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emulsifies the gas and water with a proprietary chemical emulsifying agent. Dr. Ewbank, who has been working on the process since 1965, says that as much as 13% water can be used with no engine modifications other than minor carburetor adjustments and disconnection of pollution control equipment.

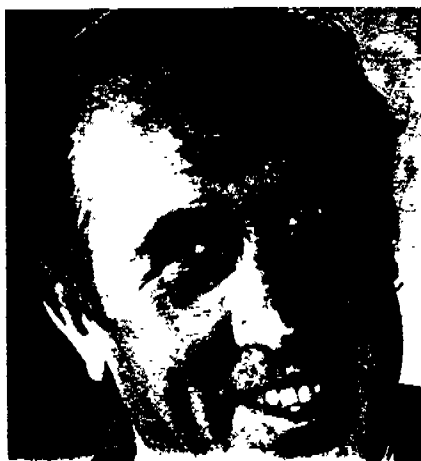
ICI ties together business in Americas

A big new chemical enterprise spanning North and South America emerges today. Britain's Imperial Chemical Industries is pooling all its operations in those areas into a single company, ICI Americas, whose sales exceed \$1 billion. So that it will not be confused with the new firm, ICI's major wholly owned U.S. subsidiary meanwhile has changed its name from ICI America to ICI United States.

The new structure for ICI's activities in the Western Hemisphere, according to William B. Duncan, chairman of ICI Americas, will "bring about a closer degree of coordination" within the region. "This will ensure, above all, that management resources of our major companies are available in a mutually supportive way to our smaller companies throughout the Americas, particularly the developing companies in Latin America," he adds.

ICI Americas will tie together five companies operating in North America and six in Latin America. The largest units are Canadian Industries, Ltd., Canada's largest chemical company with sales of \$385 million last year; ICI United States, with sales of \$250 million; and Duperial in Argentina, with sales close to \$100 million. A Latin American division will look after five smaller subsidiaries in Brazil, Mexico, and other Latin American countries, where sales totaled about

Duncan: closer degree of coordination



\$100 million. ICI Americas' headquarters will be adjacent to ICI United States' facilities in Wilmington, Del.

Mr. Duncan, who had been chairman of the former ICI America since 1969 and is also a director of parent ICI in England, notes that the new regional organization will have considerable autonomy. An unusual feature is that its board of directors, made up of 15 members drawn from the U.K., the U.S., Canada, and Latin America, includes nine outsiders who are not officials of ICI or its affiliates. President and chief executive of ICI Americas is Edward J. Goett, who had been president of the former ICI America.

Airco late entry into O₂ sewage treatment

Although well behind competition by Union Carbide and Air Products, Airco is entering the potentially huge new market for oxygen and oxygen technology in wastewater treatment with a new system it calls F³O (forced free-fall oxygenation). Like its competitors, Airco initially is aiming at new and upgraded municipal wastewater treatment plants. However, the company also is designing the F³O system for use in chemical, pulp and paper, hydrocarbon, and food processing wastewater plants.

Recognizing the handicap of being third into the business behind the four-year-old Unox system of Union Carbide and the two-year-old Oases system of Air Products, Airco vice president Warren Francis says, "We wanted to bring something [new] to the party." Mr. Francis points to four distinguishing characteristics of the F³O system: compact modular design (the system can sit like a box in the corner of an existing aeration tank), lower capital cost and less plant alteration, increased safety from oxygen-triggered explosions, and immediacy of operation.

These points make F³O particularly suited for upgrading existing city sewage plants. Airco will push hard on the system's quick installation at relatively low cost (\$100,000 per million gallons a day of plant capacity), its favorable energy use (the same as or less than an existing treatment plant), and its ability to double or triple the capacity of existing plants. The first municipal test of the Airco system will be a two-module installation at Wayne, N.J., that will start up in August.

Hearings under way on vinyl chloride rules

The Occupational Safety and Health Administration opened public hearings last week on the agency's proposed permanent standard to reduce worker exposure to vinyl chloride to a "no detectable level." The hearings promise to be long and acrimonious. There are 89 scheduled panels of witnesses, and questioning is permitted.

A lead-off witness for the Society of the Plastics Industry, Anton Vittone, president of B. F. Goodrich Chemical, argued that there are "no data showing that exposure levels as provided under the emergency standard [50 p.p.m.] are not safe and of a low degree of risk." He said that "the proposed permanent standard is not technologically feasible and, if adopted, would shut down the industry." SPI estimates that this could result in the loss of 1.7 million to 2.2 million jobs and a loss of domestic production value of \$65 million to \$90 million annually.

In place of OSHA's proposed permanent standard, Mr. Vittone proposes a stepped reduction for worker exposure in polyvinyl chloride resin plants that would lower the ceiling to 40 p.p.m. this year and to 25 p.p.m. by late 1976. His proposed standards for monomer plants are a ceiling exposure of 25 p.p.m. for 1974 and of 10 p.p.m. for late 1975.

