Over 250 attend oleochemicals course

The AOCS Oleochemicals Short Course drew 257 industrial and governmental representatives from 21 nations to King's Island, Ohio. The course, held Sept. 13–16, 1987, covered the prospects for oleochemicals and their production and applications, as well as the role of biotechnology, environmental issues and quality control on the oleochemicals industry.

Several speakers indicated that the industry's prospects look favorable, particularly in relation to the petrochemicals industry. Robert Betz, who spoke about the overall perspective for the fatty acid industry, noted that in the early 1970s, "the most provocative topic was the inevitable production of fatty acids from petrochemical feedstocks." But the near doubling in the price of crude oil would alter the direction of growth in the industry, Betz, who is Emery Chemicals' general manager, said.

"This economic change will tend to favor fats and oils over petrochemicals and this trend will accelerate in the future. Where there is a crossover between naturally derived products, such as glycerine and fatty alcohols, over time the naturally derived products should grow at the expense of the petrochemically derived products," Betz said.

He estimated that current fatty acid and glycerine production is only 3% of overall fats and oils production, and growth for the fatty acid market is about 2.8%. However, he added, markets probably will expand with the application of biotechnology and genetic engineering. Also, saturated and unsaturated fatty acid methyl ester markets should grow as interest increases in the use of sucrose polyesters and polyglycerol esters as dietary fats. The increased interest in the commercialization of pharmaceuticals and health food supplements also might influence fatty acid markets. Other possible growth markets for methyl esters include lime soap dispersing agents and use as herbicide carriers.

According to Colin Houston of Colin A. Houston & Associates, detergent-range alcohol production is forecast to increase 3% a year, with the greatest growth in demand in the Far East. He estimated that 1986 natural and synthetic alcohol production capacity for the U.S., West Europe, India, Japan and the Philippines totalled 1.19 million metric tons (MT), with most plants working at 50% to 70% capacity. The natural alcohol capacity for the U.S., West Europe and Asia totalled 485,000 MT during the same period.

While capacity is sufficient to meet demand until well into the 1990s, Houston said several new natural alcohol plants probably will be built in Indonesia and Malaysia, with at least 60,000 MT of capacity being developed in Malaysia.

Fatty amine production also is likely to grow. Fatty amine production, which accounts for 25% of total U.S. fatty acid consumption, has changed dramatically over the past 10 to 15 years, according to Charles Aldag, president of Sherex Chemical Co. "Continuous amine production and newer alcohol-to-amine processes have forced suppliers to improve plant efficiency and overall product quality. These changes will cause amine producers in the future to accelerate their forward and backward integration," Aldag said. He added that diversification, customization and a customer-oriented focus will be required by producers to succeed.

While most speakers discussed the production of oleochemicals, Charles Bolthrunis, a process supervisor with Badger Engineers Inc. in Cambridge, Massachusetts, discussed environmental problems associated with production.

"The industry must not look at environmental issues simply as technical problems, but as problems

Emery Chemicals' D.J. Kriege speaks on quality assurance

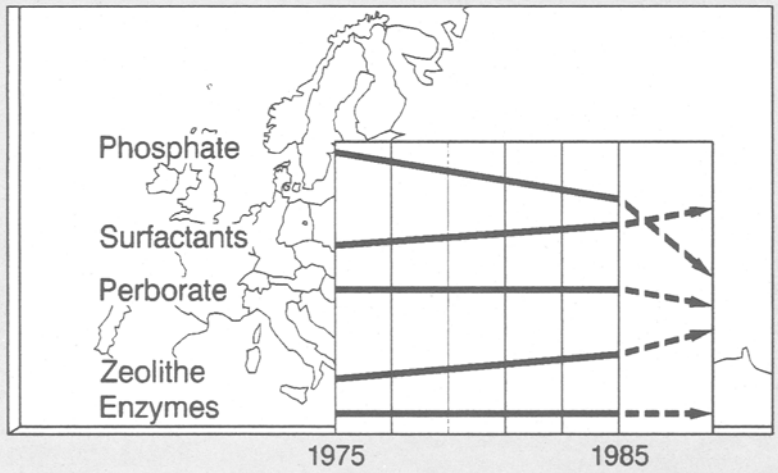
William Tallent (left) and Earl Hammond converse during break

of perception," Bolthrunis said. "Environmental issues have a lot to do with public relations; it's good business to comply (with regulations) enthusiastically."

