

# NEWS-LETTER

UNIVERSITY OF ILLINOIS

Department of Mining, Metallurgy and Petroleum Engineering

JANUARY, 1969

## Seminar Dedicated To Thomas A. Read

The 1968 ASM Seminar on Phase Transformations last Fall was dedicated to Thomas A. Read, as a fitting tribute to his memory and his contributions to metallurgy. Prof. Morris Cohen, in his introductory remarks, acknowledged that Tom Read's work had taken our understanding of the martensite transformation from the world of mysticism to a firm scientific basis.

It was quite appropriate that two of our staff members who worked closely with Tom, Profs. David Lieberman and Marvin Wayman, presented the first two papers in the Seminar. It is also significant that in the years that spanned Tom's work, papers on Martensite moved to a position of priority in a seminar on phase transformation.

## College Names Drucker As Dean

Daniel C. Drucker became Dean of the College in mid-November following the retirement of William L. Everitt. Dr. Drucker, whose field of specialization is mechanics, was formerly at Brown University.

In the short time Dean Drucker has been here, he has impressed the college with his wide range of competence and keen analysis. He has quickly grasped the history and traditions of the college, and set about to direct the future course of our programs.

He is a soft-spoken man, yet speaks with great authority. He is research-oriented, not at the expense of concern about teaching activities, but because he believes the research concept is necessary to undergraduates if they are to fully develop as engineers.

Dean Drucker recently presented some of his ideas on undergraduate education to the faculty at a lunch-

## YES, THE CAMPUS IS STILL STANDING

Most of you are quite concerned over changes on the campus, as reported (and often exaggerated) in the public press. Our department is, of course, involved in these changes, even more so as some of our staff members are spending long hours on college and University committees dealing with these problems. In view of this concern, you may be interested in a few comments on the campus scene—one man's observations, not a consensus view.

In the first place, students are better prepared than we were. They are more highly selected: 80 per cent come from the top sixth of their high school class. Their high school preparation has been better too; for example, many are a full year ahead of where we started in mathematics.

While our main concern was whether we'd be able to find a job after graduation, today's student does not have these worries. So, he can afford to take a broader look at his education and society, and he has reservations about both. Instead of "staying in his place", he wants to be heard when he speaks out against arbitrary rules, poor teaching, irrelevant courses, etc.

Most agree this is a healthy situation, and we now find students sitting on administrative committees to present their views. Their

views are generally well-considered and represent an important input. Unfortunately, the extreme cases of confrontation and violence are the ones that make the headlines. Outside of one fairly minor instance stemming from misunderstandings regarding the University's bold plan to bring 500 poverty-disadvantaged students to the campus, we have been able to avoid such incidents. This is largely due to a forward-looking administration headed by Chancellor Peltason who has shown great sympathy to student participation while making very clear that he will not accept coercion and disruption as part of the dialogue.

Student interest in social issues has hurt engineering enrollments. The admission quotas in LAS for next September were filled by the end of this November, while engineering quotas are only half-full. Students look at technology as the cause of our problems—pollution, transportation, urban ghettos, etc. This comes at a time when we are exerting every effort to increase our enrollment in metallurgy. We are doing our best to reverse this trend. Our hope is to hold on against the day that cannot be far off when people realize that technology is the answer to our major social problems, and again we will see the best students coming to rejuvenated engineering programs.

## ALUMNI DINNER

Some fifty alumni met for dinner during the Fall meetings of ASM and AIME last October in Detroit. Following Charlie Wert's remarks on the "State of the Department", the evening was devoted to renewing old acquaintances and making new ones.

We are expecting an excellent turnout next year when the annual meetings will be in Chicago: time and place will be announced.

# NEWS ABOUT THE STAFF

Charlie Wert spent the summer at the NAA Science Center at Thousand Oaks, Calif. He found it quite refreshing to get away from administrative problems for awhile, and immerse himself in the laboratory. While in Southern California, the Werts were able to see many of our alumni in the area: Jim Kerr, Don Kiefer, Don Killpatrick, Ken Kamber just to mention the K's. Back in Urbana, Charlie was elected chairman of the Faculty Senate Council for the academic year; this high responsibility follows his two-year tour as chairman of the important Senate committee on Educational Policy.

Marvin Wayman will be on sabbatical leave this semester at the Metallurgy Department at the Univ. of Cambridge, England, where he will do work on electron microscopy, phase transformations, and thin films. Marvin has been elected a Fellow of the John Guggenheim Foundation for 1969. Prof. Wayman is also a member of the Transactions Committee of ASM.

