

NEWS-LETTER

UNIVERSITY OF ILLINOIS

Department of Mining and Metallurgical Engineering Alumni

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RESEARCH ASSISTANTSHIPS OFFERED

The growth of the department in terms of people, equipment, and fields of interest has resulted in greatly increased numbers of available research assistantships for those interested in graduate work. Some of the assistantships concern projects sponsored by outside sources, including Army Ordnance, Naval establishments, and industry, while others are problems of special departmental interest and sponsorship.

Half-time assistantships require about 20 hours per week work, and carry a stipend of \$160 per month, in addition to remission of registration fees. In most cases, work done under the assistantship may be offered for thesis credit. In general, all requirements for a

master's degree can be completed in a year's time, while a Ph. D. requires a period about again as long. The entire research and teaching faculty are available for supervision of thesis projects.

While attractive employment offers make it difficult for graduates to choose between graduate work and industry, the opportunities for and advantages of graduate work have never been greater. The department is interested in increasing our graduate enrollment, and we hope our alumni will take advantage of every chance to inform acquaintances interested in graduate work of the opportunities at Illinois. Of course, we would also welcome back any alumnus who has felt the need for additional academic work.

Walker Represents Governor in Mine Investigation

A methane initiated coal dust explosion in the Chicago, Wilmington and Franklin Orient Mine number 2 at West Frankfort, on December 2, took the lives of 120 men. The explosion also wrecked the Christmas holiday plans of Professor Walker for a quail hunting trip into Texas, as he was appointed the personal representative of Governor Adlai E. Stevenson of the official investigating committee. The committee began its investigation the day after Christmas and continued for the remainder of Xmas week. As the Governor's consultant and representative, Walker has spent a portion of almost every week in Springfield. The official reports resulting from the investigation state that the U.S.B.M. believes the methane ignition was caused by an electric arc but Walker and the State department of mines and minerals believe the ignition was caused by smoking. The investigation by the State and by Walker fail to show that any electrical equipment was in operation near the source of ignition and the possibility of an electric arc causing ignition was

therefore considered unfeasible.

The Illinois Mining Investigation Commission has held a series of public hearings with the apparent purpose of determining any culpability. No statement has been made by the commission and to date no individual or groups of individuals have been charged with neglect or responsibility.

A codification and revision of the Illinois State Mine Laws was made in the latter half of 1950 and presented by Governor Stevenson to the commission for study and recommendation to the legislature. The proposal was rejected by the commission during the 1951 session of the legislature. The commission is supposedly re-examining the proposal and will make additional suggestions for deletions or additions before making a new recommendation to the Governor. It is understood the codification is acceptable but certain additions and revisions were reported to be too stringent. Illinois has good mining laws but they are in need of a codification and revision, especially to cover the highly mechanized mining operations now used.

Chedsey Attends Japan Conference

As one phase of her postwar recovery program, Japanese engineering educators requested, through Gen. MacArthur, an opportunity to confer with American educators on academic methods and policies. Dr. W. R. Chedsey, Professor of Mining Engineering was one of the team of fifteen engineers chosen to visit Japan last summer and meet with Japanese educators.

Japan had her higher education system modeled on the old German system of lectures by professors and final examinations at the end of a course, but with the exception that nobody ever was failed on his exam for this would have meant loss of face, and an immediate suicide by the person failed!

Laboratories were largely research laboratories for the staff, so that not until some student went into graduate work as an assistant did he get a chance to do any laboratory work.

All of the educators without exception were very much interested in our system and it is being quite generally applied with only such modifications as are necessary to dovetail it into the general University requirements: e.g., all Japanese engineering students must learn to read and write English and German, which takes a fair block of time from the University calendar.

According to Dr. Chedsey's observations, mining engineering is pretty well advanced in Japan although mining is done under conditions generally more difficult than in America. Emphasis in metallurgy has been more in process metallurgy than physical, although they are pretty well up on physical.

