CLAYTON L. NAIRNE
President,
New Orleans Public Service, Inc.

Will Be the Featured Speaker
At the Annual Meeting

A native New Orleanian, Clayton L. Nairne received his early education at Rugby Academy and was graduated from Tulane University in 1924 with a bachelor of engineering degree. While at the University, he became a member of Sigma Chi fraternity. In later years he was elected to membership in Tau Beta Pi, national honorary engineering fraternity, and Omicron Delta Kappa, national honorary leadership fraternity.

Immediately following his graduation, he joined New Orleans Public Service Inc. as a student engineer, and remained with the company until December 1925, when he left to become a betterment engineer in the Fort Lauderdale Power Plant of the Florida Power & Light Company. Three years later he returned to Public Service as a draftsman and combustion engineer in the Gas Department. In this department he became, successively, assistant chief engineer, superintendent of distribution and, finally, general superintendent.

In 1943 he was named assistant to the vice-president in charge of operations and in 1951 became general superintendent of operations, charged with the responsibility of directing the operations of the Electric, Gas, Transit and Safety departments. On May 28, 1953, he was elected vice-president, and assumed the direction of the Claim and Medical Departments in addition to his operating responsibilities. He was elected executive vice-president on May 20, 1959, and president on August 27, 1962.


He has served as president of the Louisiana Engineering Society, the Tulane Alumni Association, Community Chest, Valencia Club, and the Board of Trustees of Louise McGehee School. He is currently president of the Southern Gas Association and a director of the Chamber of Commerce of the New Orleans Area. He was chairman of the 1950 Community Chest and 1957 United Fund campaigns. He is currently chairman of the Tulane University Associates program, a fund-raising activity of the university’s development council.

Among his other active interests have been the Sara Mayo Hospital, (Continued on Page 4)
THE TULANE ENGINEER
Published by the Society of Tulane Engineers whose officers are:
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OCTOBER 1962

THE SOCIETY OF TULANE ENGINEERS

Dues $2.00 per year

The aims and purposes of this organization are as follows:
1. To keep members of this organization informed of the progress, activities and needs of the School of Engineering.
2. To provide closer contact between former students and faculty by providing information about their whereabouts and activities.
3. To provide employment placement service for prospective graduates and members.
4. To provide a means of raising funds for specific equipment and services.
5. To provide an advisory group whose purpose it is to recommend improvements in curriculum, instruction and classroom procedure.

ROTTY PUBLISHES BOOK ON GAS DYNAMICS

A textbook, Introduction to Gas Dynamics, written by Dr. Ralph M. Rotty, Head of Department of Mechanical Engineering, was published by Wiley in May 1962. Dr. Rotty's book is the result of number of years of experience in teaching and research in the field of gas dynamics and thermodynamics. He also served as co-editor of the proceedings of the 1951 Summer School for Thermodynamics Teachers at Michigan State University.

Dr. Rotty's book reflects the latest thinking in engineering education and presents the subject with continual emphasis on design. Not only does he present fundamental principles carefully and precisely but he constantly tries "to make the student understand the physical pattern so that he may recognize how the principle can be applied to future design.

In addition to his simplified and

SOCIETY OF TULANE ENGINEERS
FINANCIAL STATEMENT
November 15, 1961 through September 30, 1962

REGULAR OPERATING FUNDS

Receipts —
Cash on hand Nov. 15, 1961.......................... $174.33
Dues collected 11-1 thru 9-30.................... 512.00
Collected for Directory.......................... 27.00
Miscellaneous contributions.................. 15.00
Refund on postage................................. 22.00

$ 750.33

Disbursements —
Engineers Club—Participating Society Dues........ $12.00
U. S. Post Office — Bulk Mail Fee.............. 97.00
Senior Luncheon................................ 175.10
Addressograph Service........................... 38.20
Printing costs................................... 316.52
James M. Robert Award.......................... 50.00
Banking charges.................................. 7.60

