheets

### IV. LECTURER
1. Robert M. Christiansen

### V. DUPONT POST GRADUATE TEACHING ASSISTANTSHIP
1. Edward J. Freeh

### VI. INSTRUCTORS
1. Lawrence Jordan
2. Lillian L. Golub

### VII. ASSISTANT
1. John Weisel

### VIII. GRADUATE ASSISTANTS
1. Glenn F. Leverett
2. William F. Taylor
3. William J. Asher
4. Sung Ho Hong
5. Lloyd Jones
6. Wolf Vieth

### IX. STUDENT ASSISTANT
1. Phillip Gifford

### X. SECRETARY
1. Jean Ody

### XI. STENOGRAPHERS
1. Carolyn Bennett
2. Sally S. Millard

### XII. MECILNTIC
1. Keldon Latham

### XIII. FELLOWSHIPS
1. American Cyanamid-R. Yarrington
2. General Electric Fellowship in Mass Transfer-Arthur W. Liles
3. Linde Air Products-D.P. Macarus
5. Proctor and Gamble-Galen A. Grimma
6. Shell Oil - William A. Seaton
7. A.C.S., Petroleum Research - James McMicking
8. University - Robert C. Green

### XIV. SCHOLARSHIPS - UNDERGRADUATE
1. Dow Chemical Co. - Roger W. Cox and Robert D. Throckmorton
2. G. E. Ed. and Charitable Fund - Ronald P. Rowand
3. Lubrizol - Allen J. Raymond
4. Sohio - Allan E. Jones
5. National Carbon - Jon D. Helms
6. Cincinnati Milling Machine - Gerald Wilcox and Lawrence Steele

### XV RESEARCH ASSOCIATES-RESEARCH FOUNDATION
1. Felice Celli
2. Marion M. Derfer
3. Christoph J. Grundmann
4. Ehrenfried Kober
5. Alfred F. W. Kreutzberger
6. Gerhard J. F. Ottmann
7. Arthur C. Schulz
8. Hansjuergen A. Schroeder
9. Wilhelm A. Schnabel
10. Rudi Raetz
11. Henri Ulrich
12. Sigrid Seide

### XVI RESEARCH ASSISTANT - RESEARCH FOUNDATION
1. Joyce Coleman

### XVII. ENGINEERING EXPERIMENT STATION ASSISTANT
1. Foo-Heng Tse

### XVIII. SECRETARIES - RESEARCH FOUNDATION
1. Lieselotte Mieth
2. Helen L. Palmer
3. Jean Carpenter
<table>
<thead>
<tr>
<th>Department</th>
<th>First Year</th>
<th>Second Year</th>
<th>Third Year</th>
<th>Fourth Year</th>
<th>Fifth Year</th>
<th>Total LS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aeronautical</td>
<td>91</td>
<td>67</td>
<td>49</td>
<td>25</td>
<td>17</td>
<td>260</td>
</tr>
<tr>
<td>Agricultural</td>
<td>88</td>
<td>88</td>
<td>8</td>
<td>7</td>
<td>9</td>
<td>13</td>
</tr>
<tr>
<td>Architecture</td>
<td>53</td>
<td>62</td>
<td>34</td>
<td>28</td>
<td>25</td>
<td>202</td>
</tr>
<tr>
<td>Landscape Arch.</td>
<td>2</td>
<td>8</td>
<td>7</td>
<td>6</td>
<td>3</td>
<td>26</td>
</tr>
<tr>
<td>Ceramic</td>
<td>6</td>
<td>15</td>
<td>6</td>
<td>12</td>
<td>8</td>
<td>52</td>
</tr>
<tr>
<td>Chemical-1956</td>
<td>89</td>
<td>66</td>
<td>47</td>
<td>29</td>
<td>19</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>85</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>260</td>
</tr>
<tr>
<td></td>
<td>79</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>221</td>
</tr>
<tr>
<td></td>
<td>75</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>183</td>
</tr>
<tr>
<td></td>
<td>51</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>149</td>
</tr>
<tr>
<td></td>
<td>39</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>172</td>
</tr>
<tr>
<td></td>
<td>29</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>211</td>
</tr>
<tr>
<td>Civil</td>
<td>57</td>
<td>61</td>
<td>55</td>
<td>25</td>
<td>37</td>
<td>250</td>
</tr>
<tr>
<td>Electrical</td>
<td>180</td>
<td>206</td>
<td>147</td>
<td>64</td>
<td>52</td>
<td>649</td>
</tr>
<tr>
<td>Industrial</td>
<td>21</td>
<td>52</td>
<td>56</td>
<td>45</td>
<td>46</td>
<td>221</td>
</tr>
<tr>
<td>Mechanical</td>
<td>137</td>
<td>121</td>
<td>154</td>
<td>78</td>
<td>60</td>
<td>554</td>
</tr>
<tr>
<td>Metallurgical</td>
<td>12</td>
<td>22</td>
<td>17</td>
<td>21</td>
<td>15</td>
<td>90</td>
</tr>
<tr>
<td>Mining</td>
<td>8</td>
<td>10</td>
<td>1</td>
<td>4</td>
<td>2</td>
<td>27</td>
</tr>
<tr>
<td>Petroleum</td>
<td>3</td>
<td>9</td>
<td>7</td>
<td>5</td>
<td>7</td>
<td>33</td>
</tr>
<tr>
<td>Engr. Physics</td>
<td>15</td>
<td>23</td>
<td>22</td>
<td>2</td>
<td>2</td>
<td>70</td>
</tr>
<tr>
<td>Welding</td>
<td>3</td>
<td>9</td>
<td>10</td>
<td>4</td>
<td>5</td>
<td>31</td>
</tr>
<tr>
<td>Undecided</td>
<td>419</td>
<td>34</td>
<td></td>
<td></td>
<td></td>
<td>453</td>
</tr>
<tr>
<td><strong>Total LS (1956)</strong></td>
<td><strong>1096</strong></td>
<td><strong>765</strong></td>
<td><strong>612</strong></td>
<td><strong>352</strong></td>
<td><strong>307</strong></td>
<td><strong>3191</strong></td>
</tr>
<tr>
<td>Irregular</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>16</td>
<td>16</td>
</tr>
<tr>
<td>Special</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>15</td>
<td>15</td>
</tr>
<tr>
<td>Transient</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>289</td>
</tr>
<tr>
<td>Twilight</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Grand Total (1956)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td><strong>3511</strong></td>
</tr>
</tbody>
</table>

