## THE REPUBLIC OF AZERBAIJAN

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### **ABSTRACT**

of the dissertation for the degree of Doctor of Philosophy

## THE ACTIVITY OF THE BAKU DIVISION OF RUSSIAN IMPERIAL TECHNICAL SOCIETY

Speciality: 5503.02 – History of Motherland

Field of science: History

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EL HI KATIB

### GENERAL CHARACTER OF THE DISSERTATION

Relevance of the research topic and the degree of its development. After the restoration of Azerbaijan's state independence, significant development was achieved in all fields of social life, including science.

The fact that the President of the Republic of Azerbaijan, Ilham Aliyev, is interested in the problems of scientific workers and periodically meets with them, provides comprehensive assistance to scientific organizations at the state level, and the recommendations given to our historians, scientists, have made it possible to study the history of our country, including new researches in the field of researching historical problems that are still relevant today.

Azerbaijan's history has faced with some periods that need to be re-examined even today. The end of the 19th century - the beginning of the 20th century is one of such periods. It is no coincidence that the great leader Heydar Aliyev, in his speech on January 31, 1997, during a meeting with the managers and leading scientists of ANAS, specifically noted the necessity of re-studying the history of Azerbaijan in the 19th and 20th centuries and said, "I think, one of the tasks facing the academy now is to write the history of the Azerbaijan people in the 19th and 20th centuries."

The last 30 years of the 19th century and the beginning of the 20th century, the study of all issues related to the acceleration of the oil industry development and other production areas, the determination of the characteristics of these processes and the evaluation of the results are one of the most urgent topics and tasks of the modern Azerbaijan history.

So, starting from the second half of the 19th century reexamination and comprehensive analysis of the issues of organization and development of oil and other industries in Azerbaijan is very important in terms of giving new life to historical research.

<sup>&</sup>lt;sup>1</sup> Əliyev, H.Ə. Müstəqilliyimiz əbədidir: [46 cilddə] / H.Əliyev. - Bakı: Azərnəşr, - c. 8. 2006, -s.216.

Even though quite a lot of monographs, dissertations and other research works related to the studied period have been written in our Soviet and national historiography, today need to return to that period and investigate topics that have been left out of historical research or have been little touched on.

One of such topics or problems is the "Baku Branch of the Russian Imperial Technical Society" founded in 1879 which is an indispensable source for historical research. Only a few books of this society have been published and its activities are very briefly mentioned.<sup>2</sup>

Representatives of several generations of researchers, while evaluating the results achieved in the oil and other industrial fields, turned to the materials resulting from the activities of the Baku Division of the Russian Imperial Technical Society" (hereinafter RITS) but nothing was said about the fact that the first address of their origin was the Baku Division of RITC.

The research problem has never been investigated as a special topic either in monographs or dissertations. Only in several books and articles some facts were mentioned to be taken from activities of the Baku Division.

Russian historiography of the late 19th and early 20th centuries paid some attention to the oil industry and its history. However, they are factual by nature and are not important in terms of analysis.

The authors of the first articles on this field were S. Gulishanbarov, V. Rogozin and several other authors.<sup>3</sup> The history of the oil industry and improvement of oil refining were the main topics of these works.

<sup>&</sup>lt;sup>2</sup>Кульчицский, В.В. 150 летний юбилей Русского Технического Общества. Инженер - нефтяник //–Москва: Научно- технический журнал, - 2016. №2,-с. 6.

<sup>&</sup>lt;sup>3</sup>Гулишамбаров, С.И. Краткий очерк развития керосинового производства на Кавказе. Краткий очерк развития нефтяной промышленности на Кавказе / С.Гулишамбаров. - СПб: тип. Бр. Пантелеевых, - 1887.- 32 -с.; Рагозин, В. Нефть и нефтяная промышленность / В.Рагозин. - СПб: Тип. т-ва «Обществ. польза», - 1884. - 561 с.

Among other works from this genre, we can show M. Ushakov's works<sup>4</sup> dealing with the oil industry and its products' processing and sale can be mentioned

When talking about the works written before 1907 in Russian historiography, the importance of the works of the prominent Russian chemical scientist D. Mendeleev should be mentioned separately.<sup>5</sup> The value of the scientist's works was that the issues mentioned in his works were tested in Refinery factories and mines in Baku, and he made reports on the work done at the meetings of the Baku Division.

In the 1920s and 1930s, research on the topic of the oil industry in Soviet historiography decreased and almost stopped due to the Second World War.

Among the works written on oil in the 1950s, our attention is attracted by S.Lisichkin's <sup>6</sup>, S.Apresov's <sup>7</sup>, S.Akhverdova's <sup>8</sup>, and V.Parkhomenko's research <sup>9</sup> on the role of monopoly capital in the oil industry, the influence of foreign capital on the Baku oil industry.

In the works of A. Sumbatzade and M. Ismayilov, significant contributions were made to the study of many issues of the history of

<sup>&</sup>lt;sup>4</sup>Ушаков, М.И. Нефтяная промышленность в России / М.И.Ушаков. - СПб: Типография В.Д.Смирнова, - 1912. - 194 с.

<sup>&</sup>lt;sup>5</sup>Менделеев, Дмитрий и Бакинское нефтяное дело в 1886 г. / Д.Менделеев. - СПб: Тип. В. Демакова, - 1887. - 139 с.; По нефтяным делам / Д.Менделеев. - СПб: Изд-во А.А.Карцева, - 1885. - 82 с.

 $<sup>^6</sup>$  Лисичкин, С.М. Очерки по истории развития отечественной нефтяной промышленности. Дореволюционный период / С.Лисичкин. -М.-Л: Гостоптехиздат. - 1954. - 404 с.

<sup>&</sup>lt;sup>7</sup> Апресов, С.М. Из прошлого бакинской нефтяной промышленности / С.Апресов. - Баку: Азернешр, - 1969. -71 с.

<sup>&</sup>lt;sup>8</sup>Ахвердова, С.Г. О роли русских ученых и специалистов в развитии нефтяной промышленности в XIX веке // - Баку: Известия АН Аз. ССР., Серия общественных наук, - 1960. №6,- с.161 - 173.

 $<sup>^9\</sup>Pi$ архоменко, В.Е. Д.И.Менделеев и русское нефтяное дело / В.Пархоменко. - Москва: Изд-во АН СССР, - 1957. - 386 с.

oil production, processing, and oil industry in Northern Azerbaijan in the 19th century. 10,11

In Azerbaijan SSR by conducting scientific research on the oil industry history M. Mustafayev's<sup>12</sup>, G. Hashimov's<sup>13</sup>, V. Samadov's<sup>14</sup> and D. Seyidzade's<sup>15</sup> newly published books can also be mentioned.

Begining from 1970, the researches related to the history of Baku oil industry became one of the main topics in Azerbaijan Soviet historiography. The study of oil and related issues in the works of M. Ismayilov and N. Ibrahimov<sup>16</sup>, A. Gadirli<sup>17</sup>, E. Muradaliyeva<sup>18</sup>, R. Ismayilov<sup>19</sup>, and S. Aliyarov<sup>20</sup> confirmed this opinion once again.