Paul Beck gave invited talks at the Gordon Conference on Physics and Chemistry of Solids, and at the Conference on Applications of X-Ray Diffraction. Paul was a member of the organizing committee as well as a participant in the International Symposium on Textures, held in Clausthal, Germany in Oc-

tober. In addition to seeing colleagues at this meeting going back 38 years, Paul also saw M. N. Parthasarathi, Ph.D. '64, and former staff member Hein Stuwe who is now located at the Braunschweig Polytechnic Institute.

Carl Altstetter has been on sabbatical leave during the Fall semester, and is working at the Max Planck Institute in Stuttgart, Germany. Carl is working in the general area of metallurgical thermodynamics and oxidation of refractory metals with members of Dr. Gebhardt's group. Carl is also serving with Marv Wayman on the ASM Transactions Committee.

Howard Birnbaum returned this Fall from a sabbatical leave in England, where he was invited to work at Harwell on point defects in irradiated metals. The Birnbaums enjoyed their stay in England, and managed to tour much of Europe and the Near East during their time away.

Robert Bohl spent the past summer at Argonne National Laboratory as director of the summer engineering practice school. This is a program for graduate students interested in nuclear engineering. It is designed to give the participants research experience on a variety of problems of current interest in the nuclear field. He has accepted

an invitation to direct a similar program at Argonne next summer. Bob is now serving his second year as international secretary of the metallurgical honor society, Alpha Sigma Mu. The society is in a period of expansion, and will soon have 25 chapters established at the major schools in this country and Canada.

David Lieberman was invited to spend a month lecturing on crystal physics and phase transformations at the 4th Annual Pan American Course Laboratories in Buenos Aires. Graduate students from Mexico and South and Central America participate in the year-long course; this program of lectures on special topics by scientists and engineers from all over the world culminates the course. One of our own Ph.D.'s, Lita Bosogni, taught the imperfections course. After a full day in the laboratory, the students visit plants in the area in the evening. David found the climate, the hospitality, and the professional contacts extremely rewarding.

Walter Bruckner has been asked to present his course on the metallurgy of welding by extension to Caterpillar Tractor in Peoria, and will begin this course in the Spring. Walter is supervising the research of Bill Jandeska, who holds a cooperative doctoral fellowship with Caterpillar.

## CHANGES IN STAFF ANNOUNCED

### JOHN GILMAN

John Gilman has left our faculty to become Director of a new materials research laboratory for Allied Chemical in Morristown, New Jersey. Jack has been on the staff since 1963, and we will sorely miss his sound counsel and the wide range of his accomplishment and knowledge. Jack's new position is a very challenging one, and we wish him well in it.

By virtue of Jack's resignation and vacancies which have already existed, several new appointments have been made. A careful search for capable men with strong potential who complement the interests of the present staff has resulted in appointments which should do

much to increase the stature of our department.

### GERT EHRLICH

Dr. Ehrlich has come to us from General Electric's Research Lab in Schenectady. His academic background is in physical chemistry, with an AB honors degree from Columbia (48) and M.S. and Ph.D. from Harvard in 1952. After post-doctoral posts at Harvard and Michigan, Gert joined GE in 1953.

Gert's specialization is in the field of surface studies. He has done pioneer research in the basic studies of elementary reactions on solid surfaces, and he is an acknowledged leader in this field. He is a member of many professional and honorary societies and

the author of some 50 papers.

Gert has lab space at the Coordinated Science Laboratory and will participate in research with this group as well as with our department. We welcome him and his wife, Anne, to our staff and community.

### FRED V. LAWRENCE

Dr. Lawrence shares an appointment as Asst. Prof. between metallurgy and civil engineering. He earned his Sc.D. last year in C.E. from MIT, where his research involved studies of fatigue in iron. Fred's background thus suits him perfectly for his position, which is to promote liaison between our people and the structures group

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# NEWS FROM ALUMNI

The Alumni Directory which was prepared last year stimulated numerous responses and so many corrections that a supplement had to be prepared in August, and should be in your hands. Now that our records seem to be in pretty good shape, we hope you will help us keep them that way by informing us of your changes in job and address.

One well-deserved criticism we received was from Donald Johns, Min 17, because we cut the directory off with the 1920 graduates. Mr. Johns, who was an I-Man on the swimming team, is very active in St. Petersburg Beach, Florida, where he supervises a Learn-to-Swim program for 500 children each summer. In view of his activity, his annoyance at being "passed over" is thoroughly justified.

Frank Fradin, Ph.D. 67, is now at Argonne Nat'l Lab where he is working in the field of magnetic properties of solids with Joe Darby (Ph.D. 58).

Fred Roehrig, M.S. 67 is working at Battelle in Columbus. Fred was married a year ago and is now living at 2011 North Star Rd, Columbus 43212.

Tom Noggle, Ph.D. 55, is spending a year's sabbatical from Oak Ridge at the German atomic energy establishment at Julich, near Aachen. While Tom is spending day and night at the lab, Alice and the family keep busy learning the language and seeing the sights.

