

# INFORMATION

## RAISING THE TECHNICAL LEVEL AND QUALITY OF CHEMICAL AND PETROCHEMICAL PROCESS EQUIPMENT

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In June 1965, an All-Union Conference on improving the technical level, quality, reliability, and service life of equipment manufactured by chemical and petrochemical process machinery plants, was held in Kiev under the auspices of the State Committee for Chemical and Petrochemical Process Machinery (under the jurisdiction of the USSR State Planning Commission), jointly with the Central Committee of the Trade Union of Machinery Production Workers. Over 350 representatives of plants, research institutes, party bodies, trade union organizations, national youth organizations in the branch of industry concerned participated in the work of the conference.

A report on the basic trends at work in the development of chemical, petrochemical, and paper and pulp process machinery over the 1966 to 1970 period, and on the problems confronted by the staffs of research and design organizations and industrial plants tackling the problem of improving the technical level, quality, reliability, and service life of process equipment was delivered by the chairman of the State Committee for Chemical and Petrochemical Process Machinery (USSR State Planning Commission), K. I. Brekhov.

The report took note of the characteristic annual increase in production volume over the past half-decade, accompanied by broader acceptance of new equipment in industrial practice. The volume of chemical equipment production in 1964 was triple the 1958 level, or higher, and the volume of petrochemical process equipment doubled in that time. Something in the order of 2000 new specimens of machinery and equipment were developed and manufactured in that time. Regular production of 780 types of process equipment has been achieved. Over 200 obsolescent items have been taken out of production. The technological level of production is being improved steadily.

But the mounting demands of the national economy for equipment manufactured by plants in this branch of industry are still far from satisfied either in terms of production volume or in terms of technical level and quality of the machinery. The principal reasons for this lag are shortcomings in the organization of research and development work, in the low level of technology, in the organization of production at machinery plants and institutes, and insufficient development of specialized services. It was stressed that rapid specialization of plants and institutes, promotion of creative collaboration between research institutes and plants, improvements in technological preparation and organization of labor at the plant level, expansion of the production base of institutes, setting up special technological institutes, and finding ways to clear bottlenecks and delays in deliveries of materials and parts, are prerequisites to eliminating these shortcomings.

Presentation of seven papers followed.

S. P. Chistyakov, director of VNIPTkhimmash, delivered the first report. He rendered an account of the institute's work in achieving an even flow of paper work and prompt service to customers with ratings which guarantee manufactured articles and processes of a high technical level. The institute is engaged in raising the level of technological preparation at plants. In collaboration with the Penzkhimmash plant, the institute has drawn up serious measures directed to quality improvement. A bureau on organization of labor has been set up at the institute.

Director A. V. Kuramzhin of the Uralkhimmash plant presented a highly interesting report on the plant's experience in scientific organization of labor at the workbench level. The reporter told of measures for improving the organization of production at the plant, the purpose and procedure of plans drawn up for scientific organization of labor, and problems now looming ahead. A labor safety office has been established in the plant. The adoption of scientific organization of labor plans has resulted in some specialized departments handling particular types of work, in intensified specialization within departments, and in heightening the role played by socialist competition (results

of which are checked every month). 1964 labor productivity went 4.3% over the planned level; each worker earned 600 rubles over his 1963 earnings; striking improvements were achieved in the pacing of finished products coming off the line (55% increase over two ten-day periods in each month), and the amount of scrap was curtailed.

E. I. Kurochkin, secretary of the VLKSM\* committee at the Penzkhimash plant, spoke next. He told of the participation of Young Communist League and Youth Members in the struggle to improve quality and place guaranteed products on the market. The reporter emphasized that the plant is one of the Young Communist League's test cases for concentrated efforts in the chemical processing industry, and cited the results of the plant staff's successful work. A measure of the plant's success here is the reduced number of claims returned by customers against guarantees and the reduced amount of scrap in production.

Other plants throughout the nation are beginning to share in this honor.

K. A. Korol'kov, director of the Fastov Machinery Plant "Red October," spoke on the implementation of new technology in the production of enamel-coated chemical equipment and on improving the quality of enamel coatings. The factory specializes in the production of acid-stable, alkali-stable, and heat-resistant enamel-coated equipment. Many new production lines have been set up and new equipment has been introduced. This has resulted in improved quality and heightened labor productivity. The plant is now working on ways of adapting a new thermo-stable enamel to production tasks; enamel coating on both sides of complicated shapes has been worked out as a production process, and work is still continuing on further improvements in the fabrication of enamel-coated equipment.