Information about the participation of the prominent Azerbaijani entrepreneur and philanthropist H.Z.Taghiyev and other representatives of the national bourgeoisie in the activities of the Baku Division and solving related problems of the Baku oil industry were

 $<sup>^{10}{\</sup>rm Cym}$ батзаде, А.С. Промышленность Азербайджана в XIX веке / А.Сумбатзаде.

<sup>-</sup> Баку: Изд-во АН Азербайджанской ССР, - 1954. - 501 с.

 $<sup>^{11}</sup>$ Исмаилов, М.А. Промышленность Баку в начале XX века / М.Исмаилов. - Баку: Элм, - 1976. - 153 с.

<sup>&</sup>lt;sup>12</sup> Мустафаев, М.М. Из истории развития Биби-Эйбатского нефтяного месторождения / М.М.Мустафаев.-Баку: Азернешр, - 1961. - 72 с.

 $<sup>^{13}</sup>$ Ашумов, Г.Г. Азербайджанские нефти / Г.Г.Ашумов. - Баку: Изд. АН Азерб. ССР, - 1961. - 555 с.

<sup>&</sup>lt;sup>14</sup>Самедов, В.А. Нефть и экономика России (80-90-е годы XIX века) / В.А.Самедов. - Баку: Элм, - 1988. - 102 с.

<sup>&</sup>lt;sup>15</sup>Сеидзаде, Д.Б. Из истории азербайджанской буржуазии в начале XX века / Д.Б.Сеидзаде. - Баку: Элм, - 1978. - 146 с.

<sup>&</sup>lt;sup>16</sup>İsmayılov, M., İbrahimov, N. Azərbaycan neft sənayesinin inqilaba qədərki tarixi. / M. İsmayılov, N. İbrahimov. - Bakı: Elm, - 1991. - 282 s.

<sup>&</sup>lt;sup>17</sup>Кадырли, А.М. Из истории развития дореволюционной нефтедобывающей промышленности / А.Кадырли. - Баку: Элм, - 1970. - 85 с.

<sup>&</sup>lt;sup>18</sup> Мурадалиева, Э.Б. Города Северного Азербайджана во второй половине XIX века /Э.Мурадалиева. - Баку: Изд-во БГУ, - 1991. - 172 с.

 $<sup>^{19}</sup>$  Исмаилов, Р.Г. Очерки развития нефтеперерабатывающей и нефтехимической промышленности Азербайджана / Р.Г.Исмаилов. - Москва: Наука, - 1968. - 167 с.

<sup>&</sup>lt;sup>20</sup>Алияров, С.С. Нефтяные монополии в Азербайджане в период Первой мировой войны / С.С.Алияров. - Баку: Типография АГУ, - 1974. - 228 с.

published at different times in the late 19th and 20th centuries, and we have sufficiently used such kind of works in our research.<sup>21</sup>

Many books and articles written on the development of the oil industry in the years after the restoration of our state independence are also of some interest. As an example, we can mention the researches of A. Mehdiyev<sup>22</sup>, N. Ibrahimov<sup>23</sup>, H. Amirguliyev<sup>24</sup>, K. Ochagova<sup>25</sup>, S. Ryjov<sup>26</sup>, A. Matveychuk<sup>27</sup>, M. Mir-Babayev<sup>28</sup>, E. Movsumzade<sup>29</sup>, S. Rustamova<sup>30</sup> and T. Aydamirov.<sup>31</sup> It should be specially mentioned that the work of the President of the Azerbaijan Republic Ilham Aliyev "Caspian oil of Azerbaijan"<sup>32</sup> published in 2003 is a great contribution to the history and historiography of the oil industry of Azerbaijan.

From the analysis of a number of literatures published in Western European countries and the United States related to the

 $<sup>^{21}</sup>$ Гаджиев, А.Г. Миллионер Тагиев Зейнал-абдин / А.Гаджиев. - Махачкала: б/и, - 2000. - 136 с.; Тагиев, Гаджи Зейналабдин: [Elekrton resurs] / URL: https://dic.academic.ru/dic.nsf/ruwiki/457848;

<sup>&</sup>lt;sup>22</sup>Mehdiyev, Ə.B. Azərbaycan neft sənayesi XIX yüzilin son rübündə /

Ə.B.Mehdiyev. - Bakı: Altay nəşriyyatı, - 2000. - 128 s.

<sup>&</sup>lt;sup>23</sup>İbrahimov, N.A. XIX əsrin sonu - XX əsrin əvvəllərində Bakı şəhərinin mədəni və siyasi həyatı / N.A. İbrahimov. - Bakı: Ozan, - 1997. - 132 s.

 $<sup>^{24}</sup>$ Амиркулиев, Г.Д. История химической промышленности Азербайджана (XIX - начало XX в.) / Г.Д.Амиркулиев. - Баку: Элм, - 1990. - 319 с.

 $<sup>^{25}</sup>$ Оджагова, К.Р. Городское самоуправление Баку в конце XIX - начале XX вв. / К.Р.Оджагова. - Баку: Нурлан, - 2003. -135 с.

 $<sup>^{26}</sup>$ Рыжов, С.Д. История создания Русского Технического Общества // - Москва: Вестник РУДН,Серия История России, -2013. № 4, -c.67-73.

 $<sup>^{27}</sup>$ Матвейчук, А.А. Неизвестная Нобелевская премия // - Москва: Нефть России, - 1999. №5, - с. 96-103.

 $<sup>^{28}</sup>$ Мир-Бабаев, М.Ф. Краткая история азербайджанской нефти / М.Ф.Мир-Бабаев. - Баку:Азернешр, - 2009. - 376 с.

<sup>&</sup>lt;sup>29</sup>Мовсумзаде, Э.М. Зарождение перегонки апшеронской нефти и становление масляного производства / Э.М.Мовсумзаде. - Уфа: Реактив, - 1997. - 296 с.

<sup>&</sup>lt;sup>30</sup>Рустамова, Дж. Я. Из истории предпринимательства в Азербайджане / Дж. Я. Рустамова. - Баку: Изд. БГУ, - 2012. - 334 с.

<sup>&</sup>lt;sup>31</sup>Айдамиров, Т.С. Вывоз бакинской нефти из Азербайджана в конце XIX - начале XX вв. / Т.С.Айдамиров. - Баку: Элм, - 2014. - 368 с.