He noted that by continuing a dialogue with regulators, the industry would be able to get information early enough to make engineering and financial plans necessary to meet regulations. By participating in the dialogue and by providing regulators with information, the industry also would be less likely to suffer under irrational regulations, he said.

"Looking for zero environmental discharge is like the search for the Holy Grail," Bolthrunis said, adding that there are steps companies can take. "In the future, the emphasis will be on in-plant abatement, rather than cleaning up at the end of the pipe," he said. His suggestions for in-plant abatement included better "housekeeping," fat skimming of wastewater from barometric condensers, and the addition of scrubbers. According to Bolthrunis, the use of the dissolved air flotation clarifier, a type of anaerobic wastewater treatment, will gain in popularity as an end-of-pipe cleanup technique.

Other topics and speakers were: Natural Raw Material Feedstocks for the Oleochemical Industry, N.O.V. Sonntag; Biotechnology of Oilseed Production, J. Perchorowicz, Calgene Inc.; Fat Splitting and Glycerine Recovery/Purification, Wayne Rowell, Sherex Chemical Co.; Purification and Quality-Improvement via Distillation, E.L. Ewbank, Emery Chemicals; Hydrogenation of Fatty Acids, R.C. Hastert, Harshaw/Filtrol Partnership; Polymerization of Unsaturated Fatty Acids, R. Johnson, Union Camp Corp.; Principal Chemical Reactions of Fatty Acids and Their Utilization, N.O.V. Sonntag; Biotransformation of Fats and Fatty Acids, P. Sonnet, USDA's Eastern Regional Research Center; State-of-the-Art Analytical Techniques, L.D. Metcalfe, Akzo Chemie America; Quality Assurance in the Oleochemical Industry, D.J. Kriege, Emery Chemicals; Utilization of Fatty Acids and Derivatives in Detergent Surfactants, I.R. Schmolka; Fatty Acids and Derivatives for the Manufacture of Soaps, D.V. Kinsman, Emery Chemicals; Metallic Stearates—Manufacture and Utilization, D. Dieckman, Nuodex Inc.; Utilization of Fatty Acids and Derivatives in the Food Industry, J.L. Van Haflen, C.J. Patterson Co.; Methyl Esters—Manufacture and Utilization, B. Freedman, USDA's Northern Regional Research Center; Manufacture of Nitrogenous Fatty Acid Products, R.A. Reck, Akzo Chemie America; Utilization of Nitrogenous Fatty Acid Products, L. Walp, Humko Division, Witco Chemical Co.; and Manufacture and Utilization of Natural Fatty Alcohols, R. Peters, Procter & Gamble Co.



A manufacturer's decision to use specific detergent ingredients is influenced by many factors other than cost or performance. For instance, increasing restrictions on phosphate usage in household detergents in Europe are reducing the use of that builder, while zeolite usage is increasing because it is viewed as an environmentally safe builder. Surfactant usage is expected to rise as more consumers switch to liquid detergents.

—From "The Detergent and Cleanser Market in Europe," presented by Hans-Dietrich Winkhaus, executive vice president of Henkel KGaA, Düsseldorf, West Germany, during the Second World Conference on Detergents, Oct. 5–10, 1986, in Montreux, Switzerland.

Granulation tower

A 32-meter high tower has been installed at Novo's facility in Kalundborg, Denmark, to manufacture dust-free detergent enzyme granulates.

It is the second Novo tower designed to make dust-free detergent granulates. The first tower has been operational in Bagsvaerd, Denmark, since the end of 1981. Both towers produce T-granulate detergent enzymes.

The latest tower uses 3,500 square meters of production space. Plans include increasing it to over 5,000 square meters to meet increasing demand.

