

TECHNOLOGY NEWS

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Co-operation Needed

The strength of Illinois Tech depends today upon the support of its entire student body as it has depended upon it in the past. The west campus has always seemed content to rest upon the laurels and glories of the south campus.

Recently, members of Lewis have decided that the west campus needed more representation in various school activities. The ASSC now has several Lewis members. The ITSA election held last Friday has elected an ITSA member at large to aid Viola Sievers, 2nd vice-president, in west campus representation.

Equality of the campuses is slowly being reached as several professors and instructors now have classes at Armour and Lewis. Nevertheless, the south campus has always appeared to have the driving force of its students solidly behind it. Lewis continues to fail to show the cooperative spirit of its student body up to the present time.

Last term the moves of the administration under Dean Ernest Walker at Lewis failed to have complete class union irrespective of the fact that Dr. Walker showed his interest by dismissing all classes. Class meetings were very poorly attended.

The large influx of freshmen to the campus has not made these conditions any better. The majority of this body appear somewhat startled and taken back when they are told to choose persons to represent their classes in the student government.

Several semesters ago the ITSA printed activity handbooks through which those enterprising persons who read them could find out the facts of their student government and the extra curricular activities offered them. It would be highly desirable if the ITSA would again print a limited number of these activity booklets for the benefit of the startled freshmen at both Armour and Lewis.

The sportsmen at both campuses have shown a true spirit of cooperation and friendly rivalry that might well be taken as an example by all of the student body. Only through their indicated interest and activity will Lewisites demonstrate their support of and pride in the Illinois Institute of Technology.

—J. KORN

Let's Prevent This



Research Reports—

Physical Properties of Rubber Tested Under Dynamic Loading

The United States today is a rubber-conscious nation. Even aside from the shortage of rubber which has forcibly brought the importance of this substance to the attention of every motorist, there are the many industrial uses for which it is of vital importance.

However, the intelligent use of rubber depends upon a good knowledge of its physical properties. Prof. Charles O. Harris of the mechanics department, has been interested in obtaining some information of this sort and research along these lines has been carried on by the mechanics department.

The object of the research is to determine certain physical properties of rubber compounds under dynamic loading. These properties are: 1) Modulus of elasticity, 2) Internal damping, and 3) Temperature changes. The work has been carried on in a laboratory in the basement of Chapin Hall.

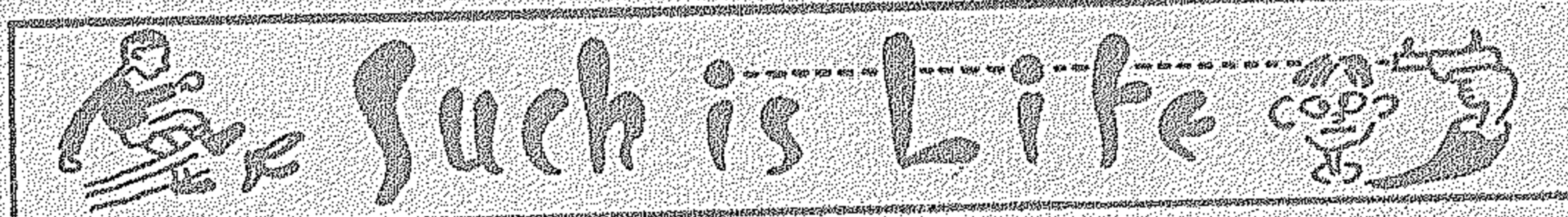
The most important piece of equipment is a pendulum driven by rubber springs. These "springs" are the samples of rubber being tested and are small barrel-shaped pieces, about one inch long and one inch in diameter. The motion of the pendulum is indicative of the properties of the rubber.

In order to record the oscillations of the pendulum, a moving paper tape and a high-voltage spark discharge are used. The spark jumps periodically from a fine point on the end of the pendulum, puncturing the paper tape. The paper moves in a direction perpendicular to the plane of oscillation of the pendulum, so the resultant trace is a damped sinusoidal wave. By measuring certain parameters of this pattern, the damping can be found.

If the pendulum is driven continuously by an electric motor, the internal damping results in the generation of heat in the rubber. This "internal damping" is the energy which is lost as potential or kinetic energy but is transformed into heat. The temperature of the rubber was measured in the experiments by means of thermocouples.

Two graduate students have chosen research on properties of rubber as a subject for their masters' thesis. Ted Zielinski, formerly a graduate student in the ME department, studied "Temperature Rise in Rubber Compounds under Dynamic Loading". Thomas A. Hunter, physics instructor, investigated "Effect of Fatigue Upon Damping in Rubber Compounds".