 $<sup>^{32}</sup>$ Алиев, И.Г. Каспийская нефть Азербайджана / И.Г.Алиев. - Москва: Известия, - 2003. -712 с.

history of the oil industry it is clear that the main focus of these articles is on the study of the positions of foreign capital in the Baku oil industry. We'd like to complete our opinion on the issue by showing two of them.<sup>33</sup>

When talking about historiographic issues related to the problems of the oil industry, we should mention that dozens of candidate and doctoral theses have been written in the historiography of the Soviet, modern Russia<sup>34</sup>, and the Motherland<sup>35</sup>. Although the issues raised in each of them are not mainly related to our research

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<sup>&</sup>lt;sup>33</sup>Даниел, Е. Добыча: Всемирная история борьбы за нефть, денги и власть. Пер. санглийского / Е.Даниел. - Москва: Альпина Паблошир, - 2018. - 622 с.; Гуннар, Хедин. Шведские нефтяные короли: забытые братья Альфреда Нобеля. Пер. с англ. языка / Х.Гуннар.-Стогкольм: ЕкерлидсФорлаж, - 1994. - 561 с. <sup>34</sup>Şahmuradov, A.Ş. XIX əsrin II yarısı - XX əsrin əvvəllərində Azərbaycanda rusların sahibkarlıq fəaliyyəti: / tarix üzrə fəlsəfə doktoru dis. avtoreferatı. / - Bakı, 2000. - 29 s; Алиев, Г.А. Строительство Бакинско-Тифлисской железной дороги: / автореферат дис. кандидата исторических наук. / - Баку, 1986. - 29 с; Велиев, Т.Т. Промышленность и пролетариат Азербайджана в период империализма (кроме Баку): / автореферат дис. доктора исторических наук. / -Баку, 1986. -40 с; Матвейчук, А.А. Техническая интеллигенция в российском нефтяном предпринимательстве во второй половине XIX века: / автореферат дис. доктора исторических наук. / - Пенза, 2000. - 56 с; Самедов, В.А. Бакинский нефтепромышленный район в экономическом развитии России (1880-1900г.): / автореферат дис. доктора исторических наук. / - Баку, 1990. -62 c

<sup>&</sup>lt;sup>35</sup> Əliyeva, G. Ə. XIX -XX əsrin əvvəllərində Şimali Azərbaycanda rusdilli təhsil: / tarix üzrə fəlsəfə doktoru dis. avtoreferatı. / - Bakı, 2014. - 28 s; Xəlilov, P.R. Bakı Neft Sənayeçiləri Qurultayının Səhiyyə və mədəni- maarif sahələrində fəaliyyəti: / tarix üzrə fəlsəfə doktoru dis. avtoreferatı. / - Bakı, 2015. - 32 s; İsmayılov, A.N. Azərbaycan Respublikasının neft sənayesi üçün elmi və mühəndis-texniki kadrların hazırlanması tarixi: / tarix üzrə fəlsəfə doktoru dis. avtoreferatı. / - Bakı, 2017. - 28 s.; Məmmədov, B.Ş. M.Nağıyevin sahibkarlıq və xeyriyyəçilik fəaliyyəti: / tarix üzrə fəlsəfə doktoru dis. avtoreferatı. / - Bakı, 2001. - 30 s; Paşayev H.M. XIX əsrin II yarısı-XX əsrin əvvəllərində Rusiya və Azərbaycan iqtisadiyyatının inkişafı: / tarix üzrə fəlsəfə doktoru dis. avtoreferatı. / - Bakı, 2015. - 28 s;Талыбова, С.Г. Культурно-просветительская И благотворительная деятельность азербайджанской буржуазии: / автореферат дис. кандидата исторических наук. / - Баку, 1994. - 29 с.

topic, we have used some materials in order to make comparisons and analyzes at certain points.

The only reason connecting all above mentioned works with our research from the historiographical point of view is the pre-researched issues in those works as research objects.

As it can be seen, there is no specific book, monograph, or dissertation related to the topic we have chosen in none of these works and studies we have faced.

The object and subject of the research. The object of the research is the study of the historically important results of the activity of the Baku Division of the Russian Imperial Technical Society at the end of the 19th - beginning of the 20th century, application of innovative methods, investigation of natural resources, the expansion and dissemination of scientific knowledge, in the field of cultural and educational works, as well as to include in the scientific materials aimed to the improvement of Baku city, but which have never been studied so far, to comprehensively study the results of the impact of these works on the economic and cultural life of Northern Azerbaijan.

The results of the activities of the Baku Division of RITS and the determination of the significance of the studied topics and materials in Azerbaijan history from the end of the 19th century to the beginning of the 20th century also necessitated the selection of the research topic.

In this research work, an attempt was made to solve the following specific tasks arising from the main scientific goal:

- the determination of important facts and points related to the forms of effective activity among oil entrepreneurs, other industrialists and the structures of the RITS Baku Division, together with engineering and scientific workers;
- to substantiate facts that the creation of production unity with scientific discoveries allows to earn additional income of a hundred thousands of rubles or to save these funds:
- the determination of the importance of the services of scientists and engineering workers in streamlining production in oil and other fields and improving the obtained results;

- to examine and summarize the results of the activities of the RITS Baku Division in the study and research of the natural resources of Northern Azerbaijan;
- to determine the results of the RITS Baku Division's activities in the field of improvement of Baku city;
- to show the importance of RITS Baku Division's work in opening technical vocational courses, a library, museum and other cultural and educational activities.

The methods of the research. The historical approach, scientific objectivity was determined by taking into account mathematical research method in historical studies, the latest achievements of world history science and homeland historiography. While studying sources, interpreting facts, historical comparison, analysis, etc. methods were used. The dissertation was done by the method of analyzing, summarizing, drawing conclusions and expecting chronological sequence of materials. The research work is based on the historical study of the sources.

#### The main theses to be defended:

- the importance of the materials related to the Division's activity for the study of various problems of Azerbaijan history;
- the results of the work carried out by the RITS Baku Divisionthat helped to achieve high efficiency and income in the oil industry and other areas of Northern Azerbaijan;
- issues of cooperation of entrepreneurs representing oil and other industries with the Division;
- determination of new materials related to the participation of representatives of the national bourgeoisie in the activities of the Baku Division;
- the results of the activities of the cultural and educational organizations established by the Baku Division;
- participation of the Baku Divisionin the study and research of the natural resources of Northern Azerbaijan;
- practical and effective results of cooperation of the department with local management structures.

The scientific novelty. Dissertation is the first work dedicated to the comprehensive and objective study of the results of the RITC Baku Division's activities, the application of technical innovations and scientific discoveries in various fields of industry in Northern Azerbaijan, the study of our natural resources, the development of scientific knowledge, the inclusion of hitherto unexplored materials related to cultural-educational and other fields, the impact on economic, political, cultural life.

Theoretical and practical significance of the research. Taking into account the importance of the subject, as well as the fact that it has not yet been the object of a special dissertation, and involving a large part of various sources into the scientific circulation for the first time, a number of valuable ideas related to the contribution of the Baku Divisionto the development of oil and other production areas, the improvement of Baku city, the identification of natural resources of the region and the impact on the development of culture were determined.

The materials, results and generalizations of the dissertation can be used for writing summary works on the history of Azerbaijan, primarily on the history of the oil industry and technical sciences, compiling textbooks for collages, secondary, and higher schools, preparing lecture courses, conducting special courses and seminars. The dissertation and its separate materials can be of interest to historians, political scientists, politicians, and any reader keen on the history of the Motherland as a whole.

Approbation and usage. Regarding the topic of the dissertation work, the claimant's 7 articles in total have been published in periodical scientific publications recommended by the Higher Attestation Commission under the President of the Republic of Azerbaijan - including 2 abroad, 5 at home, and 6 theses in international and republican scientific conference materials, including 3 abroad.

The name of the organization where the dissertation work was completed. The research work was performed at Sumgait State

University department of "History of Azerbaijan and East European Peoples".

The total volume of the dissertation in symbols indicating the volume of each of the structural elements of the dissertation separately. The dissertation consists of introduction (12 p., 20202), chapter I (52 p., 97576), chapter II (34 p., 61809), chapter III (32 p., 59853), conclusion (5 p., 86) and references in 254 titles (24 pages), in total 161 pages and 248047 characters.