According to Novo, the low dust levels of the T-granulates are obtained by first producing an agglomerate of enzymes with cellulose fibers, salt and binding materials. The inclusion of cellulose microfibers in the granulate core creates resilience to crushing. The granulate is produced in continuously working granulation drums; the desired mean diameter of the particles is obtained by controlling holding time and sheer forces together with binder and moisture content. The moist granular prod-

uct then is dried and sieved to remove too large or too small particles. Finally, the granulate is coated with protective layers and pigmented an off-white color to match the detergent.

BP Detergents

BP Detergents International has acquired the Indonesian contact manufacturing company, PT Wheelock Marden Indonesia Ltd., a manufacturer of household and personal care products that it produces for major multi-national companies. This, coupled with the recent purchase of the Malaysian-based Unza group of companies, which also manufactures personal care products, gives BP a manufacturing base in the Pacific Basin for supplying domestic and export markets.

BP recently sold three of its surfactants businesses. Imperial Chemical Industries PLC's chemicals and polymers unit has purchased the company's Belgian Tensia Industrie S.A., and Steinfels of Zurich has purchased Luhns GmbH and Lembeek Detergents S.A. of Germany.

According to a report in *European Chemical News*, BP Detergents is pulling out of surfactant intermediates to concentrate more on consumer products. As a result, it will no longer produce soap in Europe but will keep products under private label in the United Kingdom and the Far East. Earlier this year, BP sold two detergent subsidiaries in Sweden and Denmark to Henkel, West Germany.

News briefs

Igene Biotechnology, a Rockland, Maryland, company said it has received patent approval for a fructose biopolymer additive designed as a thickening agent in foods and a foaming agent in soaps, shampoos, cosmetics and toiletries. Although the patent approval is for food uses, the company said it will focus on cosmetic markets.

PQ Corp. has established three worldwide business groups organized around industrial chemicals, specialty chemicals and glass spheres. **Randol Carroll** has been named to the new post of vice president of technology, **Stanley W. Silverman** has been named president of the newly formed industrial chemicals group, and **Richard W. Kelso** has been named president of the specialty chemicals group. In other **PQ** appointments, **Michael L. Stephens** has been named sales representative in its industrial chemicals division. Also, **Jack I. Grams** has been elected president of **National Silicates Ltd.**, a PQ subsidiary. Meanwhile, **PQ** has announced it has purchased the magnesium sulfate heptahydrate (epsom salt) business of **The Dow Chemical Co.** Uses of epsom salt include industrial applications in detergents.

Marc E. Lorberbaum has been named sales manager of surfactants and detergents for **DeSoto Inc.'s** chemical specialties division.

National Starch & Chemical Corp. has appointed **Larry Jones** director of manufacturing for resins and specialty chemicals.

Schering A.G. has announced that **Charles Aldag**, of the company's U.S. affiliate **Sherex**, has been transferred to Berlin to become chairman of **Schering's** industrial chemicals division. Meanwhile, **Sherex's** European sister company, **Rewo Chemische Werke GmbH**, has opened a technical services laboratory in Steinau, West Germany, to support product development and application research.

Kao Corp. of Japan has acquired **High Point Chemical Co.** of North Carolina, a producer of surfactants for the textile industry. Meanwhile, **Kao** has announced it will build a research laboratory in Spain, with completion set for March 1988. This will be the company's third laboratory outside of Japan.

Yoshiharu Fukuhara has been appointed president of **Shiseido Co.**, a large cosmetic company in Japan, after the death of company president **Yoshio Ohno.**

Yoshio Ishii, former president of the **Japan Oil Chemists' Society** and professor emeritus of Nagoya University, died July 1, 1987, at the age of 73. His research was in oleochemistry and petrochemistry, including synthesis of nonionic surfactants, organic metal compounds and polar unsaturated compounds.

Gerard Labelle has been appointed marketing director for **Akzo Chemie Ltd.**, the Canadian unit of **Akzo Chemie.**

USI Chemicals Co. has appointed **Michael J. Baldwin** to the new position of vice president for research and development.