*Combined Program
## PLACEMENT OF CHEMICAL ENGINEERS, 1956-1957

April 15, 1957

### BACHELOR OF CHEMICAL ENGINEERING

#### SPRING - 1956

1. Berzins, John, Firestone Synthetic Rubber Co., Akron, Ohio
3. Hazelton, James, American Cyanamid, Bound Brook, New Jersey
4. Jordan, Lawrence, Ohio State University, Ph.D.; Instructor
5. Linder, Paul, National Carbon Co., Fostoria, Ohio
7. Story, Richard, Battelle Memorial Institute, Columbus, Ohio

### SUMMER - 1956

1. Alexander, Paul, Naval Ordnance Test Station, China Lake, California

### AUTUMN - 1956 - NONE

### WINTER - 1957 - NONE

#### SPRING - 1957

2. Bak, Eugene, Diamond Alkali Co., Painesville, Ohio
5. Flack, Walter, Columbia-Southern (Cement), Zanesville, Ohio
7. McClellan, Melvin, U.C.C. (Electrochem Division), Niagara Falls, N. Y.
8. Raymond, Allen, Lubrizol Corporation, Cleveland, Ohio
10. Wise, James, National Carbon Company, Fostoria, Ohio

### SUMMER - 1957

1. Ingersoll, R. Grant,
2. Kienholz, Paul, Archer-Daniels-Midland, Minneapolis, Minn.
3. Winkle, Thomas, Monsanto Chemical Co., Texas City, Texas (Plastics Div.)

### AUTUMN - 1957 (Expected)

1. Scharf, Marcus, Columbia-Southern Chem. Corp., Barberton, Ohio

### COMBINED PROGRAM, B.Ch.E. and M.Sc. Degrees

#### SPRING-SUMMER - 1956

3. Cody, Robert, Procter and Gamble Co., Cincinnati, Ohio
5. First, James, Columbia-Southern Chem. Corp., Barberton, O. (cum laude)
6. Golden, Charles, Dow Chemical Co., Freeport, Texas (cum laude)
7. Haering, Edwin R., U.S. Navy; then Monsanto Chemical Co., St. Louis, Mo. (cum laude)
PLACEMENT OF CHEMICAL ENGINEERS, 1956-1957

COMBINED PROGRAM, B.Ch.E. and M.Sc. Degrees (Cont'd.)

