The work of the Learned Mining Committee in Imperial Russia: 1825–1917

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Abstract. The article describes activities of the Learning Mining Committee, an administrative body that existed in the Russian Empire from 1825 to 1917. It analyzes the reasons for creating the Committee and describes in brief the changes in the legal status of the Committee in the public administration system of the Russian Empire. It is analyzed the organization's Charter, as well as the conditions for joining it. Most of the article is devoted to the analysis of publications of the Committee on the history of metallurgy. One of the sources of research was the Journal of Mining. The Committee has published it from 1825 to 1917. The article identified and analyzed forty-seven publications on the history of metallurgy in the Journal of Mining. One of the research objectives was to determine the professional affiliation of the authors of historical articles. The analysis revealed that the mining engineers, officials and local historians were the authors of that works. However, in all publications, they paid more attention to socio-economic history than to the history of technology. The article also analyzes books on the history of metallurgy that were published by the Committee. The research data may be used in further research on the historiography of the history of metallurgy. The article is of interest to researchers of the history of science and technology.

1. Introduction

Mining and metallurgical industry has been one of the key sectors for the Russian state since the 17th century. During the 18th century, large metallurgical plants were built in the Urals, and Russian Empire became one of the world's leaders in pig iron and steel production [1]. However, in the early 19th century, the Russian mining and metallurgical industry plunged into a deep crisis mostly due to the still-existing system of feudal serfdom. The serfs comprised the core workforce at the plants and labour productivity was low. Given the availability of cheap labour, the entrepreneurs were not in a hurry to implement technological innovation at their enterprises. As a result, Russia lagged behind in technology, compared to Western industrialized countries.

In the early 19th century, Russia’s share of metallurgy exports in the global economy declined dramatically: «After 1805, Russia began to fall behind Britain in the production of cast iron, and once coke smelting became the dominant technology, Russian production was at disadvantage» [2]. The industrialists, however, always found buyers in the domestic market. Until 1857, the operation of mining and metallurgical industries was secured by trade protection. The import of metals by sea was prohibited. The Russian customs duties on pig and cast iron imported by land comprised 1 ruble 38 kopeks per pood (sixteen kilograms), which was equal to 250% of the cost of English cast iron and 600% of the cost of English pig iron.
Another important problem faced by the Russian mining and metallurgy industry was poor diffusion of technological knowledge to the plants. To address this problem, the Learned Mining Committee was set up in 1825 on the initiative of Emperor Alexander I to publish the first Russian mining and metallurgical journal.

2. Materials and methods
This article is a historiographical study. The source was scientific works published by the Learned Mining Committee. The research analyzed issues of the Journal of Mining for the presence of historical articles.

As a source, we have also reviewed books published by this Committee. To analyze the legal status and practical activities of the Committee, we used office documents stored in the Repository of the Mining Department in the Russian State Historical Archive (repository 33, inventory 77, 79). The methodological basis of the research is formed by the basic principles of modern historical science, primarily the principles of objectivity and historicism.

In this study, we used general scientific methods: analysis, synthesis, comparison and generalization. The comparative historical method allowed us to identify general and unique features in various scientific studies on the history of metallurgy. For reconstructing the biographies of individual historians, we used the biographical method.

3. Learned Mining Committee as Part of Public Administration System
The Emperor Alexander I conducted several reforms in public administration. The obsolete councils were replaced by the ministries. In 1806, the Mining Department was established to provide central administration of mining and metallurgy. Since 1810, the Mining Department was a part of the Ministry of Finance. The Learned Mining Committee was set up in 1825 under the Mining Department [3].

The conservative regime of Nicholas I made some changes in public administration. The militarisation of public administration became a typical feature of the Russian political system. These changes also affected the central administration of mining and metallurgy. In 1834, a militarised Corps of Mining Engineers with officer cadre comprising 320 military officers was founded within the framework of the Ministry of Finance.

The Learned Mining Committee was transferred under the auspices of the Corps and renamed The Learned Committee of the Corps of Mining Engineers. The liberal reforms by the Emperor Alexander II, however, revoked this militarized order of things. In 1863, The Committee regained its former name and, four years later, in 1867, the Corps of Mining Engineers was dissolved. In 1874, The Learned Committee was transferred from the Ministry of Finance to the Ministry of Public Assets, and this was the last change in its administrative status [4].

| Period   | Name                                      |
|----------|-------------------------------------------|
| 1825–1834| The Learned Mining Committee              |
| 1834–1867| The Learned Mining Committee of the Corps of Mining Engineers |
| 1867–1917| The Mining Learned Committee              |

4. The Learned Committee chairmanship and membership
According to the initial Statute of the Learned Committee that had been in force from 1825 to 1834, the Chair of the Committee had to be the Principal of the Mining Cadet Corps. The Mining Cadet Corps was a technical college. It was founded on October 21, 1773, by the empress Catherine the Great and was first known as the Mining School till 1804 when it became the Mining Cadet Corps. Today it is Saint Petersburg Mining University.

