on furfural, tetrahydrofuran, and polifurit were examined in a paper by N. G. Semanov (VTO Soyuzgidrolizprom, Moscow). He emphasized the advisability of finding new ways to produce tetrahydrofuran and improving the technological process involved in the production of furfural in order to utilize more fully the raw material and coordinate the energies of a number of scientific-research centers in the country in order to accelerate the solution of these problems. Yu. M. Mamatov (Fergana Division of the Scientific-Research Institute of Plastics) reported data on the synthesis of monomers based on furfural and furfuryl alcohol and enumerated the areas of application of polymeric materials that contain a furan link.

In a resolution adopted by the conference it was proposed that research involving the synthesis and study of the properties of new furan compounds be developed more extensively in order to search for promising physiologically active substances for medicine and agriculture. It is important to create modern continuous technology for the production of furfural, tetrahydrofuran, and furfuryl and tetrahydrofurfuryl alcohols, to develop technology for the production of furan compounds from petrochemical raw material, and to search for ways to create new polymeric materials from furans. Attention was directed to the need for a search for efficient ways to recover and utilize furfural and other furan substances that are present in gaseous discharges and waste waters.

The participants in the conference proposed that the next conference on this topic be held in Riga in 3-4 yr.

PROSPECTS FOR GROWTH IN THE PRODUCTION OF FURFURAL AND ITS DERIVATIVES

M. V. Shimanskaya

"The present state of and methods for the improvement and raising the level of the economic efficiency of the production of furfural and its derivatives by complex refining of pentosan-containing raw material" was the topic of the joint session of the all-union scientific council for the problem of the utilization of pentosan-containing raw material of the Academy of Sciences of the Latvian SSR and the section of the hydrolysis industry of the scientific-technical council of Glavmikrobioprom SM SSSR that was held in Moscow on December 5-6, 1978.

Of the 22 communications presented in this session, 15 were devoted to the problems involved in the improvement of the technology and quality of production and economic indexes in the production of furfural and seven were devoted to the technological processes involved in the refining of furfural.

The principal trends in the development of the manufacture of furfural were set forth in a paper by the assistant chief of Glavmikrobioprom N. S. Maksimenko. In addition to the utilization of the traditional forms of pentosan-containing raw material, primarily plant by-products, in the production of "large amounts" of furfural (we are referring here to factories with a capacity of 10,000-12,000 tons) — he projected the utilization of wood from deciduous trees, in which case the process is based on a two- or one-phase method with hydrolysis in continuously operating apparatuses. Organization of the refining of part of the furfural in furfural factories is proposed.

In the papers a great deal of attention was directed to the problems involved in the improvement of the technological processes for extraction of furfural from hydrolyzates and self-evaporation vapors, increasing the quality of technical-grade furfural, improvement of the economic indexes of its production, and reducing the losses of furfural with manufacturing effluents and waste products. In communications dealing with the technology of the manufacture of large-tonnage products of refining of furfural (furfuryl alcohol, tetrahydrofurfuryl alcohol, furan, tetrahydrofuran, polifurit, and synthetic resins based on the FA monomer, as well as other furan derivatives and preparations for agriculture and medicine that are based on furfural) attention was directed to the problems involved in increasing the

Translated from Khimiya Geterotsiklicheskikh Soedinenii, No. 6, p. 852, June, 1979.

0009-3122/79/1506-0701$07.50

output capacities and the quality requirements for furfural refined by catalytic methods. The principal communications on this topic were presented from the State Institute of Applied Chemistry and the Institute of Organic Synthesis of the Academy of Sciences of the Latvian SSR.