#### THE MAIN CONTENT OF THE WORK

In the "Introduction", the relevance of the topic is justified, the study level is disclosed, the goals and objectives of the research are determined, scientific innovation, methodological foundations, theoretical and practical importance are indicated, and information is given about the approval and structure of the dissertation.

The first chapter of the dissertation called "The main directions of the activity of the Baku Division of the Russian Imperial Technical Society and the efficiency of the achieved results" and consists of 3 subchapters. The first sub-chapter of is called "Establishment and main directions of activity of the Baku Division of the Russian Imperial Technical Society". At the beginning of this subchapter, it is stated that "on March 24, 1879, the Baku Division of the Russian Imperial Technical Society was founded." First of all, this meant that it was an important event in the economic and cultural life of the country. The RITS Baku Division was not only the place where important and new discoveries and innovations were brought to life but also the society that implemented various highly effective scientific and technical discoveries in North Azerbaijan economy.

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<sup>&</sup>lt;sup>36</sup>Гаджыева М.Дж. Создание Бакинского отделения Императорского Русского Технического Общества // - Одеса: Науковий вісник. Міжнародного гуманітарного університету. Випуск 18. Серія Істория. Філософия. Політология, 2019, -c.21.

The role of L. Nobel, N. Putilov, Struve brothers, T. Morozov, D. Shipov and others from authoritative representatives of large industrial circles in the organization of the society, as well as in its effective operation, should be separately noted. "Because the support of representatives of big capital was very important in the implementation of all discoveries and innovations during the Society's existence." 37

The activity forms of the Baku Division members were different. From the first days of its activity, the department was carrying out events covering various production areas. An increase in the Branch staff, and activity directions were also observed. "In 1914, the number of the Branch staff was 140." 38

The activity of the Baku Division was not only related to the oil industry. The activity of the employees of the department was remembered by the high efficiency of various discoveries and proposals in various production areas.

The prominent professors and scientists of the time, engineering and technical workers played a leading role in the activities of the Baku Division. This was the main aspect of its activities.

One of the multifaceted activities of the Technical Society and its local departments and divisions was the organization and publication of various journals. Among the publications of the Baku Division, we should mention the publication of the journal "Works of the RITS Baku Division" (hereinafter ... Works of the Baku Division) magazine. The journal is considered to be the first press that talks about oil issues in Russia.<sup>39</sup>

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<sup>&</sup>lt;sup>37</sup>Кульчицский, В.В. 150 летний юбилей Русского Технического Общества. Инженер - нефтяник // - Москва: Научно- технический журнал, - 2016. №2,с.7. <sup>38</sup>Отчет о деятельности БО ИРТО за 1914 год. Издание БО ИРТО // - Баку: Тип. Труд С.Г.Берладира, 1915, -с.55.

<sup>&</sup>lt;sup>39</sup> Hacıyeva M.C. Rusiya İmperator Texniki Cəmiyyətinin Bakı Bölməsinin materialları Azərbaycanın XIX əsrin sonu XX əsrin əvvəlləri tarixinin öyrənilməsində mənbə kimi // - Sumqayıt: Sumqayıt Dövlət Universitetinin Elmi Xəbərləri, - 2020. cild 16, № 1, s. 49.; Гумбатова, Т. Баку в начале XX века // - Баку: Эхо. 2012, 17 августа. - с.10.

It should be noted that well-known engineers and scientists, their activities played an important role in development and expansion of oil and other industries in Baku.<sup>40</sup>

The second subchapter of the first chapter, named "Activity of the Baku Division of the Russian Imperial Technical Society"states that its activity was not only limited by application of technical innovations to production processes.

One of the special points in the activity of the Baku Division was the forms of cooperation with representatives of industrial circles in the field of preparation of ready-made discoveries and proposals with high profit prospects.

In the activities of the Baku Division, cooperation between oil entrepreneurs and experienced engineering and technical workers, exchanges of ideas on various production problems were often encountered. Information, suggestions and proposals of industrialists and entrepreneurs such as L.Nobel, H.Z.Taghiyev, M.Naghiyev, Sh. Asadullayev, V. Ragozin, I. Hajinsky were the most common forms of this cooperation.

There is also a lot of information about the work related to the organization of exhibitions held in Baku in different years with the aim of promoting technical innovations. The Baku Divisionhas always paid special attention to the progress and results of such events.<sup>41</sup>

Although the majority of members in the Baku Divisionwere foreigners, there are many facts when H.Z. Taghiyev as well as M. Mukhtarov, M. Nagiyev, Sh. Asadullayev, I. Hajinskyand other

www.ourbaku.com/index.php/Харичков Константин Васильевич - химикорганик; Буланова, О. Первый азербайджанский ученый-химик // Эхо. - 2016, - 8 октября. - с. 7.; Джафаров, К., Джафаров, Ф. Нефтяник от Бога // Вышка.

<sup>&</sup>lt;sup>40</sup>Квитко (Квитка), Семен Кузьмич - "Апшеронский " казак:[Elekrton resurs] / URL:https://www.baku.ru/enc-show.php?id=159291&cmm\_id=276; Константин Васильевич. - химик-органик: [Elekrton resurs] / URL:

<sup>2004, 8</sup> октября. - с.8.

<sup>41</sup> Переписка Бакинского Отделения Имперского Русского Технического Общества о приобретении сооружений Международной выставки двигателей внутренного сгорания в Баку// AzərbaycanRespublikası DövlətTarix Arxivi, Fond № 389, siyahı №1, 1-ci hissə, is № 482, vərəq - 1.

Azerbaijani entrepreneurs were also active participants in the implementation of the proposals made by the Society.

M.Mukhtarov, who founded a private drilling company with more than a thousand employees in 1890 and increased his income year by year, "distinguished from other colleagues not only with his productive offersand proposals in this field but also with his competent attitude."<sup>42</sup>

Another oil entrepreneur, M.Nagiyev, who was closely involved in the work of the Baku Division, was distinguished by the fact that he used the services of well-known engineers and technicians of the time in the oil field. In those years, "the invitation and arrival of many scientists and specialists who came to Baku from the big cities of the empire and the world, whose names were later associated with the activities of the Baku Division, took place precisely with the close participation of M. Nagiyev".<sup>43</sup>

It should also be noted that the participation of the above mentioned Azerbaijani entrepreneurs in the activities of the Branch helped a lot to protect our national as well as economic interests.

Another importance of these facts is that they have provided invaluable help in revealing points and situations that have never been mentioned in books written so far about the formation of the national bourgeoisie in Northern Azerbaijan.

The third sub-chapter of this dissertation of is called "The main results of the scientific researches of the Baku Division of the Russian Imperial Technical Society". In this part, it is shown that one of the important directions of the activity of the Baku Division was the cooperation with the famous scientists of that time. The forms of cooperation were either multi-faceted or effective.

<sup>43</sup>Гусейнов, В. Бакинская нефть и нефтяные магнаты Баку // Вышка.- 2002, 9 августа.-с.4.

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<sup>&</sup>lt;sup>42</sup> Договоры заключенные обществом с различными фирмами на производсво буровых работ // Azərbaycan Respublikası Dövlət Tarix Arxivi, Fond № 730, siyahı №2, iş № 7, vərəq - 1.; Буланова, О. Первый азербайджанский ученый-химик // Эхо. - 2016, - 8 октября. -с.7.