SPRING-SUMMER - 1957

1. Cox, Roger
2. Fondy, Philip
3. Helms, Jon, Sun Oil Company, Toledo, Ohio
5. Kullavanijaya, Phasook (Going on for Ph.D.)
8. Truex, Gary, Sinclair Refining Co., Harvey, Illinois

MASTER OF SCIENCE

WINTER - 1956

1. Loch, Luther, Battelle Memorial Institute, Columbus, Ohio
2. Yarrington, Robert (Working towards Ph.D.)

SPRING - 1956

2. Oubre, Robert, Dow Chemical Company, Freeport, Texas

SUMMER - 1956

1. Fanning, Herbert, E. I. duPont de Nemours and Co., Circleville, O. (Mylar)
4. Oubre, Carroll, E. I. duPont de Nemours and Co., Orange, Texas

AUTUMN - 1956

1. Gordon, John
2. Weisel, John, B. F. Goodrich Chemical Co., Akron, Ohio

WINTER - 1957

1. Jordan, Larry (Going on for Ph.D.)
2. Macarus, David (Going on for Ph.D.)
3. Ody, Richard, Battelle Memorial Institute, Columbus, Ohio
4. Savage, Hugh (Unknown)

SPRING - 1957

1. Green, Robert, Esso Research and Engineering Co., Linden, New Jersey
2. Hong, Sung Ho (Going on for Ph.D.)

SUMMER - 1957 (Expected)

1. Leverett, Glenn (Going on for Ph.D.)
PLACEMENT OF CHEMICAL ENGINEERS, 1956-1957

DOCTOR OF PHILOSOPHY

WINTER - 1956
1. Marshall, Charles, Dow Chemical Company, Midland, Michigan

SPRING - 1956
1. Strang, David, Procter and Gamble Company, Cincinnati, Ohio

SUMMER - 1956 - NONE

AUTUMN - 1956
1. Fitz, Richard, California Research Corporation, Richmond, California
2. Sanghvi, Manoj, Standard Oil Company of Indiana, Whiting, Indiana

WINTER - 1957
1. Sashihara, Thomas, E. I. duPont de Nemours and Co., Wilmington, Del. (Polychemicals Division)
2. Scharf, Edward, American Cyanamid Company, Bound Brook, New Jersey

SPRING - 1957 - NONE

SUMMER - 1957 - NONE

AUTUMN - 1957 (Expected)
1. Bellinger, Edward
2. Celeb, Lilian
3. Yarrington, Robert, American Cyanamid Company, Bound Brook, New Jersey
THE GLIDDEN COMPANY LECTURE IN CHEMICAL ENGINEERING

"SPRAY DRYING"

By

W. R. MARSHALL, JR.

Assoc. Dean and Assoc. Director, Engineering Experimental Station
University of Wisconsin, Madison, Wisconsin

Lecture No. 1 - Thursday, May 16, 1957 - 4:00 P.M. Room 154,
Lecture No. 2 - Thursday, May 16, 1957 - 7:30 P.M.
McPherson Chemical Laboratories
Chemical Engineering Department

A CORDIAL INVITATION IS EXTENDED TO ALL INTERESTED TO ATTEND THESE LECTURES.

ABSTRACTS OF LECTURES

Lecture No. 1

A discussion is presented of the heat and mass transfer relationships during the evaporation of single drops. The problem of evaporating pure liquid drops and droplets containing solids will be presented. Motion pictures will be shown to demonstrate the mechanism of the formation of solid particles during the drying process. The usual heat and mass transfer concepts at moderate temperatures is extended to very high temperatures.

Lecture No. 2

This lecture will be concerned with the problem of evaporation of sprays in which the problem of particle size distribution and its effect on the overall evaporation is considered. In addition, consideration will be given to the problem of air flow in spray dryers, with specific reference to vortex flow patterns and the factors affecting them.

Biographical Sketch of W.R. Marshall, Jr.

College of Engineering, University of Wisconsin

Professor Marshall was born in Calgary, Alberta, Canada, in 1916 and received a B.S. in Chemical Engineering from Armour Institute (Ill. Inst. Tech.) in 1938 and a Ph.D. from the University of Wisconsin in 1941. He was employed by E. I. du Pont de Nemours and Co., Inc. at their experimental station in Wilmington, Del., from 1941 through 1947.

In December 1947, he returned to the University of Wisconsin as Associate Professor in Chemical Engineering (he was appointed Professor in 1953) to conduct graduate research and graduate courses. In 1953 he became Associate Dean of the College of Engineering and Associate Director of the Engineering Experiment Station. He is also a consultant to industry. His principal field of research is drying, heat and mass transfer, and related topics.