Gilbert L. Smith, Min 24 has been retired from the Goodman Mfg Co for some time now, and lives at 8621 So Vernon in Chicago.

Glenn Schmid, Met 66, has finished his M.S. degree at Lehigh, and is now with Armco in Middletown, Ohio as a research welding engineer. Glenn had spent a summer at Middletown as an undergraduate student.

Gary Rauch, M.S. 65, is now at the Bain Fundamental Research Lab in Pittsburgh after completing his graduate studies at MIT.

John W. Davis, Met 63, has transferred from Fansteel's North Chi-

cago plant to the company's operation in Baltimore. John's technical orientation has changed from manufacturing engineering to process metallurgist.

Thomas Disz, Met 64, is now back in Urbana after having spent four years in the Air Force. Tom is still in the service, but being sent here for his M.S. degree in Industrial Engineering, and promised an overseas assignment when he finishes this program. Tom has had assignments at Chanute and Egglund Field near Pensacola.

Ed Van Reuth, Ph.D. 64, spent the past year at Leiden University, the Netherlands, on leave from the Marine Engineering Lab, Annapolis, Md. Ed was invited by the USSR Academy of Science to address the 10th International Conference on Low Temperature Physics in Moscow.

Bob Jannick, Met 57, spent a brief tour this year at Argonne Nat'l Lab working with Paul Shewmon, Met 52, and Leo Michels, Ph.D. 66, on swelling problems in reactor materials. Bob is now back at his old position at Automatic Electric.

George F. Roberts, Met 38, who works in the engineering department of the City of San Diego, wrote to correct our statement that he was City Engineer. George has seven sons; five in college with three B.S. and two M.S. degrees among them. All of his boys have lettered in sports in high school and college.

Charles Dodge, Min 24, a faithful and interesting correspondent over the years, has written an interesting letter recalling some of the old days of the department, and discussing some of the new opportunities for graduates in mining. Unfortunately, of course, our undergraduate program has been dropped, and the few students who might be interested in mining are serviced by an option program in general engineering. It might be reassuring to the miners to know that our staff, in cooperation with the staff of the Geological Survey, is reviewing the possibilities of maintaining mining instruction at the University.

We are sorry to note that we have received word that John M. Silkman, Min 15, died Oct. 3, 1967.

Harry Czyzewski, Met 43, is the co-author of an article in **Civil Engineering** dealing with failures in metal structures due to improper design in the construction stage. Harry was recently appointed by the Governor to the Oregon State Manpower Coordinating Committee to represent industry in relating State manpower needs and activities with local and federal efforts.

John Pugh, Met 48, is now manager, R & D, Refractory Metals, Business Section for General Electric in Cleveland. John was formerly manager, metallurgy research at the Cleveland Lamp Works.

Ron Larson, Met 58, is now manager of the Investment Division, Howard Foundry, and has a new home address: 1036 E Paddock Dr., Palatine, Ill. 60067.

George Schauner, Met 60, has left the world of technology and begun graduate studies in business at Northwestern. George plans a career in the investment field, where he hopes his background in engineering will stand him in good stead. George has given up bachelorhood as well as metallurgy, and was married last Aug. 31. Following a honeymoon trip to South America, the Schauers moved to 441 W. Melrose, Chicago 60657.

Jonathan Smith, Met 47, became president of Sunbeam Equipment Corp in Meadville, Pa last Spring. Jonathan has been with Sunbeam since his graduation. Every few years we have noted a promotion, but it looks like Smitty's run the course at Sunbeam, and we'll need other excuses for keeping in touch.

Marvin Pohlman, Met 51, is now vice-president-operations, Eastern Mill Division of Eastern Stainless Steel Corp, Baltimore. Marvin was formerly general manager-operations for Eastern.

Joseph Stalter, Met 56, has been promoted to asst. production superintendent for Elco Tool and  
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# ALUMNI NEWS

Screw Corp. Joe was formerly chief metallurgist for the Rockford company.

Don Killpatrick, Ph.D. 61, was married this summer, and is now living in Santa Monica. Don brought his very beautiful bride to the Fall meetings in Detroit, and to the Alumni Dinner, for which we are all quite grateful.

Ronald Meindl, Met 55, has been named plant metallurgist at Caterpillar's new Mapleton foundry near Peoria. The plant is in partial operation, and Ron gave Prof. Bohl and Tony Graziano a tour of this modern facility last Fall.

Art Ytterhus, Ph.D. 64, we understand, is spending a year's sabbatical in Denmark. Sorry we don't have any other details of what sounds like a very interesting assignment.

