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WANTED—ENGINEERS...

As never before in the history of this civilization, the role of the engineer is beginning to assume proportions of a gigantic nature. Already, those who are involved in the study or instruction of this, the newest of professions, are commencing to feel the responsibility of the inheritance which is theirs... the problem of harnessing with an ever-increasing tempo the incomprehensible forces of the universe to the evolution of a truly constructive society of man. We must now unhesitatingly face the fact that the attempts of the leaders of the older generation in bringing about such a society have met with disastrous failure. It must, therefore, be achieved by another generation, a generation dedicated perhaps to extreme self-sacrifice in devotion to the principle of tolerance and understanding, seemingly long-forgotten by their predecessors.

The role of science in this difficult enterprise must be never-ceasing reduction of time, effort, and cost in creating the necessities and luxuries basic to life on this planet. Childish criticism of such a program has a machine age depriving men of employment through labor saving devices cannot prevail in light of total increase of employment in almost every industry where labor saving devices have been introduced. The momentary displacement of men from jobs is harrowing, but eventual reabsorption into the new avenues of employment produced by these devices provides more than an even balance.

A program of mere technical achievement for the future is, however, of itself certainly insufficient unless accompanied by inspired and constructive application. The profession of engineering involves both creation and application of scientific knowledge and it seems increasingly apparent that engineers will gradually absorb much of the responsibility for the technique of operating the new order of things. By this, we mean no such thing as technocracy; an attempt to regiment anything of a creative nature is an actual affront to it and will have no long run result other than confusion. The world of Technology must rather extend its capacity to a genuine understanding of the social, economic, and philosophical problems that confront us everywhere. And it must be an understanding of natural

growth, arising from the masses of technical people everywhere. We feel that the coordination of scientific and the aforementioned practical cultural attributes in highly trained minds, magnified beyond anything that exists today, constitutes a tremendous step in the right direction.

How is this to be accomplished? Formal technical education, to our minds, should play the largest part. Already in engineering circles there is a considerable movement for liberalizing engineering education. Massachusetts Tech, California Tech, and IIT are typical colleges in the vanguard of this movement. And as no other institution in the world, IIT with the recent merger of Armour Institute of Technology, and Lewis Institute of Arts and Sciences, is now potentially equipped with magnificent resources for turning out individuals with just such scientifically and culturally trained minds as are so sorely needed for the uncertain future. We suspect that the faculty of IIT are well aware of this. If not, may we call their attention to it? This is a service we must render. There can be no greater contribution, in our way of thinking, to the development of a far happier civilization... not just a dream, but actual fact.

This article has been, perhaps, of a too serious nature. But we have long felt the necessity of setting down some concrete, constructive plan, as we hope this is. Realizing the possibility of flaws in an argument for which there has been too little time to view in retrospect, we will be more than glad to accept opinions and interested criticism from students and faculty.

RESEARCH FOUNDATION

(This is the second of a series of articles describing the work of the Armour Research Foundation. The first article dealing with the Experimental Engineering Division, appeared last week.)

One cold winter day recently the gates of Ogden Field swung open to admit a loaded van. The van drove to the center of the field, discharged a load of prefabricated house sections and departed. Three more trucks followed suit. A bit of hammering, and there in the snow stood two small houses where second-base ought to be. Soon smoke began to curl from one house and continued to curl for days. Then one morning the houses disappeared and people shook their heads and said the whole thing was just imagined.

The little houses were part of an investigation conducted by the Chemical Engineering Division of the Armour Research Foundation to determine how well aviation gasoline could be stored in a certain type of drum proposed for use in tropical areas. One house, thoroughly insulated, contained 220 gallons of high octane gasoline in drums, together with several thermometers, pressure gauges, steam radiators and a spark-proof air circulating fan. The other contained a coal-fired steam boiler to heat the radiators. The drums were subjected to artificially controlled hot and cold weather as well as laboratory-made tropical rains. Although these weather conditions could have been produced easily in the Research Foundation's big constant-temperature room, the handling of such quantities of high-test gasoline had to be done outside and away from buildings.

The Chemical Engineering Division conducts research in the industrial applications of chemistry, development and improvement of processes and equipment, and the handling and storage of materials. Foods and fuels constitute a fair portion of the work at present. Headed by Dr. Francis W. Godwin, the staff includes Dr. Martin H. Heeren, Dr. Stanley M. Walas, Mr. Sigmund Moculeski and Mr. Lew W. Winholdt as well as Mr. E. S. Cieslak of the Lewis biology department who correlates botanical investigations with certain food processing developments.

From time to time the work of this division takes some of its staff members to distant mills, plants, coal mines and field installations. The major part of the studies, however, are conducted in four laboratories, three of which are in the main Research Building. The oldest of these, located on the first floor, is also the oldest Research Foundation laboratory. Constructed in the modern style of chemical laboratories it serves as the center of the analytical and "beaker-and-test-tube" operations inevitably associated with chemical engineering problems.