716.42

Cash on Hand 9-30-62.............................. 33.91
Credit — Prepaid postage......................... 50.34

Net Operating Funds 9-30-62........................ 94.25

JAMES M. ROBERT LEADERSHIP AWARD FUND
Balance on hand 11-15-61........................ 1,201.23
Dividends — 12-31-61............................... 24.02
6-30-62........................................ 27.56

51.58

Net Balance 9-30-62................................ 1,252.81

BRUCE RETURNS TO CIVIL ENGINEERING

Dr. Robert N. Bruce, Jr., returns to Tulane as Associate Professor of Civil Engineering after an absence of nine years. He was formerly an instructor of civil engineering and was co-designer of the Donald Derickson experimental research frame which has been extensively used for prestressed concrete research at Tulane. Dr. Bruce received the Bachelor of Science in Engineering and the Master of Science degrees from Tulane and the Ph.D. in Civil Engineering from the University of Illinois.

He spent two years with Farnsworth and Chambers, Inc., after leaving Tulane and six years with Raymond International Inc. He was given a leave of absence during one year with Raymond to accept a Fulbright Scholarship for graduate study in prestressed concrete at the University of Ghent in Belgium.

He was manager of prestressed concrete work for the Gulf of Mexico area for Raymond for several years and has published a number of papers on prestressed concrete structures in the South and in the Gulf of Mexico.

unified presentation, he includes some new functions which have been tabulated and published for the first time.

COUNSELING FOR ENGINEERING FRESHMAN

A new plan to give each entering freshman student a personal counselor and friend on the faculty was instituted this past September. Nine faculty members were appointed as freshmen counselors and the freshman class divided more or less evenly among them.

Incoming freshmen were written a letter advising them of this plan and naming their particular counselor or in advance of the opening of the fall semester.

Each counselor met briefly with his group of freshmen immediately following the general engineering freshman assembly preceding registration to become acquainted with them and to show them the location of his office. In subsequent meetings, each counselor has informed his group of students concerning the rules and regulations of the School of Engineering, and given personal advice on keeping up with studies and on particular problems of each individual.

It is hoped that establishing an intimate faculty-student relationship at once will overcome the timidity of freshmen in approaching their instructors, keep many students from otherwise failing courses, and reduce the attrition among engineering students.
Mechanical Engineering
At Tulane

A graduate of a few years ago would scarcely recognize Tulane's Mechanical Engineering Department. In the dynamic world of today it seems evident that the education of engineers must be continually changing. This principle of necessity for change has led to many new developments in the past three or so years. The three basic areas of education have experienced changes as follows:

a) Curriculum Changes — The import of the space age has become evident in the companies recruiting young engineers from the Tulane campus. The fraction of our Mechanical Engineering graduates who accept employment in the aircraft, missile, and armament industry has increased steadily even before the announcement of the NASA Saturn project venture in New Orleans. With our graduates entering an ever broadening spectrum of professional activities, it has become necessary to provide a more general educational experience.

As an example of the type of change which has occurred, consider the background of an engineer who is charged with the design of a large boiler. A decade (or a little more) ago we offered courses in power plant design, steam turbines, and fuels and lubricants. With this, plus on-the-job training under the supervision of an experienced engineer, some Mechanical Engineering graduates have developed into skilled boiler designers. The newer educational procedures do not eliminate the need for the on-the-job portion of the preparation of a professional engineer, but would include course material in the areas of basic thermodynamics, heat transfer, fluids, mechanics, and combustion. Certainly a thorough understanding of principles in these areas is most necessary to the design of any new boiler, but they happen to be just as necessary in the design of the newest rockets and missiles.

Gone from the curriculum are the manual arts or "shop" courses. Since an engineer is seldom called upon to make his own parts for a new design, it has been felt sufficient to acquaint him with how various fabrication processes can be accomplished so that he may do design work which is realistic. Hence, courses in engineering materials and manufacturing processes have been incorporated and partially fill the gap in this phase of engineering.