The scientist D. Mendeleev, who cooperated effectively with the Baku Division, came to Baku for the first time in 1863. His research on oil industry problems began and continued for nearly 40 years. During his visits to Baku in 1880, 1884 and 1886, he spoke at the meetings of the Baku Division. The scientist's suggestions and recommendations played a great role in the development of the oil industry and were successfully applied in oil refineries of H.Z. Taghiyev, "Nobel brothers" and others in different years.

On May 13, 1886, the main topic of D. Mendeleev's speech at the meeting of the Baku Divisionwas "Development prospects of the Baku oil industry" The scientist's "interpretation of the method of conducting observations on the surface of oil in the Balakhani and Sabunchu oil fields" was also of great importance. The common aspect of what has been said is that the Baku Department was the first place where such effective suggestions of the great scientist were announced.

The discoveries and inventions of the scientist-engineer S.Kvitko, who had special services in the research work of the Baku Division, left a serious mark on the development of the North Azerbaijan oil industry in general.

The scientific novelty and practical importance of such discoveries were highly appreciated by world scientific organizations and influential scientists even far beyond the borders of the empire. Among them were "the use of aluminum for industrial purposes" 46,

<sup>&</sup>lt;sup>44</sup> Мысли Д.И.Менделеева о мерах содействущие развитию Бакинской нефтяной промышленности (из журнала Общего Собрания от 20 августа 1886 г.) // - Баку: Труды БО ИРТО, 1886.№ 2, -c.12–21.

<sup>&</sup>lt;sup>45</sup> Некоторые соображения В.И.Менеделеева о Бакинской нефтяной промышленности (из журнала Общего Собрания от 19 мая 1886 г.) // - Труды БО ИРТО, Баку: 1886.№ 2, - с.1 — 11.; Мысли Д.И.Менделеева о мерах содействущие развитию Бакинской нефтяной промышленности (из журнала Общего Собрания от 20 августа 1886 г.) // - Баку: Труды БО ИРТО, 1886.№ 2, - с.12-21.

 $<sup>^{46}</sup>$ Исследования о применениях алюминия для промышленных целей // - Баку: Труды БО ИРТО, 1895. № 5, - с.63.

"the influence degree of petroleum products on aluminum metals"<sup>47</sup>, "new methods in the analysis and treatment of mineral oils"<sup>48</sup>, "a new and improved version of steam engine machines"<sup>49</sup>, "a machine for removing liquids by air in mines"<sup>50</sup>, "measuring of temperature of the earth cover" <sup>51</sup> and more than a hundred other scientific-practical innovations were certified in Baku Branch.

In the course of researching the articles and other reports published in various issues of "Works" dedicated to the results of the activities of the Baku Divisionin the years 1886-1904, the "Indicator" <sup>52</sup> of information, it became known that there were 83 scientists and well-known experts' writings. Among them, 10 articles by A. Guxman, 20 by K. Lysenko, 21 by K. Kharichkov, 6 by V. Istomin, 7 by S. Kvitko, and 4 articles by each of about 10 people were printed in different issues of the journal and attracted the attention of people interested in those fields (Author's calculations).

Fatulla Rustambayov was one of the Azerbaijani scientists who took part in the research work of the Baku Department. All of F. Rustambayev's suggestions and recommendations were applied directly in practice and helped to achieve considerable efficiency in oil fields. The preparation of the theoretical foundations of the organization of the gas industry in Azerbaijan is related to the scientific activity of F. Rustambayev. The scientist's "calculations and tables confirming the presence of rich oil deposits" in the area known

 $<sup>^{47}</sup>$ Харичков, К.В. Дейстивия нефтяных продуктов на металлический алюминий // - Баку:Труды БО ИРТО, 1896. № 1, - с.16.

 $<sup>^{48}</sup>$ Новости в области и обрботки минерального масла // - Баку: Труды БО ИРТО, 1903. № 3, - с.172.

<sup>&</sup>lt;sup>49</sup>О конструкции паровых машин для нефтяных промыслов // - Баку: Труды БО ИРТО, 1894. № 5, - с.58.

 $<sup>^{50}</sup>$ Подьем жидкостей из глубоких скважин непосредством сжатого воздуха. Выбор рациональной конструкции и объяснение способа действий // - Баку: Труды БО ИРТО, 1910. № 5-9, - с.41.

<sup>&</sup>lt;sup>51</sup>К вопросу о температуре земной коры // - Баку: Труды БО ИРТО, 1892. - с.87. <sup>52</sup>Питерский, Я.М. Указатель статей и заметок, помещенных в "Трудах Бакинского Отделения Императорского Русского Технического О-ва" с 1886-по 1904 г. / Я.Питерский. - Баку: Тип. бр. Тер - Ованесовых, 1904. -86 с.

as Pirallah, which was former called "Artyom" Island, and scientifically based proposals about "building oil drilling facilities in the sea" were ahead of their time for decades.<sup>53</sup>

Mohsun Khanlarov was one of the Azerbaijani scientists closely involved in the research work of the Baku Division. He was the first Azerbaijani chemical scientist. One of the facts showing his participation in the activity of the unit was "the proposal to organize a special chemical laboratory for the study of the composition of oil products and other natural resources, and the fact that many times he presented his views on the issue in general meetings of the unit with reports based on facts. <sup>54</sup>

Another importance of the materials included in this part of the research is that they made an invaluable help in discovering valuable facts and situations that have never been found in books written so far about the formation of the national bourgeoisie in North Azerbaijan, areas of activity and many other issues, and in revising some ideas and conclusions.

The second chapter of the dissertation entitled "Cultural-educational activities of the Baku Divisionof the Russian Imperial Technical Society" consists of two sub-chapters. The first sub-chapter of this chapter is called "Schools of the Baku Divisionof the Russian Imperial Technical Society". In this part, it is said that the work done by RITC Baku Branch in the field of dissemination of technical knowledge among different strata of the population in Baku, especially among employees working in oil fields and factories, should be separately mentioned. It should be noted that these issues have so far been either completely ignored in historical studies and literature, or have been presented in some small articles.<sup>55</sup>

<sup>&</sup>lt;sup>53</sup> Бакинские миллионеры: [Elekrtonresurs] / - URL:https://www.baku.ru/enc-show.php?cmm\_id=112&id=23534&c=938

<sup>&</sup>lt;sup>54</sup> Рахшанлы, Расул.Учёный-химик Мовсум бек Мухаммед бек оглы Ханларов (1857 -1921): [Elekrton resurs] / URL: https://www.baku.ru/blg-list.php?id=105008

<sup>&</sup>lt;sup>55</sup>Из истории создания культурно - просветительных учреждений в Азербайджане в конце XIX - начале XX вв., AMEA Tarix İnstitunun Elmi Arxivi, İnventar № 6779,

Starting from the end of the 19th century one of the main charitable activities carried out by the Council of Oil Industrialists Congress established in Baku in 1884 was the opening of cultural and educational organizations, including a number of schools. The information about this can be obtained in various reports and some research works related to the activities of the congress. <sup>56</sup>

In this case the services provided by the Baku Divisionshould be separately mentioned. The beginning of the activity of the first workers' courses dates back to the 1903/1904 school year, and "a special commission was created to supervise the course the activities" All issues related to the activities of the courses within the department are controlled by the specially organized commission and administration of the courses and were reflected in the annual reports of the department.