However, United Rubber Workers president Peter Bommarito told the hearing that the "Government's goal of 'no detectable level' for vinyl chloride is both necessary and feasible." Characterizing the industry prediction of economic doom as blackmail, Mr. Bommarito contends that although some of the older plants might have difficulty justifying major alterations, "newer plants have a different problem characterized by the will, not the ability, to do the job." The labor position drew support from a draft environmental impact statement prepared by the Department of Labor, which concludes that "no evidence to date indicates that promulgation of the proposed standard will stop vinyl production and use."

What effect testimony at the hearing will have on OSHA's final permanent standard remains to be seen. But Daniel P. Boyd, director of the office of standards development for OSHA, said that in preparing the final standard, which must be set by Oct. 5, OSHA would consider the availability and cost of appropriate technology.

CONCENTRATES

Industry / Business

Du Pont expects growth to be relatively slow for the U.S. chemical industry this year and next, with output up only 3.3% in 1974 and 4 to 5% in 1975. (Production climbed nearly 8% last year over 1972.) But company chairman Irving Shapiro told an industry group in Japan last week that the company is raising its capital spending to about \$1 billion this year, up from \$736 million in 1973, and its outlays for R&D to \$325 million from \$276 million last year.

France's Rhône-Poulenc plans to buy a 26% interest in Polychrome Corp., Yonkers, N.Y. Polychrome, a producer of photographic, printing, and other chemicals, had sales last year totaling about \$45 million.

Both imports and exports of sulfur are up sharply this year. Exports during the first four months were running at an annual rate of 2.4 million long tons a year, according to the Bureau of Mines, a level 36% higher than 1973's total exports of 1.8 million long tons. But imports were at an annual rate of 2.1 million long tons, 70% more than the 1.2 million imported last year, with imports from Mexico having tripled. U.S. production is running just slightly above last year's 10.0 million long ton level, but apparent consumption, at a 10.1 million long ton annual rate, is 9% ahead of the 9.3 million long tons used in 1973.

Industry briefs

- Pennwalt will expand its Portland, Ore., chlorine capacity by 70% to more than 500 tons daily by mid-1976, primarily to serve regional pulp and paper companies.
- Union Carbide will expand propionaldehyde capacity by 100 million pounds a year (to 250 million pounds) and add a 150 million pound-per-year propionic acid unit by early 1975 at its Texas City, Tex., plant.

Government

A uniform national 42-cent rate for interstate sales of natural gas set by the Federal Power Commission will have little immediate impact on the chemical industry. Most chemical firms buy locally or from intrastate sources. The new rate (per 1000 cu. ft.) will have a significant impact on the cost of home uses, however. The new rate applies to sales from wells commenced on or after Jan. 1, 1973, and to sales under contracts negotiated on or after that date.

President Nixon has nominated eight new members to the National Science Board, including two chemists—Dr. L. Donald Shields, president of California State University, Fullerton, and Dr. Norman Hackerman, president of William Marsh Rice College in Houston—and one chemical engineer, Dr. Donald B. Rice, president of Rand Corp.

Those leaving the board include Dr. Philip Handler, president of the National Academy of Sciences, and Harvard University physicist Harvey Brooks, whose terms have expired.

EPA dropped its effort to further curb use of the herbicide 2,4,5-T last week, canceling a formal administrative hearing scheduled for August. The agency cited a lack of scientific evidence to assess the potential hazards associated with the use of the herbicide on rice, rangeland, and rights-of-way. The action followed a meeting among EPA officials, Dow Chemical (which makes 2,4,5-T), USDA, and the Environmental Defense Fund.

NSF has awarded its first energy-related graduate traineeships. The awards, totaling \$3.1 million at 30 institutions, provide a \$3000 per year stipend for graduate students and a \$3000 allowance to the institution in lieu of tuition and fees. The program will begin this fall with 172 traineeships in three energy-related fields—115 in coal and oil shale, 35 in solar energy, and 22 in geothermal energy.

International

Plans of the U.K.'s Labor government to seek a stake in British industry will be outlined in a document it will issue soon. Some 20 firms, including Courtaulds and Imperial Chemical Industries, have been mentioned unofficially as targets for government participation in management, although whether this would entail outright nationalization is still unclear.

Baker Industries is entering the Brazilian fertilizer market. With international partners, Baker will begin immediate marketing of U.S.-produced fertilizers in central and southern Brazil. By 1977 it plans to construct both fertilizer and phosphoric acid plants in Brazil to produce about 500,000 tons of fertilizer annually from raw materials supplied by Baker's U.S. operations.

The Soviet Union will build an ammonia complex capable of producing 1.8 million tons a year on the Volga River near Kuibyshev. Chemical Construction Corp. will supply engineering and U.S.-purchased equipment for four 1360 metric-ton-a-day ammonia plants to be operating there by late 1978 under a \$200 million contract with the U.S.S.R.'s Techmashimport. Natural gas from the nearby Orenberg field will serve as feedstock.

International notes

- Venezuela's carbon black capacity will be expanded by 78 million pounds per year by the end of 1975 by a new plant to be built for Industrias Quimicas Zuliana on Lake Maracaibo. Mexico's Kindy Industrial Group plans to borrow \$20 million from a consortium of U.S. and Canadian banks to expand its polyester fiber and resin operations.