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PIOTR DRZEWIECKI – ENGINEER, MECHANICAL TECHNICIAN, INDUSTRIALIST, PRESIDENT OF WARSAW

PIOTR DRZEWIECKI - INŻYNIER, TECHNIK, PRZEMYSŁOWIEC, PREZYDENT WARSZAWY

Summary: *Piotr Drzewiecki (born on May 29, 1865 in Warsaw, died 8th December 1943 in Spandau camp near Berlin) was Polish engineer, industrialist, social activist, President of Warsaw (1918 – 1921), organizer of the civil defense of Warsaw in August 1920 against the invasion of the Red Army - deputy chairman of the Defense Council of the Capital. He graduated Mechanical Department of Petersburg Technological University in Petersburg with a gold medal for project of steam mill (1988). In 1889, he commenced vocational work in Poland and began to write articles to "Technical Review". In 1899, he became the President of the Warsaw Technicians Association; owing to his efforts, Warsaw House of Technician was erected. His engagement in development of Polish technology, industry and social activity was appreciated by the National Council of Federation of Engineering Associations of Poland - Polish Chief Technical Organization (NOT) which, in 2008, established the Piotr S. Drzewiecki Medal. The mentioned Medal is the highest distinction, granted to the members of engineering associations of the Federation by the mentioned Organization.*

Keywords: *Piotr Drzewiecki, engineer, entrepreneur*

Streszczenie: *Piotr Drzewiecki (ur. 29 maja 1865 w Warszawie, zm. 8 grudnia 1943 w obozie Spandau pod Berlinem) był polskim inżynierem, przemysłowcem, działaczem społecznym, Prezydentem Warszawy (1918-1921), organizatorem cywilnej obrony Warszawy w sierpniu 1920 r. przed najazdem Armii Czerwonej – wiceprzewodniczącym Rady Obrony Stolicy. Ukończył w 1888 r. Wydział Mechaniczny Petersburskiego Instytutu Technologicznego w Petersburgu ze złotym medalem za projekt młyna parowego. W 1889 roku zaczął pracę zawodową w Polsce i zaczął pisać artykuły do „Przeglądu Technicznego". W 1899 r. został prezesem Warszawskiego Stowarzyszenia Techników i to jego staraniami został zbudowany Warszawski Dom Technika. Jego zaangażowanie w rozwój polskiej techniki, przemysłu i działalność społeczną została doceniona Radę Krajową Federacji Stowarzyszeń Naukowo-Technicznych Naczelnej Organizacji Technicznej, która w 2008 r. ustanowiła Medal im. Piotra S. Drzewickiego. Medal jest najwyższym odznaczeniem nadawanym przez NOT członkom stowarzyszeń naukowo-technicznych tworzącym Federację.*

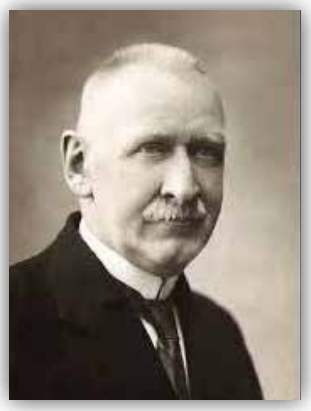
Słowa kluczowe: *Piotr Drzewiecki, inżynier, przedsiębiorca*

Engineer, technologist, mechanical technician

Engineering was beloved and performed profession of Piotr Drzewiecki. He commenced his technological adventure by the project of stem mill for which he received a gold medal of the Technological Institute in Petersburg. After come back to Poland in 1889, as an assistant of director of Hulczyński Pipe Factory, and later on, of Sosnowiec Association of Pipe Factory as a young specialist in pipes' production, he promoted their manufacture without seams, by oblique rolling method [1].