In addition to the technical aspects of the trip, Dr. Chedsey especially enjoyed the opportunity to make friends with a remarkably intelligent group of people and to see the country and customs.

NEWS OF THE ALUMNI

As the shortage of trained engineers becomes acute, more alumni are visiting the department as interviewers of graduating seniors. In that capacity, we enjoyed visits by H. T. Phermisther, Min '29, manager, Teohn Service, Explosives Dept., American Cyanamide Co; R. N. Morris, Min '47, Sahara Coal Co; Al Hollett, Min '46, Asst. Chief Engineer, Cleveland-Cliffs Iron Co., Nashwavic, Minn; and G. T. Hollett, Min '40, Cleveland-Cliffs, Ishpeming, Michigan. Here to recruit metallurgists for General Electric was Roland Carreker, Met '45, still located at the Research Laboratory at Schnectady.

W. R. Hoskins, Met '50, finished work for his M. S. last August and is now located near Cincinnati. His address is: Engr. Div, MA and R Bldg., Procter and Gamble, Ivorydale, Ohio. Bill's work consists of a variety of manufacturing problems, particularly in corrosion and material substitution.

Reidar Erikson, Met '41, formerly on the research staff of National Malleable and Steel Castings Co, Cleveland, is now superintendent at Pearson Industrial Steel Treating, Chicago.

Prof. Bohl is the envy of everyone on the second floor Met. Lab. because of the new all metal, ball bearing, foam cushion, easy-swivel desk chair recently installed behind his desk. All visiting alumni are invited to inspect and service test this contribution to staff comfort and efficiency.

The mining students, while on their annual field trip last October, met quite a few graduates of the department. At the Leadville, Mo. mine of the St. Joe Lead Co., P. N. Ferguson, Min. '23, was host to the group. Of the more recent alumni, D. R. Benner '51, G. W. Goodrich '51, and D. F. McCarthy '51, were on hand to greet the group. While inspecting the Rosiclare mine of Alcoa, we expected to see R. W. Behm, '51, but he was on an assignment across the river on the Kentucky side. At the New Orient No. 3 mine of the Chicago, Wilmington and Franklin Coal Co. at Waltonville, Ill., our students were the first to see the mechanical mining machinery, slope conveyor belt, and other modern equipment

of this new development. F. A. Miller, '27, was instrumental in arranging this inspection for our party.

R. J. Ausfahl, Met '50, stopped by the campus recently for a brief chat as a sidelight to a business trip to Danville. Dick is employed by Caterpillar Tractor Co. Another recent grad to drop by was E. J. Schwetz, Met. '51. On a busman's holiday from National Malleable, Gene wanted to talk metallurgy. It sounds like Gene is on the ground floor of something new, and promises to give us the details as soon as possible.

Stan Channon, Ph. D. in Met in '51, made a big change in geography as well as employment when he resigned from Du Pont in Wilmington, Del., to accept a position in the research laboratories of Kaiser Aluminum at Spokane, Washington. The Channons stopped in Urbana last month on their way west, to say hello and goodbye to friends at the lab.

Verle B. Utzinger's new address is 508 W. Taylor, Kokomo, Indiana. Verle, Met. '49, joined the staff of Haynes Stellite last November after leaving the Mueller Co. of Decatur. Another Illini at Haynes is Rae Russell, '51. Now that Verle is near the Lake Michigan eastern shore, he has been consulting the experts on that territory, Profs. Bruckner and Forsyth.

Here is excellent evidence to refute any possible question as to the industry and diligene of departmental staff members. In quick succession, the following new editions were contributed by our campus personnel: Charles Wert (boy) in May, Rodney Caudle (boy) in June, Vaughn Hilderbrandt (girl) in October, Paul Beck (boy) in January, Bob Bohl (girl) in January, and Wayne Craig (boy) in February. And it won't be over until early summer when the Frank O'Connors are to be heard from.