At the 1940 Annual Meeting of the American Institute of Chemical Engineers, he was honored jointly with Dr. J. A. Gerster, of the University of Delaware, for the best presentations of technical papers. In December, 1952, Dr. Marshall presented the fourth Annual Lecture of the American Institute of Chemical Engineers. The subject was Spray Drying and Atomization.

In 1953 he was awarded the William H. Walker Award of the American Institute of Chemical Engineers for meritorious contribution to the Chemical Engineering Literature. He was elected a director of the American Institute of Chemical Engineers for 1956-58.

Professor Marshall is co-author with Dr. R.L. Pigford, of a text illustrating the applications of differential equations to chemical engineering problems. He is an author of the Drying Section in the Chemical Engineers' Handbook edited by J.H. Perry. In addition he has authored and co-authored over 30 papers on researches in chemical engineering.

He is a member of the American Institute of Chemical Engineers, American Chemical Society, American Society of Engineering Education and Sigma Xi.
<table>
<thead>
<tr>
<th>June Date</th>
<th>Years Since Graduation</th>
<th>(1) Monthly Salary ($ Per Month)</th>
<th>Average Value of Experience at OSU</th>
</tr>
</thead>
<tbody>
<tr>
<td>1952</td>
<td>0</td>
<td>Min. 310, Max. 415, Average 360</td>
<td></td>
</tr>
<tr>
<td>1953</td>
<td>1</td>
<td>Min. 350, Max. 435, Average 390</td>
<td>446</td>
</tr>
<tr>
<td>1954</td>
<td>2</td>
<td>Min. 400, Max. 500, Average 450</td>
<td>476</td>
</tr>
<tr>
<td>1955</td>
<td>3</td>
<td>Min. 440, Max. 546, Average 490</td>
<td>527</td>
</tr>
<tr>
<td>1956</td>
<td>4</td>
<td>Min. 520, Max. 620, Average 550</td>
<td>560</td>
</tr>
<tr>
<td>1957</td>
<td>5</td>
<td>Min. 535, Max. 740, Average 650</td>
<td>592</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>(BS Only -- 18 Reporting, includes 6 Supervisors)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1952 0</td>
</tr>
<tr>
<td>1953 1</td>
</tr>
<tr>
<td>1954 2</td>
</tr>
<tr>
<td>1955 3</td>
</tr>
<tr>
<td>1956 4</td>
</tr>
<tr>
<td>1957 5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>(BS &amp; MS -- 4 Reporting, includes 2 Supervisors)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1954 0</td>
</tr>
<tr>
<td>1955 1</td>
</tr>
<tr>
<td>1956 2</td>
</tr>
<tr>
<td>1957 3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>(PH.D. -- 3 Reporting, no Supervisors)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1954 0</td>
</tr>
<tr>
<td>1955 1</td>
</tr>
<tr>
<td>1956 2</td>
</tr>
<tr>
<td>1957 3</td>
</tr>
</tbody>
</table>

Notes:
(1) Salaries reported while in Service not included.
(2) Based on average salaries paid to experienced engineer employees in 1956 as reported by The U. S. News and World Report of January 4, 1957.
### Table II

AVERAGE TOTAL DOLLARS EARNED SINCE BS DEGREE

<table>
<thead>
<tr>
<th>June Date</th>
<th>1953</th>
<th>1954</th>
<th>1955</th>
<th>1956</th>
<th>1957</th>
<th>Projected 1962</th>
</tr>
</thead>
<tbody>
<tr>
<td>PH.D. (3 Reporting)</td>
<td>0</td>
<td>0</td>
<td>6,900</td>
<td>14,700</td>
<td>23,500</td>
<td>75,000</td>
</tr>
<tr>
<td>E.S. &amp; E.S. (4 Reporting)</td>
<td>5,000</td>
<td>10,500</td>
<td>16,200</td>
<td>23,000</td>
<td>31,500</td>
<td>81,300</td>
</tr>
<tr>
<td>B.S. (18 Reporting)</td>
<td>4,500</td>
<td>9,900</td>
<td>15,800</td>
<td>22,400</td>
<td>30,200</td>
<td>74,600</td>
</tr>
</tbody>
</table>