Engineer Drzewiecki followed the novelties occurring in his domain of interest on the World Exposition in 1890 in Paris. After coming back, he tried to utilize them in the Kamiński-Grosman Enterprise for Construction of Roads and Technical Equipment and first of all, in his own company, established in 1893 together with Jan Jeziorański and Czesław Klarner. Production of the mentioned company was integrated with its construction-technical office which developed technological processes for construction of urban pipelines and sewage systems, factories and houses, pomp stations, containers, filters, water towers, fire-protecting equipment and central heating systems. The company was also specialized in production of dryers, washing rooms, steam kitchens, baths and water-therapeutic devices [2].

Piotr Drzewiecki was faced with new technical challenges in 1894 when he founded "Factory of Iron Casts and Mechanical Workshops by Piotr Drzewiecki et Co., which was transformed into "Joint Stock Company "Syrena". It was liquidated after Japanese-Russian war [3].



Piotr S. Drzewiecki, foto: audiovis.nac.gov.pl

As being an active entrepreneur, he utilized his competences, acquired at the Technological Institute in Petersburg and in 1896, together with Jan Jeziorański and Stanislaw Małyszycki, he established the office for construction of mills "S. Małyszycki et Co.", it exerted a significant influence on industrialization of Polish agriculture in Polish Kingdom where the consumption of flour was increasing [3].

A visit to the International Economic Exposition in St. Louis in 1904 played a significant role in modernisation of technological processes in his "Society for Construction of Sanitary Machines and Equipment", being conducted together with Jan Jeziorański. He paid there a special

attention to American machines. He commented his impressions from the mentioned show in a following way: "Steam machine, as being a motor, dominates universally in the United States. It is a result of the fact that the industry is big and requires big machines; then, the steam machine - if the returning steam has any application, and finally, the coal is cheap and the manufacturer does not pay much attention to economic aspect of motor's operation but looks for savings in costs of labour which is expensive" [4]. Warsaw conditions in 1904 were somewhat different. Labour costs were relative low and the prices of electricity were relatively high, especially of the current produced by generators in big industrial enterprises. The building of the seat of the company, situated at 85, Jerozolimskie Alleys., was finished before the dramatic Warsaw strikes in 1905 – 1906 which disturbed normal functioning of the "Society for Construction of Sanitary Machines and Equipment Drzewiecki and Jeziorański". The discussed building having a rectangular shape (ca 30 m wide alongside the street and ca. 58 m depth), was constructed according to the project of architect Bronislaw Rogóski. Its construction lasted for 5 years (1898 – 1903). The building consisted of dwelling house, office and also industrial-factory parts; there was the newest heating-ventilation technology employed, as designed by Piotr Drzewiecki. According to information of "Technical Review", we read: "The buildings of the total property are centrally heated. The first half of the building and factory premises – by low pressure steam and the second half of the building by water whereas the steam and water boilers are situated in the basement near the main stair case. The stoves in the rooms – smooth radiators – were situated under the windows. Ventilation was assured owing to supply of a fresh air by the crates under the windows, oriented to the stoves and by the extraction channel in the walls. Each room has its own, separate ventilation channel, going out on the roof. Ventilation of the rooms of the company's office was performed owing to electric ventilators situated in special wall channels. Bath stoves in the flats were heated by gas and vapour from the central steam boiler. The kitchens were furnished with steam samovars; they were heated from the central fire. The houses possessed its own electric station; it was connected with the workshops of the company, situated in the depth of the property" [4]. The building of Drzewiecki was the example of construction with the application of modern ventilation-heating and energetic equipment.


PRZEGLĄD TECHNICZNY

CZASOPISMO POŚWIĘCONE SPRAWOM TECHNIKI I PRZEMYSŁU

Na 50-lecie pracy Piotra Drzewieckiego

Talent of engineer, technologist and manager, P. Drzewiecki was appreciated by great companies of metallurgical industry. "Joint Stock Company of Boilers and Mechanics Factory Fiztner W. & Gamper K., as founded in 1880, employing up to 2200 workers, offered him the membership in its board, the president of which was Ernst Borsig. Drzewiecki was also the member of the board of "Joint Stock Company of Mirkowska Paper Factory", beside Stanisław and Edward Natanson, Henryk Dynowski and Stefan Dziewulski [5].