One direct application of the information obtained may concern tire construction and motor supports where failure is often due to excessive temperatures caused by the energy converted to heat. This has caused a problem in the use of synthetic rubber for treads on truck tires. Here the load is such that the material heats up very fast and there is not much dissipation of heat due to the relatively small surface area.



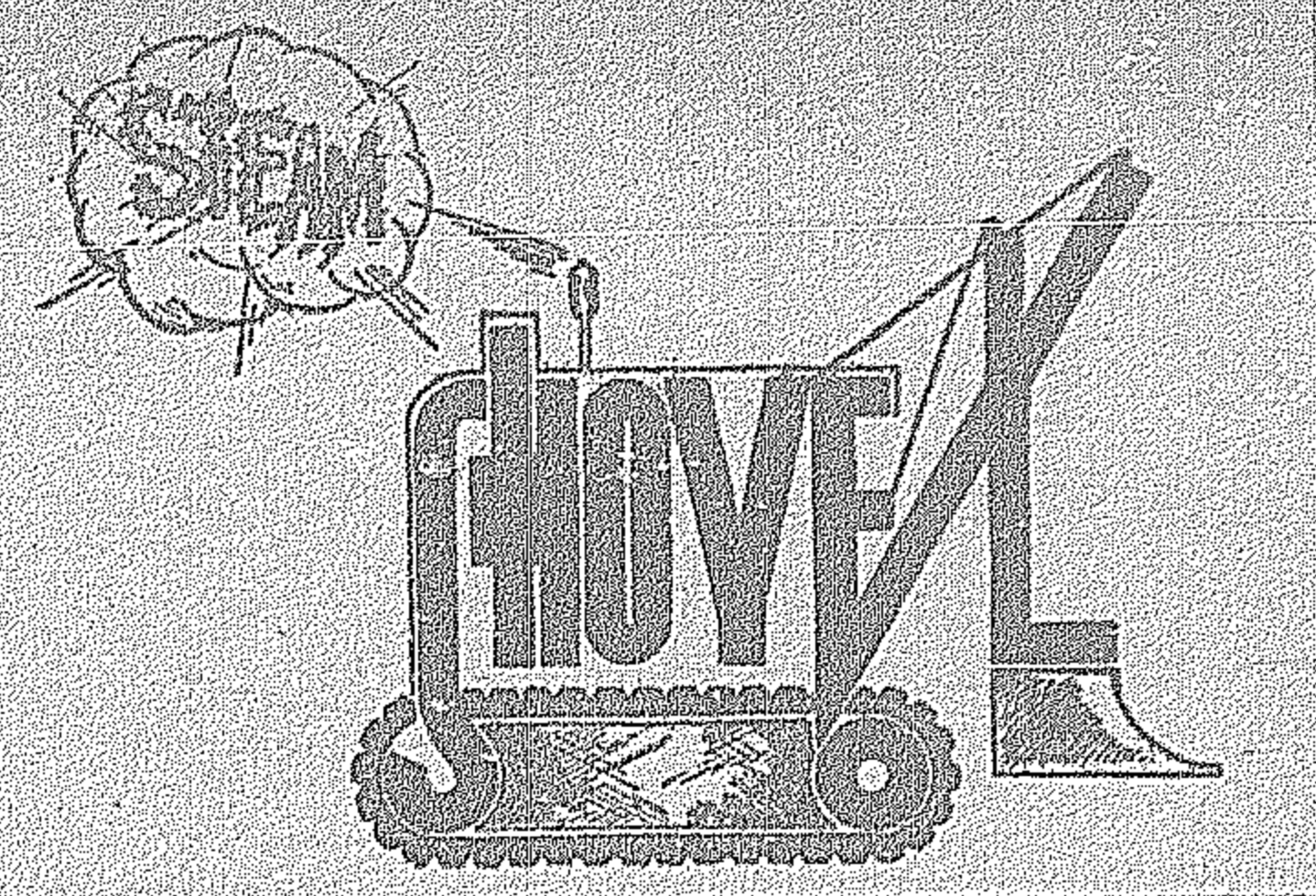
Spring has just exceeded her elastic limit (spring is sprung to you budding geniuses) and all newspapers have had the quip about, "In the spring a young man's fancy..." etc. Ah yes, such unmistakable indications proclaim once more that life, such as it is, is ready to begin anew.