In other aspects some of the courses which appear to be holdovers from earlier days merely carry the same titles but actually have been extensively re-oriented. The thermodynamics courses include more examples drawn from the area of jet propulsion and combustion and fewer from steam engine and cycle analysis. The mechanics courses are now presented based on vector mathematics.

b) Space and Equipment Changes — Perhaps the greatest change in space available to the Mechanical Engineering Department is the graduate research laboratory currently under construction. This laboratory is scheduled for completion by the end of December and will provide the much needed space for the growing research activity of the department.

Considerable change has taken place in the "steam lab." The last of the reciprocating steam engines left the laboratory during the past summer, and the low pressure steam piping which has become hazardous due to old age is being removed. We are continuing to operate steam turbine units and have installed a pressure reducing station in a high pressure line in order to supply a small, versatile turbine which allows us to teach the principles involved in steam plant operation with a maximum of safety and a minimum of floor space. Several refrigeration and air conditioning units are being installed on the sites of the older reciprocating steam equipment.

A new laboratory for basic combustion has been established in a corner of what was once the steam lab. A combustion tunnel in which a flame can be stabilized in a high speed gas stream is being installed.

In the engines laboratory the emphasis has been toward smaller engines in which the variables can be more carefully controlled and studied. Two single cylinder variable compressor gasoline engines are now available along with two small single cylinder Diesel engines. Only one prototype gasoline engine and one Diesel engine remain. It is intended that these units will provide some of the necessary experience and background of working on "real" engines.

Recent additions in this area include a Boeing 504 gas turbine which is located in a separate test cell, and a small rocket engine with gasoline as the fuel and compressed air as the oxidizer which is located in an adjoining test cell.

A small supersonic wind tunnel was built as part of a master's thesis. This was designed to give a Mach number of 2 in the test section for a period of about 30 seconds. Actual student tests show a Mach number of 1.9 for about 35 seconds.

Largely as a result of the increasing emphasis on research we are now nearing the end of the construction of a rather sizeable wind tunnel facility. This tunnel will have the test section approximately 2 ft. x 3 ft. in cross section and be about 15 ft. long. Conceived as a facility for graduate student and faculty research, it is quite evident that this tunnel will receive heavy usage in undergraduate instruction.

Both the space and equipment available for our metallurgy course has been greatly expanded in the last two years. New microscopes, furnaces, polishing and photographic equipment are now available.

Considerable equipment is now available in the area of stress analysis. A complete photoelasticity apparatus has been built and is extensively used. More and more work is done with the SR-4 type strain gage equipment as additional amplifiers, oscilloscopes, and recorders are available.

c) Faculty Changes — Although much of the change in recent years has been toward a strong graduate program, it has been adopted as a policy of the department that all faculty members will participate in undergraduate teaching and devote a sizeable amount of their time to this effort. All new faculty members are retained in part for their interest and ability in undergraduate teaching and in part for their ability to inspire graduate students and direct research. Neither is to be regarded more essential than the other.

We are confident that the future status and success of our Mechanical Engineering Department also will be based on continued change. A part of what graduate course work this year will be in the undergraduate curriculum three or four years from now. Much of the graduate research equipment and instrumentation will be the undergraduate laboratory apparatus of the not-so-distant future. Hence we anticipate a continually changing curriculum, an ever changing utilization of our equipment and space, and especially an always changing outlook or viewpoint on the part of our faculty.

Our basic plan is to be (and to remain) a dynamic academic department in the dynamic technical and professional world of today and the future. — RMR
From The Mail Bag

Donald E. Nestler, ME'45 is now associated with GE Missile and Space Vehicle Dept., Philadelphia, Pa. He makes his home in Havertown, Pa.

Nicholas A. Schillen, CE'38 is handling the sales and engineering of grain dryers for the Hess Company. His home is in Indianapolis, Ind.