Only twice - in 1905 and 1912 reports on the activities of all courses, commission meeting protocols and other important official documents were printed in the form of booklets.<sup>58</sup>

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qutu №239, іş № 239, vərəq - 126.; Таирзаде, Н.К. К истории народного образования в промыслово-заводском районе Баку в конце XIX - начале XX века // - Баку: АН Азербайджанской ССР. Серия история, философия и право, - 1988. № 1, - с. 63 - 64.  $^{56}$ Xəlilov, P.R. Bakı Neft Sənayeçiləri Qurultayının Səhiyyə və mədəni- maarif sahələrində fəaliyyəti: / tarix üzrə fəlsəfə doktoru dis. avtoreferatı. / - Вакı, 2015. - 32 s.; yenə onun: Деятельность «Съезда Бакинских нефтепромышленников» в сфере образования в конце XIX в.

<sup>[</sup>Elekrton resurs] / URL:http://kavkazplus.com/news.php?id=223#.XR7bHegzaUk

<sup>&</sup>lt;sup>57</sup> Отчет о деятельности технических курсов при Бакинского отделения Императорсого Русского Технического О-ва за 1904/1905 учебный год. Издание БО ИРТО / Сост. К.Ярченко. - Баку: Тип. Труд С.Г.Берладира, - 1905. - с. 3.

<sup>&</sup>lt;sup>58</sup> Отчет о деятельности технических курсов при Бакинского отделения Императорсого Русского Технического О-ва за 1904/1905 учебный год. Издание БО ИРТО / Сост. К.Ярченко. - Баку: Тип. Труд С.Г.Берладира, - 1905. - 75 с.; Отчет о деятельности технических курсов при Бакинского отделения Императорсого Русского Технического О-ва за 1911/1912 учебный год. Издание БО ИРТО / Сост. К.Ярченко. - Баку: Тип. Труд С.Г.Берладира, 1912. - 40 с.

The most extensive and important facts about the activity of the technical courses of the Baku Divisionand their results are given in the report compiled for the 1911-1912 academic year.<sup>59</sup>

As the department's library and its extensive network are discussed in another part of the dissetation, we would like to point out a single issue here. On May 1 1909 another innovation was signed in the cultural life of Northern Azerbaijan due to the books bought and donated to the department by the "Syndicate of Drilling Entrepreneurs" for the first time and the department's own library was opened. In the same year, "400 rubles were spent on the purchase of library equipment." <sup>60</sup> We should note that until now no detailed information about this has been given in the any bibliographic literature.

We would like to emphasize one issue, that an important part of the names of the companies, factories and plants represented by the technical worker courses of the department are not given in any literature. Information about their existence at that time and the nationality of their owners can be found only in the mentioned reports of the RITC Baku Branch and in various issues of their annual "Works" journals.

Summarizing the department's 9-year activity of technical worker courses, we can say that 1106 students applied or were sent to the courses, 911 of them were accepted, 165 were rejected, and 471 of them had left their education 61. In this period, 1106 students were enrolled in 53 different professions. The years in which the largest

<sup>&</sup>lt;sup>59</sup> Отчет о деятельности технических курсов при Бакинского отделения Императорсого Русского Технического О-ва за 1911/1912 учебный год. Издание БО ИРТО / Сост. К.Ярченко. - Баку: Тип. Труд С.Г.Берладира, -1912. - с. 4-30.

<sup>&</sup>lt;sup>60</sup> Отчет о деятельности технических курсов при Бакинского отделения Императорсого Русского Технического О-ва за 1911/1912 учебный год.Издание БО ИРТО / Сост. К.Ярченко. - Баку: Тип. Труд С.Г.Берладира, - 1912. - с. 6.

<sup>&</sup>lt;sup>61</sup> Отчет о деятельности технических курсов при Бакинского отделения Императорсого Русского Технического О-ва за 1911/1912 учебный год. Издание БО ИРТО / Сост. К.Ярченко. - Баку: Тип. Труд С.Г.Берладира, -1912. - с.26-28.

number of students were registered in the courses were 1906/1907 (181), 1907/1908 (141), 1908/1909 (142), 1909/1910 (165) and the last 1911/1912. coincided with the years (168)". (Calculations and comparisons were made by the author based on the indicators of source No. 62).

The second sub-chapter of the second chapter of the dissertation is titiled" The library of the Baku Division the Russian Imperial Technical Society". It is shown here that the library of the Baku Division, in addition to its richness, attracts special attention in terms of the placement, protection and rules of use of books. In terms of purpose and specifications of books, the existence of 16 departments is in great interest. Because the books were related to the most diverse fields of science and production, and they consisted of new editions and other aspects.

The first department of the library was called "Architecture and construction art" <sup>62</sup>. 73 books of Russian and foreign authors in different languages were stored here. The content of these books was not only scientific, but also important from a practical point of view.

The second department of the library was called "Geodesy and communication routes" <sup>63</sup>. In 1912, valuable books were stored here under 38 different names, authored by both prominent scientists of that time and people known for their practical activities.

The books in the third department of the library called "Geology, mineralogy, petrography and paleontology"<sup>64</sup> attracted attention from the point of view of containing the latest and important knowledge and information, representing the sciences related to the structure of the earth.there again

 $<sup>^{62}</sup>$  Каталог книг Библиотеки Бакинского отделения Императорского Русского Технического Общества / - Баку: Тип. ТрудьС.Г.Бернадира, - 1911, - с. 2.

<sup>&</sup>lt;sup>63</sup>there again,-c.7.

<sup>&</sup>lt;sup>64</sup>Каталог книг Библиотеки Бакинского отделения Императорского Русского Технического Общества / - Баку: Тип. ТрудьС.Г.Бернадира, - 1911, - с.11-16.

The contents of the books in the fourth department of the library called "Hydraulics and Hydrotechnics" 65 were interesting in terms of many parameters. It is true that although the number of books here was only 85 copies, but it attracts attention from the point of view of the issues covered and practical importance.

The books in the sixth, seventh, thirteenth and fourteenth departments of the library belonged to the fields of natural sciences and included the rarest and most valuable publications in the fields of mathematics, applied and theoretical mechanics, physics, chemistry, electrochemistry and physical chemistry. <sup>66</sup>

One of the richest and scientifically and practically important departments of the library of the Baku Division was the eighth department called "Oil Department" <sup>67</sup>. The main feature of this department was that the books here were of high value and of great practical importance.

Another part of the library of the Baku Divisionwas the so-called "General Division" <sup>68</sup>. It was the place where the most theoretical materials and books were stored. More than 80 percent of the books in this department were printed in the capital cities of Europe and were intended for use by specialists who knew foreign languages.

The last - the sixteenth and the largest department of the Baku Division's library, called "Periodical press", which was extremely wide and contained more publications, which was referred to various professions, was especially important. 1076 different types of magazines, newspapers, information indexes, guidebooks, bulletins, Notes, News, and Works<sup>69</sup> printed in foreign countries and imperial cities in different languages are only the names of a small part of the publications here. To our opinion, it is worth talking a little more about

<sup>&</sup>lt;sup>65</sup>Каталог книг Библиотеки Бакинского отделения Императорского Русского Технического Общества / - Баку: Тип. ТрудьС.Г.Бернадира, - 1911, -с.7.

