• *Sections*

Pulp Chemicals Uses To Expand Sharply

IN FIFTEEN YEARS the production of tall oil fatty acids, a whole new class of pulp chemicals derived from a paper industry by-product, "has zoomed from practically nothing to a current annual rate of 150 million pounds."

This statement by a speaker at a panel of representatives of the Pulp Chemicals Association discussing "Tall Oil Products in the Markets of the 60's" brought into sharp focus the entrenchment of virtually a new American industry, utilizing a one-time waste product to stretch further the nation's forest resources.

That this industry will have no major immediate competition from either the free world or satellite nations was noted by another speaker, who stated that European production of crude tall oil fatty acids is less than 20% of the U.S. production. Conversely in the international scene, the U.S. export picture of these products seems to be expanding in the near future for the requirement of special tall oil fatty acids in Europe and other export areas.

Representing the Pulp Chemicals Association, the panel appeared before a meeting of the Northeast Section of the American Oil Chemists' Society at Whyte's Restaurant, New York, on December 6, 1960. They were J.M. Wafer, vice president, West Virginia Pulp and Paper Company; J.H. Ruskin, president, Arizona Chemical Company; C.W. Eurenius, assistant general manager. Paper Makers Chemical Department, Hercules Powder Company Inc.; and D.R. Eagleson, assistant sales manager, Emery Industries Inc. D.E. Campbell, secretary of the Pulp Chemicals Association, was moderator.

The panel spotlighted various markets now consuming the vast amount of tall oil fatty acids produced in the United States. The first major market for the consumption of these materials is the paint, varnish, lacquer, and coating field. Tall oil fatty acids are being used increasingly in this field because of the combination of low cost and superior paint properties imparted for various household appliances finishes.

Another growing market for tall oil fatty acids is in the soap, emulsifier, and synthetic detergent field. In the past few years the advent of household pine cleaners has caused a sharp increase in the usage of these materials.

At present the surface coatings field, principally alkyd resins used in these coatings, consumes approximately 30 to 40 million pounds of tall oil fatty acids. A competing material in this field, soybean oil, is used at the rate of 100 million pounds. The current price picture however, according to the panel, supports greater usage by the newcomer for some time to come since current price levels make tall oil fatty acids extremely competitive with soybean oil.

Other products yielded in tall oil fatty acid production, the panel pointed out, should also have wider industrial use because of the economy they impart. "Heads" fractions, for example, now sell at about 2¢ per pound and are used as flotation reagents in the mining field and in core oil manufacture for the foundry industry. Pitch, a high-boiling residue, is also at a market low, selling for 1¼¢ per pound. Only about half or less of the pitch produced today is finding use, but it should prove useful in making low-cost resinous products.

In standard soap products tall oil fatty acids are historically competitive with traditional fats and oils. In the surface-coatings field, vegetable fatty acids are already feeling the bite of the newer tall oil fatty acids.

The speakers indicated that there will also be greater domestic increase in the use of these new pulp chemicals for such applications as low-temperature rubbers, plasticizers for vinyl products, and synthetic detergents. The advent of these materials in greatly increasing formulations and grades is also helping to produce newer paints and newer coatings as well as newer plastics. They are being used to a marked degree in the polymerization of new resins, for example, in the plastics industry.

An encouraging note in the export picture was provided by outlining the potential of tall oil fatty acids in markets abroad. They anticipated that the volume consumption of premium tall oil fatty acids not produced in Europe will rise.

However consumption of crude tall oil, from which these materials are derived, will decrease as it is refined and fractionated in the United States to a broader range of new products.

Also forecast for European production was the start-up of newer processes using tall oil fatty acids, and an increase of tall oil fatty acids in foreign synthetic detergents.

Despite the over-all satisfactory picture of tall oil products in the markets of the 60's a cautionary note was introduced by another speaker who indicated that the pulp and paper industry could not meet for many years to come the total demand that has existed for gum and wood rosin, traditional naval stores products which have been used increasingly for the past 50 years in many of these industries. The speaker noted that the pulp and paper industry is contributing greatly to the over-all production of rosin, but it would appear "that the revival of the gum naval stores industry will be essential to provide the major source of rosin in the future."

Shuman Speaks

A. C. SHUMAN of the Shuman Chemical Laboratory Inc., Battle Ground, Ind., spoke before the North Central Section of the American Oil Chemists' Society on December 14 at the Builders' club in Chicago. He discussed the various types of crystalline materials encountered in foods and food processing and the nature of the bonds holding them in the crystalline state. He also mentioned the importance of measuring crystallization in determining the physical properties of food products.

L.R. Dugan Jr., president of the Section, announced that he was leaving the American Meat Institute for Michigan

State University in East Lansing as of January 3, 1961. Decatur B. Campbell Jr., vice president, would become president, and A.V. Graci Jr. would serve as both treasurer and vice president.

