RUSSIAN CHEMICAL REVIEWS
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## THE DECEMBER PLENARY SESSION OF THE CENTRAL COMMITTEE OF THE COMMUNIST PARTY OF THE SOVIET UNION AND THE TARGETS SET FOR CHEMISTRY

The December 1963 Plenary Session of the Central Committee of the Communist Party of the Soviet Union (CPSU) is a new milestone marking our advances in communist construction, development of the nation's productive forces, reinforcement of its might and prosperity, and realisation of the resolutions of the May Plenary Session and the XXIInd Congress of the CPSU.

N. S. Khrushchev's report, and the Plenary Session resolutions trace a great programme of the further development of the chemical industry and the application of chemistry to all aspects of the national economy.

The outstanding role of chemistry is expressed in the resolution of the Plenary Session, supplementing the Leninist formula: "Communism is Soviet power plus electrification of the whole country plus application of chemistry to the national economy".

The feelings of pride and joy of the Soviet people, and of our many friends abroad, give rise to splendid progress in the economic development of our country. In the last decade the gross production of the whole Soviet Union has multiplied by 2.7, the production of the chemical industry and especially of mineral fertilisers by 2.9, of synthetic resins and plastics by 5.6 and of synthetic fibres by 5. The mean annual rate of growth of the chemical industry is 10.8%.

The December Plenary Session of the Central Committee of the CPSU noted that the development of the chemical industry has acquired enormous importance because the use of chemical products and synthetic materials gives rise to fundamental changes in all branches of material production, extending the scope of raw materials, providing new industrial materials, and effective means of improving agriculture and increasing the production of high-quality consumer goods.

Much has been achieved since the May 1958 Plenary Session of the CPSU in advancing our chemical industry. During the five years elapsed since then 5.5 milliard roubles have been invested in the chemical industry, which is one-and-a-half times more than in the preceding 40 years of existence of Soviet rule. Thirty-two new works and 250 large chemical plants have become operational. The production of chemical equipment has multiplied by 2.7. Over 20 new chemical research institutes have been organised.

However, the level of development attained by the chemical industry is till short of the growing requirements of the national economy and does not correspond to the resources of the country. The December Plenary Session has focused the attention of the Party and the people on accelerated development of the chemical industry, widespread application of chemical achievements for technological progress in the national economy, and further increase in the production of agricultural products and consumer goods.

N. S. Khrushchev's report, approved by all the participants of the December Plenary Session, unfolds a formidable programme of further development of the chemical industry over the next seven years. This envisages a more than threefold increase in the productivity of the chemical industry, the total capital investment in the chemical industry and agricultural chemistry being 42 milliard roubles.

Intensive development of the chemical industry will be a big step in raising the whole of the national economy to a higher level and particularly in such vitally important aspects of it as agriculture and manufacture of consumer goods.

The application of chemistry, together with mechanism, means a revolution in agriculture, opening the way to the highest productivity in farming. More effective use of fertilisers is currently one of the most important aims in the struggle for the production of grain and other agricultural products. The considerable efforts of the Party and the Government have led to an increase of mineral fertiliser production from 7 million tons in 1953 to 20 million tons in 1963. The December Plenary Session also planned an ex-

tensive programme for the production of mineral fertilisers, weed-killers, chemical poisons, and other crop-protecting substances, in order to fulfil the country's economical requirements. It has been estimated that by 1970 the agricultural needs will amount to 70–80 million tonnes of mineral fertilisers, 800–900 thousand tonnes of insecticides, fungicides, and weed-killers. To meet these goals in the production of fertilisers the capacity of the existing plants must be increased by about 20 million tons and 55 new plants must be built, of which 28 are for nitrogeneous fertilisers, 19 for phosphate fertiliers, 6 are potash mines and 2 are for production of phosphate meal [19 for superphosphate and 2 for bone meal ? (Ed. of Translation)].

These goals will be achieved by speeding up the construction of new plants, as well as workshops and individual production units at existing factories. In addition to the increased volume of production of fertilisers and chemical poisons for agricultural purposes their quality and range must also be improved.

At the moment a considerable proportion of the fertilisers supplied to agricultural undertakings are inadequate in terms of nutrient components; for example, of the potassium fertilisers about one-half are crude potassium salts. The situation is similar in the case of phosphate fertilisers.

In future the new plants will be producing mainly highly concentrated mixed fertilisers to enrich the soil with all the necessary nutrient substances in the required amounts and proportions.

The development of agricultural chemistry gives rise to new scientific problems, requiring profound and systematic research into the synthesis of the most effective mineral fertilisers, especially highly concentrated and complex ones, development of economical methods for their manufacture, production of optimal mixtures of fertilisers for the main soil and climatic zones and the most important crops, as well as the production of new effective agents against weeds, pests, and crop diseases.

The Plenary Session has also outlined a comprehensive programme for the development of the manufacture of clothing, footwear, and other consumer goods based on products of the chemical industry. The target production of synthetic fibres for 1970 is 1.35 million tonnes. This will serve as a basis for qualitative changes in the textile industry, with a changeover to extensive production of knitted fabrics, artificial leather goods and non-woven fabrics, with consequent improvement in the quality of the goods, greater efficiency of production and reduction of cost.

The target production of plastics and synthetic resins for 1970 is 3.5–4 million tonnes.

Plastics should largely replace non-ferrous metals whenever it is economically and technologically possible; they should also be widely used for the manufacture of machine components and pipes, and for treating wood, especially for floor coverings, finishing materials, sanitary-technical equipment, etc.

An important goal put forward by the Plenary Session is the organisation of full-value replacements of raw food materials so that by 1967–1968 no grain, sugar, vegetable oils, or other foodstuffs will be used for technological purposes.

Among the tasks of the fine chemicals industry, also considered by the December Plenary Session, are the creation of a pure reagents industry and production of super-purity metals and various equipment needed for further scientific and industrial developments.

An extensive development of theoretical and applied chemical research has been outlined for Soviet science.

Having directed the work of scientific research organisations towards the creation of new materials and the development of more suitable, simple, and economical technological processes, the Plenary Session of the Central Committee of the Soviet Communist Party paid particular attention to the need for completing promptly the development of production methods, of more effective fertilisers and chemical pesticides for crops, new plastics, synthetic fibres, synthetic rubbers, dyestuffs, lacquers, pigments, and other chemical products.

Special stress was laid on the need to ensure rapid incorporation of scientific advances into industry and to attain the highest technological levels in the chemical industry.

It is also most important to develop the fundamentals of chemical technology and to create methods of small-scale testing and calculating technological processes with the help of computers.

The programme for the rapid development of the chemical industry, agriculture, and light industry adopted by the December Plenary Session is of the utmost national importance, with enormous bearing upon communist construction, economic development and reinforcement of the country's might.

The rewarding task of all workers in chemical science and industry is the creative and prompt fulfilment of all the goals of the development of chemical science and the incorporation of chemistry into the national economy.

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# ADDITION OF ALCOHOLS AND MERCAPTANS TO COMPOUNDS WITH TRIPLE BONDS

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