Robert D. Hinson, CE'47 is doing consulting engineering for Hinson & Associates.

Matthew P. Schneider Jr., CE'50 reports that he is with the St. Joe Brick Works, Slidell, La.


Dubois J. Daniels, CE'52 is an Aircraft Senior Weight Engineer with Georgia-Lockheed Co., and makes his home in Marietta, Ga.

E. Hunter Herron Jr., ChE'59 joined the R&D Div. of Humble Oil & Refining Co., Baytown, Texas for the summer of 1962. He is working toward a Ph.D. at Tulane and returned for the fall term recently.

Ralph P. Nolan Jr., ME'42 serves as a Contracts Administrator for National Steel and Shipbuilding Co., LaJolla, Calif.

Ray Grundmeyer Jr., EE'59 at last report expected to be separated from the Air Force this summer.

Clarence G. Reuther, ChE'44 is the Executive Vice President of Reuther Seafood Co., Inc., New Orleans, La.

Walter B. Moses Jr., M&E'38, Engineering Sales Co., New Orleans, La., reports that his son is a Tulane freshman.

A. B. Davis, CE'28 is with the US Corps of Engineers, Galveston, Texas District.

R. L. Argus, M&E'33 is the Assistant Plant Manager of the Whiting, Ind. refinery, American Oil Company.

Ed. R. Grey, ChE'32 is Manager of the Sugar Creek (Missouri) Refinery of the American Oil Co.

C. J. Houlgrave, M&E'35 is the Operating Superintendent, and M. M. Norton, M&E'52 the Assistant Chief Plant Engineer for the Texas City Refinery of the American Oil Company.

R. C. Patton, ME'07, EE'09 of Providence, R.I., says we should clearly indicate that the dues for the STE are $2.00 per year... Thanks for the opportunity to get in the plug.

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Middle Initial

Year

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City

Business Address

Bus. Tel.

I am employed by:

Firm Name

News about job (type of work):

News about other jobs:

Suggestions:

NAIRNE - -

(Continued from Page 1)

New Orleans Area Council of the Boy Scouts of America, YWCA, Arthritis and Rheumatism Foundation and the Committee on Alcoholism for Greater New Orleans.

In January 1961 he received the Louisiana Engineering Society's Andrew M. Lockett Award. This award is presented annually to a Louisiana engineer "for exemplary contributions in civic affairs."

He resides at 1500 Bordeaux Street with his wife, the former Elizabeth M. Westerfield. They have two daughters, Mrs. James G. Burke, Jr. and Miss Clayton Nairne, and two grandchildren.

BARRON JOINS CHEMICAL ENGINEERING STAFF

Dr. Charles H. Barron, Jr., comes to the Department of Chemical Engineering from the University of Virginia where he earned the Doctor of Science degree in 1962. He was previously at Clemson College where he received a Bachelor of Science degree in Chemical Engineering. He was a member of Sigma Xi and Tau Beta Pi at Clemson where he also was graduated with highest honors.

TATRO APPOINTED PROFESSOR, MECHANICAL ENGINEERING

Dr. Clement A. Tatros, Professor of Mechanical Engineering comes to Tulane from Michigan State University where he taught in the Department of Applied Mechanics. He received the B.A. degree from Friends University and the M.E. and Ph.D. degrees from Purdue University. Both his undergraduate and graduate work were in the field of physics, followed by six years in applied mechanics at Michigan State. His research has included the study of crystal slip in metals, photodissertation of the deuterium, stress strain relations of metals, high energy photoproton emission, and attenuation of sound by pulse technique. His most recent work has been in the field of acoustic emission from crystalline materials. He served in U.S. Air Force from 1942 to 1949. His wife and two daughters came with him to join the Tulane family. He is a member of the American Physical Society, The Society for Experimental Stress Analysis, and Sigma Xi, and is listed in American Men of Science.