Frank Padavic, James Miller, and John James, recent mining graduates, send their greetings from Holden, West Virginia. Jim is preparation engineer for the Pond Creek Pocahontas Co. Another recent mining alumnus, Tom Keim '51, reports his present address as 533 W. Main, DuQuoin,

Illinois. Tom is working at a strip pit and underground operation for the Truax-Traer Coal Co., Elksville, Ill.

A goodly number of met grads were in Pittsburgh for the ASM Midwinter meeting. Some of the former Illini who got together were W. R. Apblett, '44, Warren Jonsson, '47, George Sinclair, '48, Glen Wensch, '46, Jim Bechtold, '47, Stewart Sandberg, '48, Gene Ellis '47, and Harry Turner, '49. George and Glen each presented papers at the meeting.

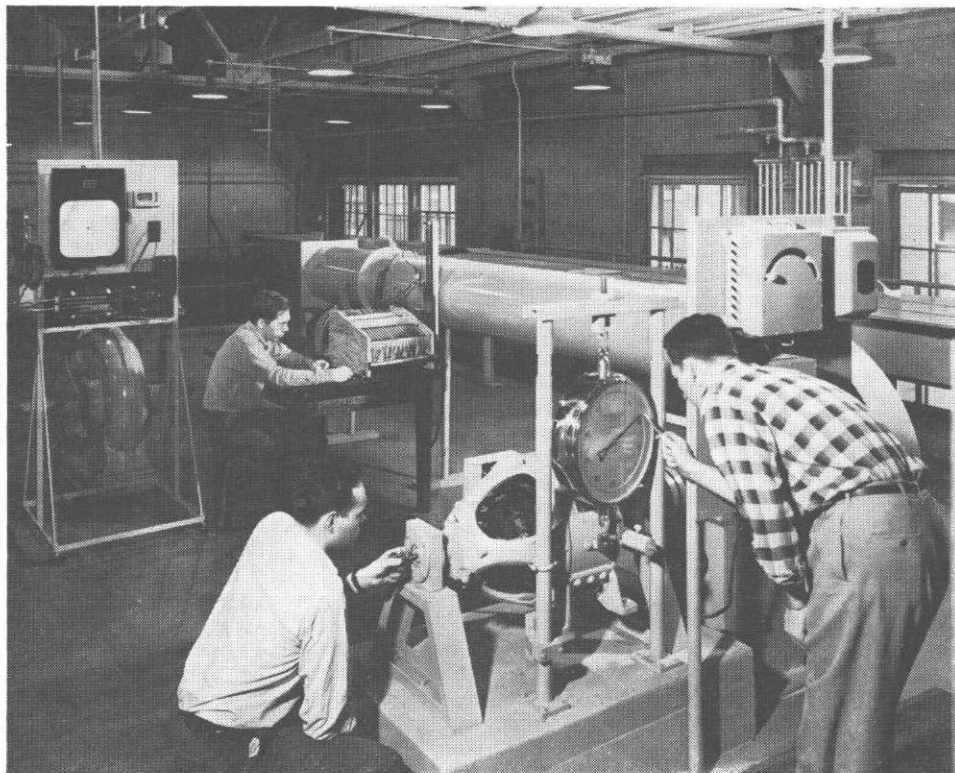
Ole Paasche, Met '42, is co-author of a recently issued Bureau of Mines Bulletin on the constitution diagram, metallography, and physical properties of the Ti-Zr system. Ole is now director of physical testing at the U. S. Bureau of Mines station at Albany, Oregon—a half-time post—and is still Assoc. Professor at Oregon State college, on half-time.