His talents of mechanical engineer were revealed in 1907 when P. Drzewiecki, together with Karol Rose, living in Berlin, founded the all-European company, employing American system for temperature control, according to Johnson patent. Due to the war, the discussed company was sold to engineer Schellhase and functioned for the whole inter-war period.

When utilizing the economic-investment situation before the First World War, P. Drzewiecki together with Jan Jeziorański, Karol Rose and Czesław Klarner established the enterprise "Fire-protecting Devices for Easily Flammable Liquids by Martini Hunecke system", serving the receptive Russian market. It was liquidated by bolsheviks [6] with great losses for the owners.

The First World War devastated Warsaw industry. The engineering talents of Piotr Drzewiecki, the President of the Association of Technicians since 1899, were utilized in the activity of the Society of Technical Courses, in development of Polish School Educational Organization (in Polish: Polska Macierz Szkolna), the Society of Scientific Courses and reconstruction of higher education in Warsaw, including Warsaw University of Technology, managed by the outstanding mechanical engineer, Prof. Zygmunt Straszewicz (1860-1927), who was a friend of Piotr Drzewiecki and editor of "Technical Review".

Function of the President of the Association of Technicians, having the ambitious program of civil activity in respect of education, charity aid, and, first of all, activity in Civil Committee of the Capital City of Warsaw, in management of the city as the first major and President opened the new areas of social activities for P. Drzewiecki; his profession played a significant role. In 1920, together with Leopold Wellisz and Władysław Jechalski, with the support of the Commercial Bank in Warsaw, they established the joint stock company, the first Factory of Locomotives in Chrzanów. In 1920, together with engineer Andrzej Wierzbicki, he mobilized metallurgical industry of Poland and of Warsaw to direct service for Polish army, fighting with bolsheviks. In 1921, P. Drzewiecki took the lead in French-Polish Society for Construction of Automobiles and Airplanes which was initially overtaken by the Czech capital "Skoda" and then, by the Ministry of Military Affairs.

In 1922, P. Drzewiecki, as constructor-mechanical engineer participated in the establishment of Polish Electricity Society, the first factory of electric machines in Poland, with the participation of Swedish capital. From 1928 to 1939, he played a function of the president of the greatest Polish consortium of machine industry "Consolidated Factories of Machines, Boilers and Wagons Zieleniewski, Fitzner and Gamper S.A.". The mentioned consortium employed ca. 5 thousand workers. Since 1933, Piotr Drzewiecki played a function of the President of Polish Union of Metallurgical Industry, founded in 1920. In 1938, 360 factories, employing more than 70 thousand workers, were enrolled in the mentioned organization.

The place of P. Drzewiecki in economic history of Poland was determined not by his new technological constructions, but by his role as the outstanding, modern industrialist. Czesław Klarner when writing a biography of P. Drzewiecki stressed; "As early as in the mentioned period...there was shaped a nature of industrial activity of Piotr Drzewiecki, as a pioneer of progress at the territory of Poland. He will be carefully observing and transferring the most beautiful principles from the experiences of American and West European life to Polish ground, and the mentioned work will open newer and newer economic and social horizons for him" [6]. His friends from the Society of Technicians and Technologists (1928) evaluated Piotr Drzewiecki in a following way: "Owing to his unusual energy, organizational and financial capabilities and popularity among his colleagues, the building of the Association of Technologists at 3/5 Czackiego street in Warsaw could be erected; it contributed – in the greatest degree – to communication between Polish technicians and development of the Association [3].

