

In this issue, our featured chemical engineering educator is Professor Joe Koffolt, chairman of the Department of Chemical Engineering at Ohio State University, who writes fifty letters a month to his former students—"his jewels." This article was submitted to us by Professor Aldrich Syverson of Ohio State University, Columbus, Ohio.

JOE and his JEWELS

Dr. Joseph H. Koffolt is entering his 39th year of teaching chemical engineering at Ohio State University, Columbus, Ohio. "There is no similarity between what we taught ten years ago and today," notes Koffolt, chairman of the department since 1948.

Chemical engineering began at Ohio State in 1902, the same year Koffolt was born in Cleveland. In 1924 he received the department's 310th chemical engineering degree and next year he will hand out degree number 2700. Koffolt's teaching career spans more than half the time his subject has existed.

Chemical engineering, he says, evolved from industrial chemists who were good pipe fitters and plumbers.

Koffolt, smiling, recalls "putting on long pants and lying about my age" when, at 14, he went to work for Union Carbide as a block grinder. "Nine cents an hour, ten hours a day—it was just a summer job, but Dad thought I was doing pretty good," grins Koffolt through a haze of Ibold cigar smoke.

Things had improved a bit by June, 1924, when Koffolt got his first job after graduation. He worked for Industrial Rayon Corporation in



Cleveland. His starting pay was 43 cents an hour, "with a chance to work up to 45 cents." When he started, experienced sniffers and tasters were responsible for solution strengths. He adapted nomographic (alignment) charts to the business so that if a man could read, he could run the process.

By making what he calls "relatively simple" changes in equipment he was able to increase production from 250 to 5,000 pounds of rayon per day, with no increase in men. "I did quite a bit of good there," he muses. Koffolt still uses some of his notes, "disguised and dummied up," to pose problems for students.

Koffolt, author of a book on "application" of chemical engineering, has a long list of papers to his credit. Among his consulting activities have been fire and explosion investigations. Asked what the usual causes for these were, he replied "damn fools who are supposed to be experts."

Highlight of his professional activities is his term as vice chairman of the membership committee of the American Institute of Chemical Engineers. When he took office, only about 150 men ("the majority of them from Ohio State") belonged. By the end of his term he had boosted

membership to about 3,000, a feat which netted him the society's "founder's award" in 1963. "Why, that group was so poorly publicized that when I was in school I thought it was a secret society and you had to know the password," he recalls.

Koffolt has belonged to the American Society for Engineering Education since 1933 and, in the chemical engineering division, has held every office but one.

Koffolt's office walls are lined with pictures of his former students. He also has a small mineral collection close to his desk. Both are important to him.

Of the alumni, he says: "Here—these men, the graduates—are the real highlight of it all." And, of his minerals, he says: "I like rocks, only we call them minerals. Look here, and here, see how each one has different characteristics, is shaped differently and intricately? I think, looking at these rocks, that God must have had a lot of fun when He created the world."

Koffolt is willing, even anxious to talk about his alumni and their accomplishments. I believe we have the strongest alumni group in the country," he declares. "They're a close-knit, enthusiastic group."

"Our support from industry is amazing," he boasts, naming donations like chemicals, laboratory equipment, money, a computer, and sometimes even borrowed brainpower. Laboratory fees, he declares with pride, are the same as they were in 1924.

Since 1958, Koffolt has secured for his department more than \$300,000 in contributions and is credited with "getting" the modern chemical engineering building. Since he has been chairman of the department, he has also written and sent an "annual report," sometimes over 30 pages long, to his alumni.

How is it that Koffolt is so successful getting money from his alumni; how does he know so much about them, keep in touch so well? For Koffolt, the answer is simple. "I decided when I started to teach that I owed an obligation to the children of the state. I was going to know everybody I taught and not forget them."

And, though he may not remember every one, he cheerfully talks at length of his alumni. Like Cornelia, he refers to them as his "jewels." Obviously enjoying himself, Koffolt points to a picture on his wall and says "There's Bob Bates; he founded Chemineer, and sometimes when he consults he recommends his competitor's equip-

ment. And Harry Warner, president of B. F. Goodrich. Parker Dunn—he was in my first graduating class—is president of American Potash. Dale Barker there is head of *Chemical Abstracts*, and Herb Barnebey is president of Barnebey-Cheney, an activated carbon manufacturer.