When Prof. Bruckner was awarded the AWS Lincoln Medal for 1951, the Newsletter enjoyed the opportunity to get late word from many of Walter's friends who wrote their congratulations. A sampling of the correspondence showed letters from Keith Lampson '40, Ed Spencer '47, H. C. Beede, '46, and Dick Wilde '40. Keith is using his Oak Ridge experience in metal-ceramics to good advantage in his new position at Allison Div., General Motors. His work there is on high temperatures and weld failures, especially in austenitic stainless. His home address is 509 W. 49th, Indianapolis.

Another change in address is noted for Dick Wilde: 99 S. 11th Ave., Coatesville, Pa. Dick is Asst. Director of Research, Lukens Steel Co., and is involved with problems such as quality control and development, improving basic open hearth practice, reducing mill defects, welding and deep drawing problems, etc. The Wilde family (two sons now), after breathing the industrial atmosphere of Western Pennsylvania, are especially pleased with their new environment.

Howard has taken a new job with Consolidated Western Steel Corp. (A U. S. Steel subsidiary) as chief inspector, army utility vehicle program.

New Equipment in Ventilation Laboratory



The scene shown above may not be immediately recognized by any but the most recent visitor as the mezzanine floor of the mineral dressing laboratory. The change in appearance has been brought about by completion of installation of new equipment and instruments for work in mine ventilation.

The new equipment includes two new fans; one a centrifugal type and the other a new Aerodyne axial flow type. The latter is capable of delivering 30,000 cubic feet of air a minute—enough to ventilate a small mine.

The photograph also shows part of a new duct system for the study of air flow in simulated mine openings. The ducts are equipped with a complete

group of instruments for measurement of the physical properties of air, and for measurement of air flow, air horsepower, fan horsepower, and other quantities desired in ventilation study and research.

A principal feature of the new laboratory is a new multitube manometer which will measure the average flow of air in round ducts. It will greatly facilitate the measurement of air flow in fan testing work. This manometer was designed and developed in the department by Associate Professor George Clark.

We feel justified in the belief that the department now has one of the finest mine ventilation laboratories in the country.

The speaker at a recent Mineral Industries Society meeting on the campus was Joe DiVito, Met. '43, mainstay of the metallurgical section of Stewart-Warner, Chicago. Joe discussed typical problems a metallurgist might be expected to face, based on his varied experience in many types of manufacturing, and gave his audience his formula for sure success in industry.

Jean Louvier, Met '47, has moved from Western Cartridge at Alton, Ill. to Michigan, where he is now

working for the Mueller Brass Co. Another man on the move is Bill Craig, Met '41, who resigned as Research Asst. Prof. of T. & A. M. here to accept a position with the Sandia Corporation near Albuquerque N. M. This is an Atomic Energy commission establishment operated by Western Electric for final assembly and testing of atomic weapons. Visitors to the Southwest are encouraged to make a stop at the Craigs.

B. C. Person, Met. '47, after two years with Esso at Baton Rouge,

La., is now at Boston attending the Harvard Graduate school of Business Administration. Burton spent a year in budget preparation work for Esso. His address now is 26 Thomas St., Belmont 78, Massachusetts. The department's only representative at Esso now is our faithful correspondent Bruce Capek, '51. His latest letter describes some of the interesting metallurgical problems associated with the diversified operations at the Baton Rouge refinery. Bruce reports an especially enjoyable fea-

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College Sets Up New Requirements

The college of engineering has adopted new entrance requirements to become effective in the fall of 1953, with a resultant change in the freshman program. Under the new policy, engineering freshmen will be expected to enter the University with four years of high school mathematics, including college algebra. This will permit the student to begin calculus in his second semester, and provides an earlier opportunity to satisfy prerequisites for more advanced courses in mathematics or engineering.

The change in program necessitated by the new policy served as an opportunity for a re-examination of the general core of courses taken by all engineers, as well as of individual curricula by the various departments. As a result, several changes have been made which are believed to give a much better program for the engineering student.

Major features of the new program, in addition to the change in the mathematics sequence, are reducing of credit in engineering drawing from eight to six hours and change in physics requirements from ten to twelve hours.