Piotr S. Drzewiecki Medal, foto: editorial office

After the Second World War, his merits as engineer-constructor-industrialist were resembled by "Peoples' Newspaper" (in Polish: "Gazeta Ludowa"); it has been also presented for many years by "Technical Review" and, first of all, by the Chief Technical Organization (NOT). It is worthy to mention the article "Piotr Drzewiecki – why we remember?" by the President of NOT, Ewa Mankiewicz-Cudny: "When appreciating the merits of Piotr Drzewiecki for development of engineering associations and, also, his determination in social and educational activity, the National Council of Federation of Engineering Associations NOT (the supreme authority in technical organization, being the inheritor of the Association of Technicians in Warsaw and its legal successors) established, in 2008, the Piotr S. Drzewiecki Medal. The discussed medal is the highest distinction, which may be granted to the members of the associations that constitute the Federation" [3].

Industrialist – propagator of scientific organization of work and management

Piotr Drzewiecki belongs to the most talented Polish industrialists of the end of the 19th and the 20th century. His success in relation to the companies under his management comes; inter alia, from:

- Good knowledge of the needs of national market, and also, of the Russian market in the domain of iron casts and, first of all, sanitary machines and equipment. The demand on the former devices resulted from the development of water pipeline and sewage systems;
- Understanding the meaning of starting up the electrical engineering industry in Poland, with the utilization, inter alia, of Swedish capital;
- Stressing a special meaning of metallurgical industry and craftsmanship – under his guidance since 1933 - for all sectors of national economy, and first of all, for defence of the country;
- Utilization of modern technological processes, acquired from the United States of America, Germany, Great Britain, France and Sweden.

When writing about the role of export in development of Polish industry, he asked a difficult question: "how will our economic independence look like in comparison to our neighbour who has the surpassing merits, i.e. diligence, effectiveness, regularity, caution, and unheard perseverance. I am afraid that the products, manufactured in the regions of Poland will be not so cheap as to compete on the international markets and will be sold only in the own country" [7]. In his struggle for economic effectiveness of Polish industry and trade, P. Drzewiecki established (on 2, February, 1923) Polish Standardization Committee as an advisory body to the Ministry of Industry and Trade. He became the President of the Committee which published periodical "News of Polish Standardization Committee". The Committee published technical and material standards of industrial products, generally in agreement with the International Standardization Organization [8].

The establishment of the Insurance Association of Polish Industrialists on February, 16, 1920 had a significant meaning for Polish industrialists. "The mentioned association, as based upon the principles of mutuality was aimed at insurance from fire, theft of transports, civil responsibility, damage of machines etc. P. Drzewiecki was a founder of the Association, apart from de Alfred Biedermann, baron Juliusz Heinzl, duke Andrzej Lubomirski, Maurycy Poznański, Leopold Wellisz and other industrialists. Piotr Skarga, expert and practitioner in insurance matters was the managing director of the Association [9]. On the same day, there was established the Society of Mutual Insurances in Warsaw with Supervisory Board in the composition of which Piotr Drzewiecki and majority of the mentioned above founders of the Insurance Association of Polish Industrialists were found. The management of the Society included: engineer Stanisław Szymański, Stefan Laurysiewicz, dr Józef Berlinerblau, engineer Tadeusz Sułowski, engineer Stanisław Surzycki and Leopold Wellisz [9]. Piotr Skarga was also the managing director of the Society. The Society had, owing to the State, the appropriate reinsurance cover; it commenced the activity in fire sector and insured all types of realties and movables for insuring. In the country where the most of the dwelling houses and farm buildings had a wooden construction, remote from public water sources, the insurance from fire played an important role.