Here are located calorimetric apparatus, balances, ovens, furnaces, colloid mill and similar items. Here, also, are several automatic machines for accelerated corrosion studies, one of which carries samples repeatedly through an 87-minute weather cycle involving rain, wind, immersion and sun. Below this is a basement laboratory largely used for handling and processing solid fuels and equipped with both laboratory and semi-plant scale apparatus for sampling, crushing, pulverizing, drying, screening and treating coal and coke. One special unit determines the dustiness of fuels while another runs a scale-model aluminum truck body continuously over a mechanical "rough highway" to indicate the effects of transporting loads of solid fuels.

QUOTE & UNQUOTE

Controversy?

In regard to the question asked, "What is the controversy splitting the student body of the Illinois Institute of Technology?" I reply in kind.

Is Lewis a part of IIT? According to an article "String Quartet to Serenade Guests" which appeared in Technology News, Volume 27, Number 2, dated February 25, 1941, the junior class at Armour seems to regard the merger as a rumor. The Armour section of the junior class feels that it must canvas the U. of C., Mundelein, and Lucy Flower High School for a queen for the junior formal. As a student at Lewis, I have a faint recollection of seeing a girl or two on the campus. Maybe I was just dreaming, however. Then too, I seem to remember a rumor to the effect that there are some girls in the junior class at Lewis. But again I may be wrong. Maybe the Kappa, Lambda, and Sigma sororities are just a figment of my imagination. At least the Armour boys might have come over and let me know if these bleary old eyes are deceiving me.

In conclusion, may I ask if John Butkus, Charles Ball, Jack Thornton, John Peterson, the Steam Shoveler, and other Armour students have been dating a lot of mirages. ALL HAIL MIRAGES!

Signed,

A. Wolf.

The Co-ops Lament

We are the co-ops of Illinois Tech
 Our eyes are all baggy, our brains
 are a wreck.
 We wear horn rimmed glasses,
 Our shoulders are broke,
 If you were a co-op, you'd see it's
 no joke.
 Before we enrolled we were happy
 and spry,
 But now we lose weight like ice in
 July.
 Our friends hardly know us, we're
 sick and we're pale,
 When the prof asks a question,
 our brains ring 'no sale'.
 We never have dates, or we'd
 work for a year
 On the homework which piles up
 like dirt does down here.
 So we plead with you readers,
 don't laugh at our plight,
 As we sleep in the classrooms
 and study all night.

Philip Conway, Walter Moe
 Co-Authors
 (coo-coo Co-ops)

Paging Mr. Ripley

Believe it or not, the students at Lewis are the healthiest collegiate group in the Middle West. You don't believe it? Well, the "Proof of the pudding is in the eating," as the old adage goes. It seems that Lewis Institute is the only college in the city of Chicago that does not offer to its students some form of free clinical advice in regard to medical problems, and is the only school that does not have an M.D. on its staff.

Why must we students at Lewis be deprived of the opportunity of getting medical care? Why are we relegated into the background on such an important issue?

Is it necessary for some catastrophe to strike Lewis before a doctor is assigned to the school, or doesn't "A stitch in time save nine", mean anything? Surely the

Whose Fault?

Dear Mr. Editor:

After much deliberation and discussion with a representative group of intelligent Armour students, I have come to the conclusion that the detestable inattention and "I don't care" attitude of some students is seemingly not altogether the fault of the student body.

Of course, some students are incorrigible, but in general, I think a program of extended demonstrations would be extremely beneficial to the average student. Inasmuch as abstract ideas are very difficult for most ordinary people to understand, a complement in the form of demonstrations seems highly desirable.

How often do I hear: "Open your book to page 144 and look at figure 32". Then follows a lengthy explanation of how the steam engine indicator works. This little gadget weighs less than one pound and can easily be carried to class. Why not let the students see the actual instrument when we have so many available? Why not have a class meeting down in the laboratory in the morning, when the equipment is not being used, and why not explain those engines right then and there, instead of drawing distorted pictures on the blackboard which can only be deciphered by a genius, or a surrealist who is well acquainted with the subject?

Technical movies and the presentation of lantern-slides are desirable in that same sense.

Also, I believe that in very many subjects taught in this school, the instruction is very dry, partly because only theory is discussed. Some professors introduce the historical background connected with the subject matter, or they give humorous analogies which will help to make it "stick". Naturally every professor has his own philosophy of teaching, and it would not be right for a student to tell his professor how to teach. However, in many departments the head of the department selects the textbook. This book may be good for one type of teacher and utterly insufficient and too limited for another. So, limiting the teacher in this same sense, I feel justified in making this weak effort to induce some of our professors not to adhere to the theory too rigidly all the time. A little anecdote or the historical development of a formula should be an excellent antidote for sleepiness on the part of the students.

In conclusion, may I restate that it is my belief that the demonstrative material should be increased considerably and that the faculty should be more inclined to discuss such historical developments as we are not likely to find in our texts.

Herman Tachau.

students at Lewis are entitled to that much consideration as far as preventative medicine is concerned.

Since this is the year 1941 and not 1790, and medical clinics are here to stay, will the administration see the light and see fit to install at Lewis a medical room where Lewis students may go for medical advice and treatment? Or is it going to be necessary to wait for Gabriel to blow his horn and then Utopia will have arrived?

S. B. Cohen.