<sup>&</sup>lt;sup>66</sup>there again, - c.39,41,107,113.

<sup>&</sup>lt;sup>67</sup>there again, - c. 53-67.

<sup>&</sup>lt;sup>68</sup>there again, -c.78-81.

<sup>&</sup>lt;sup>69</sup>Каталог книг Библиотеки Бакинского отделения Императорского Русского Технического Общества / - Баку: Тип. ТрудьС.Г.Бернадира, - 1911, - с.119-137.

this department and the publications stored here. Since its inception, the library has subscribed to 208 foreign publications, and surprisingly all the annual issues of these publications were neatly collected and available to readers. Most of them were publications in the form of bulletins and journals of higher schools and scientific societies in Berlin, Hamburg, Warsaw, Paris, London, New York, Leipzig, Vienna and other cities.

The last chapter of the dissertation is titled "The assistance of the Baku Division of the Russian Imperial Technical Society to the study of our natural resources and improvement of Baku city." The first subchapter of this chapter entitled "The activities of the Baku Division of the Russian Imperial Technical Society in the field of studying our natural resources" states that the Baku Division engaged in propaganda and agitation in various directions and forms among the population of Baku city, and carried out educational work. One of such activities was the Baku Division museum. The explanations added by the museum staff and other specialists to the large and small items stored in the thirteen departments of the museum are very productivenot only for the ordinary viewers, but also for the historian-researchers. <sup>70</sup>

One of the reasons why the materials of the museum of the Baku Divisionwere important for our research was that during the work done to study the reserves of our natural resources a large part of the items were collected here.

The museum, which consisted of 13 departments and the objects stored there, allows you to visually familiarize yourself with materials that are extremely important in terms of the study of the economy of Northern Azerbaijan at the beginning of the 20th century, the historical places of Baku and many other issues.

The vast majority of items in the museum's departments showed that Northern Azerbaijan was rich in natural resources. It was also important for determining their locations, their reserves, and studying

 $<sup>^{70}</sup>$ Каталог музея Бакинского отделения Императорского Русского Технического Общества / - Баку: Тип. ТрудьС.Г.Бернадира, - 1912, - 98 с.

and investigating issues related to the agrochemical composition of the soil. An important part of the items exhibited here were samples collected during expeditions held in different regions of Northern Azerbaijan.<sup>71</sup>

When talking about the discovery of new oil deposits, as a tradition, "we accept that these works are limited only to the city of Baku and the Absheron peninsula." However, after investigating the results of the work carried out by the Baku Division in the direction of finding new oil deposits, it was possible to obtain new information about the existence of sufficient oil reserves in other regions of Northern Azerbaijan. <sup>73</sup>

In the third edition of the "Works" of the Baku Division dated 1897, it was stated that during the exploration work carried out in the

<sup>&</sup>lt;sup>71</sup> Каталог музея Бакинского отделения Императорского Русского Технического Общества / - Баку: Тип. ТрудьС.Г.Бернадира, - 1912,-с. 9.31.63.69.

<sup>72</sup> Дело о выдаче жителям гор. Елизаветполя Ады беку и Мешади беку Рафибековым, Молле Бабаеву и др. разрешениенп проведение разведки открытого ими месторождения железного руды и др. на казенной земле жителей сел. КабатханаЕлизаветпольского уезда // AzərbaycanRespublikası Dövlət TarixArxivi, Fond № 92, siyahı №1, 1-ci hissə, iş № 1211, vərəq - 1.; Заявление жителей сел. Юхары Айыплы Беюк Ага Карабекова и село Баданкенд Артема Шушанова, переписка с Елизаветпольском уездным начальником и о выдаче разрешения на разработку открытых залежей меди и серебра // Azərbaycan Respublikası Dövlət Tarix Arxivi, Fond № 92, siyahı №1, 1ci hissə, iş № 251, vərəq - 1.; Заявление жителей сел. Юхары Айыплы Беюк Ага Карабекова село Баданкенд Артема Шушанова, переписка Елизаветпольском уездным начальником и о выдаче разрешения наразработку открытых залежей меди и серебра // Azərbaycan Respublikası Dövlət Tarix Arxivi, Fond № 92, siyahı №1, 1-ci hissə, iş № 251, vərəq - 1.

<sup>&</sup>lt;sup>73</sup>Дело по разбору прошения Бакинских купцов Шамси Асадуллаева и Мусы Нагиева о разрешении им открытьнефтяные промыслина своих участках в местности Беюк - Пута Бакинского уезда // Azərbaycan Respublikası Dövlət Tarix Arxivi, Fond № 92, siyahı №1, 1-сі hissə, iş № 649, vərəq - 1.; Дело об отводе жителью сел. Нюгеди Кубинского уезда Тураба - Хальфа Али Мамед оглы двух участков землидля разработки в 10 верстах от сел. Перебедиль и Гюмтар Кубинского уезда // AzərbaycanRespublikası Dövlət TarixArxivi, Fond № 92, siyahı №1, 1-сі hissə, iş № 451, vərəq - 1.

Guba region, "new sources of oil in this region were found and they were different from the oil fields of the entire South Caucasus in terms of both in quality and quantity".<sup>74</sup>

Among the works carried out by the department in this direction were "soil samples and results of air analysis to be discussed at the congress of oil industrialists" [75], "geological map showing the borders of gardens, estates, treasure lands on the Absheron peninsula" and so on.

In the second subchapter of the last chapter of the dissertation entitled "The assistance of the Baku Division of the Russian Imperial Technical Society to the improvement of Baku city" it is stated that one of the activities of the branch was to solve the economic problems of Baku city.

Because of the many activities of the branch in this field, we first focused on three issues that are extremely important for urban economy - provision of drinking water to the urban population, lighting of city streets, and the role of vehicles.

Based on the requests of the city hall, the inspection of water samples of drinking water wells in Baku by branch staff and commissions has become a demand and a tradition. Later, in 1909 after beginning the construction of the Shollar aqueduct to Baku, the work done by the Baku Division for the construction of the Kura aqueduct and all the stored materials were useful for new comparison with "the realization of a huge social problem, such as the construction of the

 $<sup>^{74}</sup>$ Исследования нефти из местности около Кубы // - Баку: Труды БО ИРТО., 1897. № 3, - с.157.

<sup>&</sup>lt;sup>75</sup>Пашковский, С. К анализам почвы и воздуха, произведенным по поручению А.М.Бенкендорфа для доклада XIII очередному съезду нефтепромышленников в Баку // - Баку: Труды БО ИРТО, 1899. № 5, - с.273.

<sup>&</sup>lt;sup>76</sup>Лебедев, Н. Геологическая карта Апшеронского полуострова с обозначением границ дач, владений, казенных групп и других сведений // - Баку: Труды БО ИРТО, 1898. № 5, - с.323.

Kura aqueduct to Baku, implemented by the great leader Heydar *Alivev in 1971''<sup>77</sup>* 

Another important area in which the Baku Division cooperated with the city duma and helped to expand the improvement works in the city was the improvement of the lighting of the city streets. This issue and the results of the work were repeatedly discussed in the departments and special commissions of the branch.<sup>78</sup>

On March 19, 1888 "Materials of the section commission on improving street lighting in Baku"79 were discussed. These data and proposals that would significantly improve the situation were sent to the city duma.