Joseph Wdowiarz, Met 62, is now located at the Inland Steel Research Lab in East Chicago. Joe has changed his last name to "Dow". Joe's home address is 6330 Honey Lane Dr., Tinley Park, Ill. 60477. We saw Joe and also Bill Heitmann, Ph.D. 61, at the new lab when our students were given the opportunity to tour this magnificent facility last Fall.

Jim Stanley, Ph.D. 59, has left Oak Ridge, where he was located since he received his doctorate, and is now with the Engineering Mechanics Dept of Arizona State University in Tempe. Jim is now on the staff with George Mah, Ph.D. 66, at ASU.

A. John Birkle, Met 57, has taken a position as Manager, Products R & D, for C F & I Steel Corp in Pueblo, Colorado. We congratulate John for being chosen for this position of responsibility.

Another convert to the academic world is Darryl Albright, Met 59, who is now Assoc. Prof. of Metallurgical Engineering at Illinois Institute of Technology.

H. J. "Bob" Maurer, Met 43, moved to Terre Haute when J. I. Case opened a new plant there for manufacturing construction equip-

ment. Bob is Asst Chief Engineer at the Terre Haute plant. The Maurers live at 251 So 21st Street, Terre Haute 47805; at least some of them do, as three of the four children are now in college.

Jim DeChant, M.S. 67, has been assigned to the Byron Jackson Pump Division of Borg-Warner in Los Angeles. Jim's address is now 5325 Lanai, Long Beach, Calif 90808.

At the NACE meeting in Cleveland last Spring, Prof. Bruckner turned up two alumni who had been "lost" for some time: Leonard G. Polek, Met 56, is located with LaSalle Steel Company, Hammond, Indiana; and Robert B. Hull, Met 58, is now with Marathon Oil Company, Robinson, Illinois.

Here are some address changes of which we have been advised:

Dallas Pasley, 17554 2nd Pl, N. E., Seattle, Wash 98155.

Ed. Van der Molen, Champion House, East Haddam, Conn 06423. Bus: Adv Mat'l R & D, Pratt & Whitney.

R. C. Bertossa, 346 Carlton Terrace, Ridgewood, N. J. 07450. Bus: V-Pres, Coast Metals, Inc.

Richard Bennett, Chief Metallurgist, Oliver Corp, Charles City, Iowa.

Charles A. Robertson, 7 Chipmunk Lane, Pheasant Hills, Media, Penn.

Vito Mitkus, 9028 Ironwood Ct, Indianapolis, Ind. Bus: Diamond Chain.

Raymond Johnson, 709 Westwood Dr., Gibsonsia, Pa. 15044. Bus: Anvil Products, Inc.

William J. Craig, 21456 Hollyook Dr., Cupertino, Calif 95014.

## Department Grants 35 Degrees in 1968

During the past calendar year, the Department has granted five doctorate degrees, including one in mining, and fourteen master's degrees, with three of these in mining. Sixteen bachelor's degrees were also earned.

Now that first year graduate students are unable to receive student deferments, the number of new graduate students has dropped sharply. Some of our seniors who

## Staff Changes

in civil who have long been involved in studying mechanical properties in metals. The exchange of students and ideas between these groups is very important, and Fred appears to be the ideal man for establishing this rapport.

We are most pleased to welcome Fred, his wife, and their three small children to Urbana.

### JOHN E. MORRAL

Our second new Asst. Prof. is John Morral, also with a fresh Ph.D. from MIT. John took his M.S. and B.S. work at Ohio State. He has a solid pedigree in metallurgy—his father is a well-known metallurgist at Battelle. John is particularly interested in thermodynamics, and his doctoral research involved application of the coherent spinodal in multicomponent systems to alloy design.

Like Fred, John is a young man who brings a great deal of enthusiasm and competence to our program, and we expect him to have a strong influence in the growth of the department.

### BRUCE PAUL BARDES

Dr. Bardes has an appointment as Asst. Prof. in M.E. and metallurgy. Although his activities are now concentrated in M. E. (where he is teaching metallurgy courses to M. E. majors), we expect Bruce to work with our staff and students on problems of mutual interest. Bruce is also a MIT product, with S.B., S.M., and Sc.D. degrees in metallurgy. After completing the doctorate in 1965, Bruce spent a year teaching metallurgy at Clemson. More recently, Bruce has been at Frankfort Arsenal as a captain in the U. S. Army. At Frankfort, he worked on explosive failures in steel cylinders. Currently, Bruce has applied for a NSF initiation grant for studying distribution of solutes in ternary alloys—an outgrowth of his thesis research. We are looking forward to his increased involvement in our department.

had planned graduate work decided instead to accept jobs rather than risk being drafted in the midst of their graduate studies.

We are hopeful that a more predictable selective service policy will permit our students to plan their careers with more certainty in 1969.