Vista Chemical Co. has promoted **Bruce E. A. Larsen** to general manager of marketing. **H. Wayne Hilgers** replaces Larsen as manager of marketing for surfactants. Also, in September the company announced it expected record income from operations during its fourth quarter ending Sept. 30, 1987, and for the full fiscal year.

Meccaniche Moderne of Italy has signed an agreement with **Chimcomplect**, Sophia, Bulgaria, to supply a toilet soap plant for installation at the Marshal Tolbukin factory in Burgas, Bulgaria. The plant will be designed to produce 1500 kg/hr. This plant will be used in conjunction with one supplied by Meccaniche Moderne in February 1985.

Lonza Inc. has appointed **Baychem** of High Point, North Carolina, as a distributor for its fatty acid derivative products in North and South Carolina and Tennessee.

Toyo Engineering and **Toko Bussan**, both of Japan, have announced plans to set up an ethylene oxide/glycols facility in China. The facility will be built within the Shanghai petrochemical complex at Jinshanwei. A by-product of the plant, purified ethylene oxide, will be the raw material used in a new detergent operation at the site.

Henkel, in cooperation with the **Ultra Group** of Sao Paulo, Brazil, will build Brazil's largest fatty acids plant, **Oleoquimica do Nordeste**. The facility will produce fatty acids derived from coconut oil, which currently is imported from Mozambique and the Philippines. However, a plan is under way to replace the imported oil with oil from trees native to the area, such as babassu and carnauba.

Air Products & Chemicals Inc. has announced it will produce up to 20 million pounds of polyamines a year, beginning in mid-1988. The polyamines will be produced at the company's alkylamines plant in St. Gabriel, Louisiana, using excess capacity. The new products include diethylenetriamine (DETA), triethylenetetramine (TETA) and higher molecular weight ethyleneamines.

Union Carbide Corp. plans a multimillion dollar expansion of specialty silicones product capacity at its Sistersville, West Virginia, plant, with completion scheduled in the first quarter of 1988. Capacity will increase for silicone surfactants, organo modified silicone oils and silicone antifoams.

New book

Synthetic Detergents, 7th edition, by A.S. Davidsohn and B. Milwidsky, John Wiley & Sons Inc., 605 Third Ave., New York, NY 10158, 1987, 315 pp., $59.95.

Surfactants & Detergents Calendar

1987

December

Society of Cosmetic Scientists meeting, Dec. 3, 1987, Royal Society of Arts, London, England. Topic, "A Physicist's View of Colour." Contact: Society of Cosmetic Scientists, Delaport House, 57 Guildford St., Luton, Beds LU1 2NL, England.

2nd Pan Arab Conference on Soaps and Detergents, Dec. 6-10, 1987, Abu-Dhabi, U.A.E. Contact: Salih Rashid Al-Dhahiri, General Abu-Dhabi, Chamber of Commerce and Industry, PO Box 662, Abu-Dhabi, U.A.E.

1988

January

61st Annual Meeting and Industry Convention, Soap and Detergent Association, Jan. 28-31, 1988, Boca Raton Hotel and Club, Boca Raton, Florida. Contact: The Soap and Detergent Association, 475 Park Ave. S., New York, NY 10016.

March

XIXth Meeting of CED/AID on Surfactants, March 9-11, 1988, Granada, Spain. Contact: Secretariá de la Asociación de Investigación de Detergents (AID), Jorge Girona Salgado, 18-26 Edificio Juan de la Cierva, 08034 Barcelona, Spain.

May

World Surfactants Congress II, "Surfactants in our world—today and tomorrow," May 24-27, 1988, Paris, France. Organized by ASPA, France, and sponsored by the European Committee on Organic Surfactants and Their Intermediates, Avenue Louise 250, Bte. 102, B-1050 Brussels, Belgium.

September

Cosmetic Science '88—Achievements and Aims, 15th International Congress of the International Federation of Societies of Cosmetic Chemists, Sept. 26-29, 1988, Grosvenor House, Park Lane, London, England. Contact: Lorna K. Weston, General Secretary, Society of Cosmetic Scientists, Delaport House, 57 Guildford St., Luton, Beds LU1 2NL, England.