### Table III

AVERAGE MONTHLY SALARIES FOR B.S. DEGREE CONSIDERED IN TERMS OF STARTING SALARY

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>310-330 (5 Reporting)</td>
<td>340</td>
<td>440</td>
<td>490</td>
<td>560</td>
<td>645</td>
</tr>
<tr>
<td>330-375 (8 Reporting)</td>
<td>370</td>
<td>440</td>
<td>490</td>
<td>555</td>
<td>660</td>
</tr>
<tr>
<td>375-415 (5 Reporting)</td>
<td>415</td>
<td>460</td>
<td>480</td>
<td>540</td>
<td>635</td>
</tr>
</tbody>
</table>

AER/ecm
10-10-57
# TABLE I

**TABULATION OF MONTHLY SALARIES SINCE GRADUATION**

<table>
<thead>
<tr>
<th>June Date</th>
<th>Years Since Graduation</th>
<th>Min.</th>
<th>Max.</th>
<th>Average</th>
<th>(2) Value of Experience</th>
<th>Average at OSU</th>
</tr>
</thead>
<tbody>
<tr>
<td>1952</td>
<td>0</td>
<td>310</td>
<td>415</td>
<td>360</td>
<td>446</td>
<td></td>
</tr>
<tr>
<td>1953</td>
<td>1</td>
<td>350</td>
<td>435</td>
<td>390</td>
<td>476</td>
<td></td>
</tr>
<tr>
<td>1954</td>
<td>2</td>
<td>400</td>
<td>500</td>
<td>450</td>
<td>527</td>
<td></td>
</tr>
<tr>
<td>1955</td>
<td>3</td>
<td>440</td>
<td>546</td>
<td>490</td>
<td>560</td>
<td>435</td>
</tr>
<tr>
<td>1956</td>
<td>4</td>
<td>520</td>
<td>620</td>
<td>550</td>
<td>592</td>
<td></td>
</tr>
<tr>
<td>1957</td>
<td>5</td>
<td>535</td>
<td>740</td>
<td>650</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(ES Only - 18 Reporting, includes 6 Supervisors)

| 1952      | 0                      | 394  | 402  | 400     |                          |                 |
| 1953      | 1                      | 404  | 454  | 425     |                          |                 |
| 1954      | 2                      | 435  | 475  | 460     |                          |                 |
| 1955      | 3                      | 470  | 525  | 475     |                          |                 |
| 1956      | 4                      | 500  | 675  | 570     |                          | 470            |
| 1957      | 5                      | 625  | 866  | 710     |                          |                 |

(BS & MS - 4 Reporting, includes 2 Supervisors)

| 1954      | 0                      | 551  | 562  | 555     |                          |                 |
| 1955      | 1                      | 592  | 600  | 595     |                          |                 |
| 1956      | 2                      | 650  | 651  | 650     |                          | 640            |
| 1957      | 3                      | 690  | 731  | 715     |                          |                 |

(TH.D. - 3 Reporting, no Supervisors)

Notes - (1) Salaries reported while in Service not included.
(2) Based on average salaries paid to experienced engineer employees in 1956 as reported by The U.S. News and World Report of January 4, 1957.
### TABLE II
AVERAGE TOTAL DOLLARS EARNED SINCE BS DEGREE

<table>
<thead>
<tr>
<th>June Date:</th>
<th>1953</th>
<th>1954</th>
<th>1955</th>
<th>1956</th>
<th>1957</th>
<th>Projected 1962</th>
</tr>
</thead>
<tbody>
<tr>
<td>PH.D. (3 Reporting)</td>
<td>0</td>
<td>0</td>
<td>6,900</td>
<td>14,700</td>
<td>23,500</td>
<td>75,000</td>
</tr>
<tr>
<td>B.S. &amp; I.S. (4 Reporting)</td>
<td>5,000</td>
<td>10,500</td>
<td>16,200</td>
<td>23,000</td>
<td>31,500</td>
<td>81,300</td>
</tr>
<tr>
<td>B. S. (18 Reporting)</td>
<td>4,500</td>
<td>9,900</td>
<td>15,800</td>
<td>22,400</td>
<td>30,200</td>
<td>74,600</td>
</tr>
</tbody>
</table>

### TABLE III
AVERAGE MONTHLY SALARIES FOR B. S. DEGREE

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>310-330 (5 Reporting)</td>
<td>340</td>
<td>440</td>
<td>490</td>
<td>560</td>
<td>645</td>
</tr>
<tr>
<td>330-375 (8 Reporting)</td>
<td>370</td>
<td>440</td>
<td>490</td>
<td>555</td>
<td>660</td>
</tr>
<tr>
<td>375-415 (5 Reporting)</td>
<td>415</td>
<td>460</td>
<td>480</td>
<td>540</td>
<td>635</td>
</tr>
</tbody>
</table>