The change in the physics sequence will permit increased emphasis to the basic fundamental of physics in addition to some review of modern physics. The courses will be taught over a three semester period, beginning with the second semester, freshman year. The acceleration of the math sequence will facilitate the teaching of physics, as well as T.&A.M. and other courses, where the earlier introduction of calculus makes instruction easier.

The reduction of drawing credit is believed to result in a course still meeting the minimum requirements of most engineers, with advanced courses available for curricula with special needs.

The consolidation of high schools in the state has reduced the number of small schools which do not offer a schedule of high school mathematics which satisfies the new requirements. Those few who might suffer from the new regulation will be required to make up the deficiency in summer school. With this exception, we believe the engineering curriculum has been greatly strengthened.

Miners, Mets to Vie for Trophy at Spring Picnic

Now that we have had a few days of warm weather, the undergraduates are beginning to anticipate the annual M. I. S. picnic. Extra interest is centered in the event this year because of the traveling trophy inaugurated last spring, and awarded to the winner of the miners-mets softball game.

Designed and built by the students, the trophy is fashioned of a white granite receptacle, seldom used in these days of modern plumbing, appropriately lined with soft fur, with an attached plaque for recording results of the intra-departmental competition.

The refreshments—imported directly from Milwaukee—and the general good fellowship in addition to the new rivalry make the spring picnic even more an event than when most of us were undergraduates.

New University Policy

The University has inaugurated a new policy within the past year regarding staff attendance to technical and professional meetings. The new plan permits staff members to apply for travel expenses to one technical society meeting per year. Prior to the adoption of this policy, only those who were fortunate enough to be associated with research projects whose sponsors made travel allowances were able to attend meetings without incurring the expense personally.

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 ture of his work is luncheon meetings with sales representatives, with lunch on the salesman.

Robert Bertossa, Met '49, reminds us that he can be reached care of Chicago Bridge and Iron Co., P. O. Box 277, Birmingham, Ala. Bob is working on corrosion problems in stainless and other alloys, and has become interested in lithium atmospheres for high temperature protection. Bob reports an addition to the family as of Dec. 10, 1951. Brother Don, Met '50, is now working for Wyman-Gordon Co., Worcester, Mass., having resigned his position with Reynolds Metals, Sheffield, Ala. His home address is: Nelson Place, Oxford, Mass.

Plans for Third Floor Hit Snag

Last fall, these pages described the progress we had made toward increasing our facilities through addition of a third floor to the Metallurgy Laboratory. At that time, architects in cooperation with the staff had completed detailed working drawings and tentative approval was given the construction by the appropriate University committees. This approval was based on an estimated construction cost of \$75,000.

The present Met. Lab. was built some 15 years ago for approximately \$50,000, and was particularly designed so that an additional floor could be easily added. Making generous allowance for the rise in construction costs, it seemed hardly likely the cost of an additional floor could be much more than that of the original two floors.

Imagine the surprise and anguish created here when a final estimate submitted was \$190,000. This was later reduced to \$135,000 by eliminating all but the most essential features of the addition, but administration officials reported that funds in that amount were not available during the current biennium.

Our new proposal for the third floor addition is in a favorable position for consideration in the 1953-55 budget, and our prediction is that the summer of 1953 will see the construction start that will ease our serious shortage of space.

WALKER HAS NEW HOME

Prof. Walker revealed to the staff for the first time Sunday, April 7, his new residence at 614 W. Florida, Urbana. Although Johnny calls his new home "The Kennel" in honor of his dog Jake, the term in no way describes the elegance of the just constructed home. In addition to surprising us all with his new acquisition, Johnny displayed an unsuspected talent in expertly choosing the furnishings for his new home.

For those who have forgotten their local geography, the house is located directly across the street from the President's gardens—truly a beautiful setting.

Prof. Walker is now besieged with eager offers of assistance in construction of a game room and bar in the basement of his new home.