Activity of P. Drzewiecki in respect of scientific organization of work and management had the universal meaning, including also that one for the industry. On 26, February, 1919, P. Drzewiecki - together with Prof. Karol Adamiecki, Henryk Karpiński, Stanislaw Okolski and Prof. Zygmunt Straszewicz - founded the League of Labour. The aim of the organization which involved the people of science and economic life was to increase the effectiveness of work and rate of reconstruction at the territory of the whole country, deprived of capitals, raw materials, outlet markets and mentality of industrial community [8]. The activists of the League struggled for a reasonable utilization of working day, decrease of the number of free days and adaptation of the work time in Poland to the European countries, especially Germany, being involved since 1924, in a quick reconstruction of their industry, with the help of, inter alia, American capitals. In 1925 when the Germany declared customs war against Poland, Karol Adamiecki, Piotr Drzewiecki and Ignacy Radziszewski established Institute of Scientific Organization of Work. They addressed the following appeal to the industrialists: "The mentioned Institute should be vocational-scientific institution, independent in respect of work and become a centre for activity in the area of correct organization of Polish system of work. It should give assistance to each producer in his work and efforts aiming at improvement of work, in order to increase production, based on minimal consumption of energy, material and efforts. It would contribute undoubtedly to general improvement of life of working people [10]. It is difficult to answer the question: what was the number of the industrialists in Poland who implemented the postulates of the Institute. It was performed by the greater enterprises, working for the needs of internal market and for export, which were successful in the competition with German, Czech, French, Italian and English companies. Their percentage was low. They occurred first of all in coal mining, metallurgy and consortia of machine industry. The recommendations of the Institute were popularized in editorial series of the League of Labour which included several dozen of popular items, developed by P. Drzewiecki, usually without scientific,

statistical and iconographic aspects. P. Drzewiecki tried to popularize – in an understandable way – modern methods of economic education, material savings in construction industry, harmonize the architectonic solutions with climate conditions of Poland and utilize reasonably work time in manufacturing processes.

P. Drzewiecki, as being industrialist, was able to transfer the manufacturing experience, exposed during industrial-construction exhibitions in St. Louis, Paris, Prague and Berlin into Polish ground. He was open to technical novelties what was manifested in his engagement in establishment of the cradle of Polish broadcasting "Polskie Radio Ltd." (1924) and then, presentation of the first TV programme during the exhibition of machine and electro-engineering industry in 1936 which he organized as the President of Polish Union of Metallurgical Industry.

A very small number of Polish historians have perceived the achievements of P. Drzewiecki until now. They were" Zbigniew Landau and Jerzy Tomaszewski, creators of synthesis "Economy of the inter-war Poland, Volume I – III" (Warsaw, 1967-1989) and Zbigniew Pustuła, author of problem entries in "Encyclopaedia of the History of the Second Republic of Poland" (Warsaw, 1999). The merits of P. Drzewiecki for Polish industry were highly appreciated by Czesław Klarner: "Having integrated so many economic problems from the territory of Poland in one hand, Piotr Drzewiecki is one of the leading and extremely active representatives of the Society of Industrialists of the Polish Kingdom, and then, the Central Union of Polish Craftsmanship, Mining, Trade and Finances (1920 – 1932) and finally, the Central Union of Polish Industry, unifying the industry of the whole Republic of Poland since 1932 where – representing the Polish Union of Metallurgical Industrialists – he participates in almost all most important activities of the mentioned organization in the name of welfare of the whole national economy. As the President of the discussed Union, Piotr Drzewiecki organizes the first exhibition of metallurgical industry, electro-engineering and radio broadcasting and becomes the chairman of the board of the exhibition" [7].

After the September destruction in 1939, P. Drzewiecki tried to reconstruct Warsaw industry, taking an advantage of the activities of the President Starzyński in October 1939, being tolerated by the occupant and later on, of various forms of activity of the Warsaw Committee of Social Self-Assistance. In agreement with the Polish-government-in-exile, he prepared information for gen. Sikorski, concerning German industrial policy on the occupied territories. It was the reason for his arresting and tragic death in the campus in Spandau, near Berlin.

The industrial activity of Piotr Drzewiecki waits still for a documented source monograph. The matter of participation of P. Drzewiecki in Polish banking system requires also detailed studies.

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