A report by chief engineer I. I. Nikitin of the Frunze plant at Suma dealt with ways to expedite the manufacture of high-capacity opposed-piston reciprocating compressors. The reporter stated that a special department with a testing station had been built at the plant to handle this line of production. The report also mentioned inadequacies in the compressors manufactured, shedding light on the reasons for flaws and on ways of eliminating them.

Secretary N. V. Korolev of the Kiev regional committee of the Trade Union of Machinery Workers reported on the development and promotion of socialist competition in chemical machinery plants of the Kiev sovnarkhoz [council of the national economy; regional body] aimed at raising the technical level and reliability of equipment manufactured and at lengthening service life.

New advanced technological processes adapted to foundry work were reported by V. G. Gorenko, chief metallurgist of the "Bol'shevik" plant. Advanced processes are now in use in the plant's foundry; gas-flame cleaning of castings, new equipment, a flexible mechanized production line for fabricating rod shapes from loose flowing materials, and controlled by a single operator, are featured. A heat treatment shop and an induction treatment section have been inaugurated. Quality and service life have both undergone significant improvement.

A discussion involving 20 delegates followed the presentations.

Chairman K. I. Brekhov of the State Committee for Chemical and Petrochemical Machinery (USSR State Planning Commission) presented some final remarks.

The conference adopted a resolution taking note of the principal paths open in improving technical levels, quality, reliability, and service life.

The recommendations of the conference are:

Research institutes, planning and design organizations, and production plants in the chemical, petrochemical, and allied branches of process machinery industry should include the development and fabrication of new, advanced types of equipment and complete production lines capable of producing goods in no way inferior to the best Soviet or foreign wares, in regard to technical level, cost, reliability, service life, outer finish, or convenience in operation, in all phases of their planning activities; they should work to improve the technical level of existing machinery and equipment to bring them up to the best wares available worldwide, with a target date of 1967, the 50th anniversary of the Soviet State, and should see to it that obsolete forms of equipment are taken out of production. To this end, a careful check should be made of governmental standards now in use, and of existing engineering specifications for the most important forms of equipment manufactured, and proposals should be elaborated for revising all obsolete governmental standards and engineering specifications and for developing new ones; normalization and unitization of parts and subassemblies in machinery and equipment must be intensified; specifications must be drawn up for the attention of plants providing semifinished products and parts, with a view to raising the technical level of the final

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\* All-Union Lenin's Young Communist League

machinery; new designs of machinery and equipment are needed to improve working conditions and work safety; the use of low-alloy steels, duplex metals, modified and low-alloy cast irons, new and advanced nonmetallic materials, low-cost metal shapes, must be expanded in the design of process machinery and equipment; uniform strength of parts must be included as a design factor.

The State Committee for Chemical and Petrochemical Process Equipment and its research and design organizations should see to it that laboratories and testing stations in institutes are equipped with all the necessary equipment and instrumentation, that new experimental and pilot plants be built, and that existing experimental and pilot plants be properly equipped and instrumented, with all the necessary process control equipment.

Industrial plants must continually improve the technological level of production, seek to develop and adapt to production standard technological processes, multiple-station processing techniques, and advanced technological processes. Reliability and service-life inspection departments must be set up in all industrial plants in 1965-1966 for regular sampling and analysis of information on the performance of machines on the line, for data on the length of service life of individual parts and assemblies, and to single out the determining factors in reliability. Continuous production planning following the method of the Novocherkass electric train works must be achieved in 1966 in all plants, with scientific organization of labor at the workbench level using the experience of the Uralkhimmash plant and others. The technical training of workers and of engineering and technical personnel must be improved, with special attention given to training in quality, reliability, and service-life inspection and also to industrial arts aesthetics; the experience of the advanced Saratov plants in the production of flaw-free wares and in prompt delivery to customers should be applied to advantage on a broad scale.

In conclusion, the conference adopted a statement entitled "Appeal to all workers, technicians, engineering and scientific personnel, of research institutes, design and planning organizations, in the chemical, petrochemical, and allied branches of machinery industry." This appeal stressed that workers in the industry should aid in speeding up the development of these branches of the industry to the point where the amount of chemical process equipment produced in 1970 will be double the 1965 level, the volume of petrochemical process equipment will be 1.6 times the 1965 level, compressors will be produced in 2.2 times greater volume, and the production of equipment for the paper and pulp industry will have been increased by a factor of 2.5. The appeal highlighted the goal of achieving an improved technical level in machinery and equipment matching the highest world levels, and of removing obsolete types of equipment from production by 1967, the 50th anniversary of the Soviet state.

The conference calls on all workers, engineers and technicians, and scientists in the industry to promote a wide-scale development of socialist competition with the idea of improving the technical level, quality, reliability, and service life of equipment as a worthy way of meeting the 50th anniversary of Soviet power.