"Cy Porthouse is president of Dunhill. He's contributed over \$20,000 to the department, and he once raised two million dollars in two days. His father was a bricklayer. Edgar C. Bain is retired, but he became vice president for research of U. S. Steel and has a research laboratory named after him. I remember one graduate who just made it with a 2.01 grade average and no one thought he would go far. But he had a lot of common sense and a good feel for things and now he's manager of one of the world's largest chemical plants."

Koffolt's alumni are generous. One man, responding to a money request, came to his office, called him a "pipsqueak," and gave him \$10,000 worth of stock. Another, in his will, left the department \$75,000.

Koffolt writes about fifty letters a month to his jewels. Grinning, he points to a dictaphone and says "that thing is a godsend." He sends 700 Christmas cards, and can recall when he wrote personal notes on each one. "I can't do that anymore," he sighs.

Asked why he was made chairman of his department, he chuckles and replies, "Because I knew all the rules." Seriously, he says he accepted because he wanted to increase alumni ties, which he calls "our most important asset." He also wanted to improve teacher retention, and is proud of only two resignations in almost twenty years. And he has distributed the teaching load better. He recalls that before he was made chairman, he had more than forty graduate students. This, he felt, was "very wrong . . . very unfair to the students."

"When I was made chairman," he continues, "I decided that every one I hired had to be smarter than I was."

On peeves, Koffolt barks "Too damn many forms." And his greatest failing? "I talk too much." Asked about hobbies, he replies "Really, my hobby is people. I like them. Every person is different, and they're all good."

Koffolt claims his greatest accomplishment is his relationship with his jewels. His alumni are located in most states, and in some forty countries around the world. He brags: "I can go about anywhere and call an alumni meeting." He is also



CHEMICAL ENGINEERING DIVISION ACTIVITIES

L. BRYCE ANDERSEN, Chairman

The Chemical Engineering Division of ASEE serves the interests of chemical engineering faculty and others concerned with the education of chemical engineers. In this period of intense re-examination of GOALS and goals, the Division serves as a liaison with other engineering fields within ASEE. In all of its activities, the Division tries to coordinate its efforts with the education committees of AIChE.

After a stimulating and well-attended Summer School for Chemical Engineering Teachers held in June at Michigan State, the Division has begun planning for the next Summer School to be held about five years from now. Suggestions on topics, format, and location are welcome.

The Division sponsors a full program on chemical engineering education at each annual meeting of ASEE. Next June in Los Angeles, there will be sessions on "Frontiers in Chemical Engineering" and "New Approaches to Teaching Chemical Engineering." In addition, there will be the annual Distinguished Lecture, a department chairmen's meeting, a luncheon, and a banquet.

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proud of the 75 chemical engineering professors his department has produced.

What makes Koffolt angry? "These damn fool sign carriers with the big beards," he exclaims, adding "also professors, who are supposed to be professional people, who won't cross a protest line. This makes me mad." Of war he observes that, "We'll never do away with greed. There is free will. There will always be jackasses."

Koffolt is candid, though optimistic, about the future of chemical engineering. "We don't know what's going to happen. Materials are selling now that were unknown a decade ago. We haven't discovered everything yet," he smiles. The future looks bright, he thinks, "but not smooth."

Petrochemicals, the computer, and synthetics are "exciting" things in chemical engineering for Koffolt. Petrochemicals are important because, he predicts, "This is the way we're going to lick the food problem." Koffolt, criticizing chemical engineering somewhat, notes sadly that "It is still about half art, half science." He would prefer



In order to serve a broader segment of chemical engineering faculty, the Division has begun sponsoring sessions at AIChE annual meetings. A symposium on Case Problems was presented at the New York meeting, and another session is planned for the Washington meeting in 1969.

Potentially one of the most important functions of the Division is its sponsoring the journal, *Chemical Engineering Education*. After several years of considerable effort by many people, the journal is now established on a sound financial and editorial basis. It should serve as an effective means of communication among chemical engineering faculty.

that science outweigh art.

"Quite often we don't know what's happening," he admits. "Thirty years ago no one thought of using rayon in tires. And the first pair of rayon panties—when they were washed and hung out to dry, they stretched out to about two feet."

Asked for a funny story, for which he is noted, Koffolt bowed out gracefully, quipping "My stories come like a Quaker talk—when the spirit moves me."

Why do chemical engineering alumni offer such strong support to the department, Ohio State, and Koffolt? Perhaps it is because, as one jewel wrote in a letter to Koffolt, "if it hadn't been for you and the department, I would probably have been a pants-presser like my father all my life." To this, Koffolt adds "I think they appreciate the interest we take in them."

How do Koffolt's jewels view him? "As Joe."

How does he view his alumni? "Like second sons."