A few years ago, life around thoity-thoid and de tracks used to begin slightly in advance of the official opening. On the 17th of March, Spring—in the person of the sophomore class—used to get off with a bang. In those days the unmistakable indications were freshmen, either wearing a green hat or minus their trousers.

It seems that with their inherent

curiosity as to natural phenomena and their love for the abstract, the engineers, in their course of years of research into the subject, reached such a level of perfection in the art of "Depantsing" that a poor, forsaken, helpless waif of the Freshman class just didn't have a chance. When the sophomores applied Newton's second law of motion (experiment 7 in Physics lab) to a frosh's habiliments, the resultant uniformly accelerated motion in the downward direction delighted every onlooking student of natural philosophy.

Such ungentelemanly conduct has been mutually agreed to be out of bounds for the last few years. What with women wearing slacks it became slightly risky business anyway.



Irene Ptak seemed quite happy to be left at the Dance Club one night. Perhaps it was the sailor who was very anxious to escort her home that made her overlook a ride.

A/S Wes Muthig must be quite a dancer by now, for last Saturday night he was schooled in the art at a fair young maiden's home whom he escorted there from another dance. He returned to quarters at 0730 Sunday morning.

During a recent Ch E lab period Paul Friedman and Roger Tate, who were performing an experiment with a leaky calorimeter, continually showered Herman Nelson and Frank Crosley who were at work on a Whetstone bridge. When their patience had been exhausted, the soaking and disgusted Nelson and Crosley moved to the opposite side of the lab. Tate and Friedman then proceeded to blow out a fuse and obtain data which violated the law of conservation of energy.

A/S Ray Stryzek has a tendency to meet beautiful girls at weddings, which leaves him good pickings. The only trouble is that he is afraid to advance his cause because of leap year and the surroundings that give the girls ideas.

It seems that Jerry Schneider has become BTO for we have it that he is frequenting remote sections of the city in order to keep company with a very "charming" chorus girl.

A/S Sam Popower received a little medical information in Dr. F. K. Richter's German class last week. Sam told Herr Richter that his recent absence from class had been occasioned by a cold. "Were you in the hospital?" asked Herr Doktor. "Yes, for two days", Sam said.

"That is no cold," replied Richter in perfect German. "That is a hangover."

Striving hard to promote himself from the title of STO to MTO is Don Slager. This energetic sophomore mustered up sufficient courage to attend this semester's first meeting of the Dance Club.

A/S Sam Popower was very gentlemanlike in asking the little woman where she would like to go next time. She, not wanting to be outflanked, suggested the Rio Cabana. Sam (the gentleman) accepted the challenge and hastily organized a charity drive and a confidence game, which netted him \$5.53. Of this fortune \$5.00 was the minimum, .32 for car fare, and .21 for etc. The big nite came and Sam with his little woman stepped boldly into the ushered door of the Rio Cabana. Everything was hunky dory 'til the waiter presented a little message of \$12.75. This week Sam is going back to the fated spot to help his lady fair at her new job, (washing dishes).

Bob Haylick has been bemoaning his fate of being appointed to SSTO, for the last week. To explain this sad situation he has been spreading rumors, one of which is "she went out with a squirt and he put out the flame."

In the Mech. 208 class the discussion centered around who had conducted a certain experiment about the expansion of gas in a spherical shell. Several students said that it was a gentleman named Magdeburg and thus the problem was ended. Then all of a sudden a lone hand in the back of the class was raised in protest. "No," said Walter Grengg, "it was conducted in Magdeburg by Otto Von Gerke." At this Prof. Sternberg replied "That is the most decent thing you have ever said, Mr. Grengg". At last Grengg gets a right answer.

Milton Oran is now eligible to become the newest member of the BTO's. A week ago he approached a bewitching female whom he had been observing for some time. The following conversation took place:

He: Ah, er, I beg your pardon, but I—

She: (With a big smile)—Yes?

He (advancing): I have an important question to ask you. My life depends on it, so think before you give me your answer.

She (blushing): Oh, go on.

He (pulling her into a corner): Well, er, what is your opinion of the food in the cafeteria?

Milton, of course, is a reporter for the IIT News with a true journalistic spirit.

Cameramen Arnold Rosner and Don Friedman did their part last Friday night in keeping alive an old Armour Eye tradition. The two young ladies who were photographed probably are now well-versed in matters of dark-room technique.

Wonder how U. Backas is coming along with his "culture lessons"? Seems that the local belles at Lewis decided that he needed a little polish.

—BROTHER ALOYSIUS