The first membership of the Learned Committee was appointed by the Ministry of Finance. The members included the experts in mining and metallurgy, the renowned scientists and government
officials. According to the Statute, new members of the Learned Committee could be appointed by the Ministry or elected by the Learned Committee. Thus, one of the members elected in 1826 was a mining engineer Ilya Tchaikovskovsky, the father of the great Russian composer Pyotr Tchaikovskovsky. The new Statute effective since 1834 changed the procedure for appointing the chair and introducing new members. Under the new regulations, the Chair of the Learned Mining Committee could be the Director of Mining Department or the Chief of Staff of the Corps of Mining Engineers. Since 1894 the Chair of the Learned Committee could also be appointed by the emperor. According to the new Statute, the new members were to be appointed by the Ministry. It was only the members of general meetings who could be elected but they had very little authority [4].

5. The functions of the Learned Mining Committee
Initially, the Statute provided for only two functions of the Learned Committee. The first was publishing activities and the second was reviewing draft technical regulations. With the introduction of the new Statute in 1834, the Learned Committee’s activities also included correspondence with Russian and foreign scientific institutions and societies. Since 1894, the Committee’s functions were broadened considerably to include both spreading scientific knowledge and providing practical guidance. Here, we will focus on publishing activities of the Learned Mining Committee [4].

6. Publishing activities of the Learned Mining Committee
Publishing was the main function of the Learned Mining Committee. The first issue of Gornyi zhurnal (Journal of Mining) was released in 1825. The Learned Mining Committee received a one-time subsidy of ten thousand rubles from the government for publishing this periodical. This amount is equivalent to approximately to five and a half million rubles or seventy thousand and five hundred Euros nowadays. For all mining officials, the subscription price was reduced by 50%. To compensate the Mining Committee for these discount subscription fees, the government annually paid the Committee five thousand rubles. The Journal of Mining consisted of ten sections. The first section was devoted to articles concerned with the mining and metallurgy regulatory framework. Other sections contained the articles on mining and metallurgy and related sciences. Each section had its own editor from the Mining Committee members. However the issues of the Journal had no consistent structure. Each issue comprised only those sections for which the articles were available by the time of publishing. Till 1834, the editorial board worked free of charge. However, with the Journal being commercially successful, the Learned Committee hired the editor-in-chief with a staff of assistants. Even in the first year of its publishing, the Journal garnered 1,093 subscribers, which was more than good for this type of periodicals in the first half of the 19th century. In comparison, in the early 1830s, another journal published by Ministry of Finance, Zhurnal manufaktur i torgovli (Journal of Manufactures and Trade) had only 120 subscribers. The French version of the Journal of Mining was published in 1840. The book entitled Annuaire du Journal des Mines de Russia consisted of five volumes containing the articles published in the Journal of Mining from 1835 to 1839.

In addition to the Journal of Mining, the Learned Committee was publishing other periodicals. Two issues of “Memorandum Books for the Russian Mining People” were published in 1862 and in 1863 [5, 6]. In the 19th century Russia, Memoranda were annually published handbooks that included official information. The Memorandum Books published by the Learned Committee included mining and metallurgy statistics as well as technical and historical papers. From 1864 to 1866, the Mining Department’s statistics was published in the books titled “The Collection of Statistical Data on Mining”. This title was changed twice: from 1873 to 1884, it was “Mining and metallurgy industry in Russia” and, from 1888 to 1918 – the “Collection of statistical data on mining and metallurgy industry in Russia”.

The Learned Committee also published books. In 1869, the Committee announced an all-Russian contest for the best book on the history of Russian mining and metallurgy. This contest was dedicated to the centennial anniversary of the Mining Institute. The winning book - Metals, metal products and minerals in Ancient Russia (Materials for the history of Russian mining) by Mikhail Khmyrov – was
published in 1875 [7]. The book had a dramatic history. The author died in 1872 and in the last years of his life he lived in abject poverty and ill-health. However, Khmyrov was working on this book of his till his death. After his death, the manuscript was sent to the archive. A member of the Learned Committee, Vasily Rozhkov, discovered this book and submitted it to the contest. As a result, it was published.

The Learned Committee provided financial support to the prominent Russian scientists for the publication of their works. Thus, it was due to this support that a Russian scientist, Professor Ivan Avgustovich Timme published his handbooks and scientific monographs such as *Fundamentals of Mechanical Engineering, Mining mechanics*, etc. [8, 9].

The Learned Committee also translated into Russian and published foreign scientific literature. In 1847, a renowned mining official Apollon Mevius was seconded to the Learned Committee to publish the book “Metallurgy of pig and cast iron” translated by him. The book was published the next year and became the first handbook of metallurgy in the Russian Empire [10].

7. Conclusion

After the 1917 October Revolution, the Learned Mining Committee was dissolved and the Journal of Mining first changed its name and then was temporarily suspended. The work of the Committee has impacted the industry’s development in Russia in the 19th century. The initiative to create the Learning Mining Committee came from the Emperor. The scientific organization was part of the system of state administration. Initially, it consisted only of officials and mining engineers who served in state-owned factories. However, with the development of the Committee's activities, domestic scientists, engineers of private factories and economists began to join it. The Committee carried out not only practical but also scientific and educational functions. The Journal of Mining regularly published by the Committee promoted knowledge about the newest technologies of the time. From the very first year of its Foundation, the Committee has paid much attention to the preservation of historical heritage. The Committee not only published historical articles on the pages of its publications but also funded research on the history of metallurgy and mining. The experience of the Learning Mining Committee that existed till 1918 was taken into consideration in setting up the Soviet public administration bodies. The publication of the Journal of Mining was resumed. It is still being published in Russia.

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