January 25 was set as the date of the next meeting, with Robert S. Bryant of the Victor Chemical Works as speaker on "Use of Phosphates in the Food Industry." M.L. Ott of Durkee Famous Foods is program chairman.

Elect Officers

JOHN KNEELAND, director of research, Pacific Vegetable Oil Corporation, San Francisco, spoke on "Trends in the Fat and Oil Industry and the Relation of Research and Development" before the November 4, 1960, meeting of the Northern California Section at the Engineers club in San Francisco before 82 members and guests. Also L.A. Goldblatt and W.C. Wood reported on the national A.O.C.S. meeting in New York in October. A moment of silence was observed for George Rosenblatt, Section chairman in 1959, who had been killed in a car accident.

Newly elected officers for the coming year were president —Fred Palmer III, Best Foods Division, Corn Products Company, San Francisco; and steering committee—Dr. Goldblatt, Western Regional Research Laboratory, Albany; Lowell Cummings, Pacific Vegetable Oil Corporation; and L.D. McClung, Best Foods Division, Corn Products Company. The next meeting will be in May.

Form SPROTI

Three Mexican chemical engineers have formed the Sociedad Profesional de Servicios Tecnicos Industriales S.C. to supervise the correct use of patents, trademarks, and quality control in accordance with international policies. Their address is Martin Mendalde 936, Mexico 12, D.F.

The three are Roberto Galvez, general director of standards for the Mexican government from 1948 to 1958 and professor at the National University of Mexico since 1924; Ignacio F. Palencia, consultant and coordinator for fatty oils and derivatives in Mexico and Central America since 1935, also representative for Croll-Reynolds Company Inc., Westfield, N.J., International Electrolytic Plant Company, Sandycroft, Chester, England, and associate engineer for the VioBin Corporation, Monticello, Ill.; and Daniel Lozano, adviser to the National Railways of Mexico for 10 years, technical adviser on standardization systems at the Direction General of Standards for the Mexican government for six years, and head of the technical department of the Mexican Control Corporation from 1952 to date (parent company, General Superintendence Company, Geneva, Switzerland).

Seminar Meets

The 18th annual Statistical Quality Control courses for the chemical and processing industries will be held at the Rochester Institute of Technology, Rochester, N.Y., June 12–29. H.M. Kentner, director, announces that Industrial Statistics and Quality Control will be offered June 12–21; Design and Experiments June 22–29; and Applications Seminar June 20–21.

Brings Out Chart

The Scientific Apparatus Makers Association, 20 N. Wacker drive, Chicago 6, Ill., offers a chart for suggested built-in instruments and equipment for laboratory furniture. The test area market research study covers petroleum, food, metallurgical, paint, plastics, chemical high school and university laboratories.

Change Name

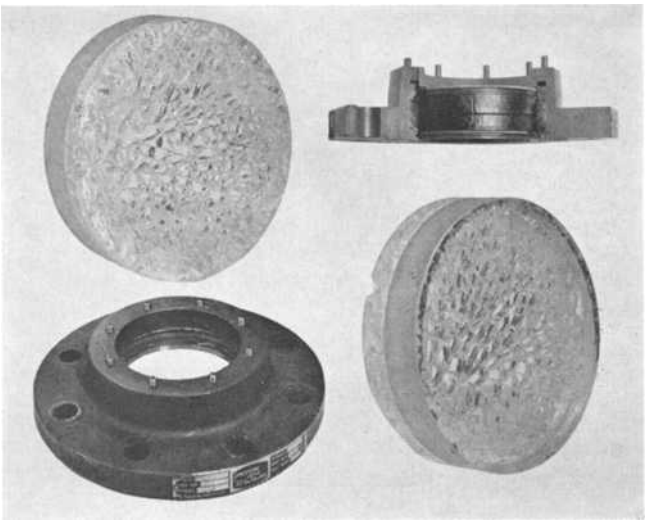
The North Dakota Agricultural college, Fargo, N.D., announces a change in name to The North Dakota State University of Agriculture and Applied Science.

A.S. La Pine and Company, Chicago, will hereafter be known as the La Pine Scientific Company.

Show Safety Features

Safety features of PresSure Products Company's new sight-glass are shown in the composite photograph.

At the left is a front view of a fractured "Safelite" patented lens, with fool-proof mounting of the control plus a secondary internal lens. At the top right is a cut-away view of the packing and assembly. The mounting accommodates the pressures and temperatures sight-glasses must



contain. The possibility of rupture or blow-out destruction is eliminated by equal distribution of all stresses against the glass.

At the left, bottom, is a standard model sight-glass with carbon steel base containing a 4-in. lens assembly, built to specifications of 150 p.s.i. At the right, bottom, is a rear view of the "Safelite" lens shown at the top left. Each lens contains a tested safety factor of 10 or is capable of holding 10 times the normal operating capacity for which it has been specified.

The company is located in Charleston, W.Va.; box number is 424, and zone number, 22.