In 1996, Tomsk Polytechnic, among the oldest universities in Russia, celebrated its centenary. A leading institution of higher learning, it can boast a wealth of traditions in scientific and technological training and research.

Tomsk Polytechnic ranks first (among Russia's 145 institutions of higher learning) on the rating list of the Russian Association for Engineering Education and fifth (among a total of 65) on the rating list of the Association of Technical Universities. At the Education of Siberia '96 and Science of Siberia '96 exhibitions held in Novosibirsk, Tomsk Polytechnic was awarded two diplomas in the Gold Medal competition.

In 1997, Tomsk Polytechnic added instruction in three more specialties: information systems in economics; environmental protection and rational use of natural raw resources; and engineering environmental protection (in power generation).

By the Russian Federation President's decree, Tomsk Polytechnic has been included in the state register of the cultural heritage of Russia.

The Department of Physical Chemistry of Silicate and Inorganic Technology, which is part of the University's Faculty of Chemical Engineering, is among Tomsk Polytechnic's oldest divisions. It has been the fountainhead of many ideas and discoveries widely known both in and outside Russia.

This issue of the Journal contains a collection of papers by the Department's staff.

THE 101ST ANNIVERSARY OF TOMSK POLYTECHNIC

Professor V. I. Vereshchagin

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In May 1996, Tomsk Polytechnic celebrated its centenary. Known until 1992 as the Tomsk Polytechnic Institute, the first to be founded in Asiatic Russia, it has played an important role in tapping the wealth of Siberia and the Russian Far East and in building up the country's industrial and defense potential.

In the past hundred years, it has trained over 100 thousand engineers, hundreds of doctors, and thousands of candidates of science. Many of them have become the pride of Russian science, prominent statesmen and public figures, and outstanding captains of industry.

Tomsk Polytechnic has helped with personnel, advice, materials, and physical facilities in setting up more than 25 institutions of higher learning and research in Siberia and Kazakhstan.

Siberia's oldest establishment of engineering education, it was brought into existence in response to the needs of the developing industry in that region and the construction of the Trans-Siberian Railroad. By tradition, it is assumed that Tomsk Polytechnic was founded on April 29 (May 11, new style), 1896 when Czar Nicholas II signed into law the State Council's Resolution of March (26), 1896 to set up a practical technical institute in Tomsk [1]. Taking active part in its foundation and organization were Finance Minister S. Yu. Witte and the famous chemist D. I. Mendeleev [2].

Instruction at what was then called the Tomsk Technological Institute began on October 9 (21), 1900 in the mechanics and chemistry faculties. In 1901, a mining faculty and in 1902 a civil-engineering faculty were opened. In fact, the institute was conceived as a diversified establishment of higher learning of the polytechnic type from the outset. Every faculty was to train engineers in a gamut of specialties essential for Siberia's growing economy of the time.

The type and structure of the Tomsk Institute were conceived and formulated by E. L. Zubashev, its first director [2].

The Department of Physical Chemistry of Silicate and Inorganic Technology, founded as part of the Faculty of Chemistry in 1901, started as a laboratory of mineral chemical engineering. The first to hold its chair (from 1902 to 1909) was Professor Aleksandr Eduardovich Sabek (1864 - 1909). At the same time, from 1904, he was the dean of the Faculty of Civil Engineering. From 1909 to 1915, the Laboratory of Mineral Chemical Engineering was headed by Professor Vladimir Filippovich Yuferov (1877 - 1937) who transferred to the Novocherkassk Polytechnic Institute in 1915 [1].

But it was Professor Ivan Fedorovich Ponomarev (1882 - 1982) who played the decisive role in making the Department of Silicate Technology what it is today.

Professor Ponomarev settled in Tomsk in 1918 and until 1939 all of his activities as a scientist and a teacher were associated with the Tomsk Technological Institute and with growth of the silicate industry in Siberia. From 1921 to 1926, Professor Ponomarev was the dean of the Faculty of Chemistry. Coming back from a long visit (between October 1926 and May 1927) to Western Europe where he gathered first-hand knowledge about production practices at more than 100 silicate plants in Germany, Denmark, Britain, Belgium, Czechoslovakia, and Italy, Professor Ponomarev launched an intensive program whose objective was to organize silicate manufacture and research on silicate chemistry and technol-
In 1928, he took part in founding the Ural Institute of Silicates (Sverdlovsk) and the Siberian Ceramics Station as part of the Department of Mineral Chemical Engineering at the Tomsk Technological Institute, which was reorganized in 1929 into the Siberian Institute of Building Materials and relocated to Novosibirsk. In 1929, Professor Ponomarev reorganized the Department of Mineral Chemical Technology into a department of silicate technology.

While at the Tomsk Technological Institute, Professor Ponomarev published over 100 papers and guided the training of 136 engineers in silicate technology.

In 1939, Professor Ponomarev went back to the Novocherkassk Polytechnic Institute as the head of the Department of Silicate Technology.

Among Professor Ponomarev’s disciples were the now full member of the Academy of Construction and Architecture A. V. Volzhenskii (a 1925 graduate, he worked at the Tomsk Technological Institute until 1928); A. T. Logvinenko, Dr. Sc. (Tech.), who was, from 1944 to 1977, director of the Institute of Physicochemical Foundations of Mineral Processing, Siberian Division, USSR Academy of Sciences; and Professor P. G. Usov (a 1936 graduate). Dr. Logvinenko headed the Department of Silicate Technology from 1939 to 1941, whereas from 1941 to 1943 its head was Professor K. I. Shtaub.

The traditions laid down by Professor Ponomarev were carried on by a disciple of his, Professor P. G. Usov (1905 – 1977). He held the chair from 1943 to 1977. In this period, the Department’s field of research took its final shape, with main emphasis placed on studies of the material and mineral composition of promising new deposits of mineral raw materials in the Siberian region and the development of methods for processing of natural and secondary raw materials for ceramics, glass, and cements. Working side by side with Professor Usov were associate professors A. V. Petrov, N. S. Dubovskaya, N. F. Voronova, and É. A. Guber. In this period, the department’s staff were the collective author of several monographs summing up research on various types of silicate raw materials in Siberia [3 – 5].

Today, the Department’s staff are largely Professor Usov’s disciples (see Fig. 1). Since 1979, Professor V. I. Vereshchagin has held the chair.