In the last years of the 19th century, especially at the beginning of the 20th century, the improvement of the work of urban transport was often discussed in the commissions of the Baku Division and effective proposals were made. In this regard, it can be noted that on February 22, 1914 at the general meeting of the division, based on the calculations made in previous years, engineer K. Nekrasov's report on the results of the work of the commission with the participation of experts 80 was heard and a number of effective practical recommendations were put forward.

Summarizing our thoughts about the assistance of the Baku Division to the development of Baku city, we must say that this work helped a lot to solve various tasks related to city life.

<sup>77</sup> Мамедова, Лала. Интересные факты о бакинском водопроводе - как в столицу пришла вода: [Elekrtonresurs] /

URL:https://news.day.az/society/1101235.html

<sup>&</sup>lt;sup>78</sup>Цимбади, О.П. О применение в Баку электрического освещения // - Баку: Труды БО ИРТО, - 1886. № 1, - с.13.;Способы уличного освещения городов и выбор рациональной системы освещения для города Баку // - Баку: Труды БО ИРТО, 1902. №8, - с.815.

<sup>79</sup>Об уличном освещениигорода Баку и мерах его улучшение // Баку: Труды БО ИРТО, 1888. № 1, - с. 56.

<sup>80</sup> Отчет о деятельности Бакинского отделения Императорсого Русского Технического О-ва за 1914 год. Издание БО ИРТО / - Баку: Тип. Труд С.Г.Берладира, 1915, -с 7.

In the "Conclusion" of the dissertation, the main aspects obtained during the research are systematized, summarized and suggestions are put forward.

It became clear from the research that the establishment of the RITC Baku Division was accompanied by very important changes in the economic and cultural life of the country. During its existence, the Baku Division was a place where important discoveries and innovations were brought to life, and at the same time, it created conditions for the application of scientific and technical discoveries with high economic efficiency in various areas of the economy of Northern Azerbaijan.

One of the main conclusions of our research was that for some decades the Baku Division managed to do important work in various regions of the empire (Northern Azerbaijan, the North Caucasus and other areas) to study the economic wealth and natural resources of those places and to use them efficiently in the development of the empire's economy.

It was also known that the activity of the Baku Division was not only related to the oil industry. The activity of the department is very broad, not only with different fields of science, but also with the fact that the discoveries and effective suggestions of the employees of the department led to high profits and efficiency in different areas of production.

Paying special attention to research works in the activity of the Baku Division, organization of scientific-technical and important searches and tests run in the laboratories were no less important than other works done.

The fact that the Baku Division brought together the best specialists and skilled scientists and harmony of production was a new event for the life of that time. Talking about the results of the Baku Division's activities, we should emphasize that they played a positive role in turning Baku into the center of oil refining in Russia, and later in the world.

It would be better to say about the scientific public library of the Baku Division that a large collection of books published abroad related

to engineering and natural sciences was stored here. One of the important results of the efficient operation of the department was that there were enough people who wanted to use the free library opened by the Baku Division. This indicates their effective management.

Courses opened to master skills and abilities of the staff who worked in oil fields and factories helped to increase the literacy rates among the people.

After reviewing the main conclusions of the research, we would like to make some suggestions and recommendations:

- it would be better to establish a coordination council to coordinate the activities of ANAS and scientific research institutes under the ministries in order to strengthen the unity of science and production;
- taking into account that oil production will continue to be the leading part of our economy for a long time, it would be useful to increase the scale and financing of researches related to petrochemical sciences;
- to increase the effectiveness of work in competent staff training for petroleum chemistry and other natural sciences, it is advisable to hold scientific competitions among secondary and high school students;
- in the research of the achievements of the Azerbaijani science deeply investigate the end of the 19th beginning of the 20th century of Azerbaijan history, comprehensively use the materials related to the activities of the Baku Division which have not been included in the scientific periodicals;
- for the sake of maintaining the previous appearance of Baku in terms of architecture and history during the construction of new buildings transfer these works to the north-west and north directions of the city, thereby giving preference to the construction of a residential area to be called "New Baku" and greening issues, as in the world practice;
- At least some part of the work shown in the materials of the section related to the history of Baku city can be used in the expositions of Azerbaijan history and other museums, and this work is even very necessary.

# The content of the dissertation is covered in the following published articles of the author:

- 1.Hacıyeva M.C. Rusiya İmperiya Texniki Cəmiyyətin Bakı Bölməsinin fəaliyyəti haqqında // Doktorantların və gənc tədqiqatçıların XXII respublika konfransının materialları. II c., Bakı: ADPU. –2018, 22 -23 noyabr, –s.37-39.
- 2. Hacıyeva M.C. Rusiya İmperiya Texniki Cəmiyyətin Bakı Bölməsinin Bakıda ilk kütləvi kitabxanaların təşkilində rolu //- Bakı: Tarix və onun problemləri, −2019. № 1, −s.34-38.
- 3.Hacıyeva M.C. Rusiya İmperator Texniki Cəmiyyətin Bakı Bölməsinin təbii sərvətlərimizin ehtiyatlarının öyrənilməsi sahəsində fəaliyyəti //Doktorantların və Gənc tədqiqatçıların XXIII Respublika Elmi Konfransının Materialları. –Bakı: –2019, –s.22-23.
- 4. Насіуеva М.С. Создание Бакинского отделения Императорского Русского Технического Общества //- Одеса: Науковий вісник. Міжнародного гуманітарного університету. Випуск 18. Серія Істория. Філософия. Політология, 2019, с. 20-24.
- 5. Hacıyeva M.C. Rusiya İmperator Texniki Cəmiyyətin Bakı Bölməsinin məktəbləri // -Bakı: Geostrategiya, −2020, № 02 (56), −s.88-94.
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- 7. Hacıyeva M.C. Rusiya İmperator Texniki Cəmiyyətinin Bakı Bölməsinin materialları Azərbaycanın XIX əsrin sonu XX əsrin əvvəlləri tarixinin öyrənilməsində mənbə kimi // –Sumqayıt: Sumqayıt Dövlət Universitetinin Elmi Xəbərləri, –2020. C.16, № 1, –s.48-53.

- 8. Hacıyeva M.C. Azərbaycanlı sahibkarlar və alimlərin Rusiya İmperator Texniki Cəmiyyətinin fəaliyyətində iştirakı // Sumqayıt: Sumqayıt Dövlət Universitetinin Elmi Xəbərləri, −2020. C.16, №4, −s.55-63.
- 9. Hacıyeva M.C. Assistance to the Russian Imperial Baku branch of the technical society for the improvement of the city of Baku // Одеса: Літопис Волині. Всеукраинський науковий часопис, –2021. Число 24.—с.143-151.
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- 11. Hacıyeva M.C. XIX əsrin sonu-XX əsrin əvvəllərində Şimali Azərbaycanda yeni neft ehtiyatlarının müəyyən edilməsi sahəsində Rusiya İmperator Texniki Cəmiyyətin fəaliyyəti // Doktorantların və gənc tədqiqatçıların XXIV respublika konfransının materialları. Bakı: –2021, –s.169-17.
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