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ENGINEER CRISTEA MATEESCU

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Abstract. Acad. prof. Cristea Mateescu is one of the greatest Romanian engineers and scientists, a personality of perfect honour and sincerity, loving the truth above all. His simplicity and modesty became proverbial. But the greatest merit of acad. Prof. Cristea Mateescu is the one to have created a Romanian school of hydromechanics. He conducted studies and executed dams, hydroelectric plants, foundations for thermal turbogenerator groups (Floresti, Campina, Comanesti). Following the earthquake of 1940 and the bombings of the Second World War, he carried out the consolidation of several large, heavily damaged buildings in Bucharest.

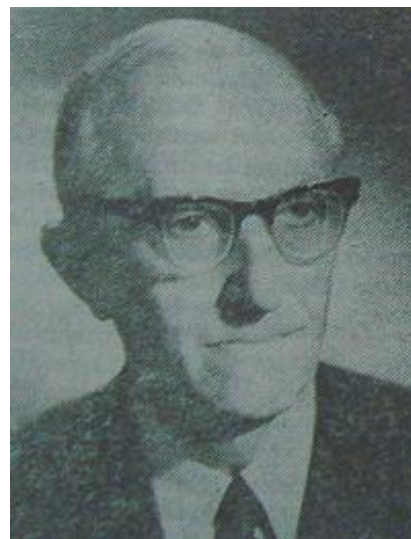
Keywords: *hydraulics, civil construction, industrial construction, hydroelectric plants, dams, canals.*

Rezumat. Acad. prof. Cristea Mateescu este unul dintre cei mai mari ingineri și oameni de știință români, o personalitate de o sinceritate desăvârșită, iubind adevărul mai presus de toate. Simplitatea și modestia lui au devenit proverbiale. Dar cel mai mare merit al acad. Prof. Cristea Mateescu este cel de a crea o școală românească de hidrotehnică. A realizat studii și a executat baraje, hidrocentrale, fundații pentru grupuri de turbogeneratori termici (Florești, Câmpina, Comănești). După cutremurul din 1940 și bombardamentele din cel de-al doilea război mondial, el a realizat consolidarea mai multor clădiri mari, puternic avariate, în București.

Cuvinte cheie: *hidraulică, construcții civile, construcții industriale, hidrocentrale, baraje, canale.*

Cristea Mateescu was born on the 11th of August 1894 at Caracal. His father was a clerk, and his mother a housewife. He attended the primary school in his native town, then „Carol I” secondary school in Craiova and High school in Buzau. He passed the entrance examination at the National School of Bridges and Roads of Bucharest in top position. He got his engineer degree in 1919 and he continued his studies in Switzerland between 1920 –1921 and in France between 1921 – 1922.

During these internships which were financially supported by the Romanian Academy, he studied especially the display of water falls and of the lakes for hydroelectric plants. In France he met professor Denis Fydoux who helped him visit several hydroelectric plants, opening his professional career.



Rhetorical questions

My imagination can go further and I can ask myself if engineer Cristea Mateescu, born at 15 km from the Olt River, having a passion for hydroelectric arrangements, had ever thought, that the Olt River would be radically transformed along 350 km in order to build 31 hydroelectric plants with an installed power of 1.112,8 MW and an electric production of 3.040,6 GWh/year.

Had he ever imagined that, at Râmnicu Vâlcea, it would be build in 1974 a hydroelectric plant whose dam would have 34 metres height and it would be supplied from a lake with a surface of 319 ha and 319 million m³ of water? This make me think of the hydroelectric plant from Ionești, inaugurated in 1978 and whose dam is 14 m height and which is supplied from a lake with the surface of 466 ha and 25 million m³ of water. I am also thinking of the hydroelectric plant from Turnu, built in 1981 and whose dam is 44 m height, and its lake has a surface of 154 ha and 13 million m³. What can we say about the hydroelectric plant from Drăgănești, built in 1988 whose lake with a surface of 1000 ha goes beyond the bridge that crosses the Olt river, covering the beach where the child Cristea Mateescu used to sunbathe with his friends?

Finally, we should not forget about the hydroelectric plant from Izlaz whose construction will begin soon.

Certain answers

I do not know if the engineer Cristea Mateescu imagined all these achievements, but I know for a fact that his first scientific paper was about the electric plant from Sadu-Gorj. He remarked himself within scientific community in 1927 with the paper "The Rationale Arrangement of the superior part of the river Ialomița". He organized and led, for the first time in Romania, a department for the hydro-energetic study of the rivers Prahova, Ialomița, Târlung, Buzău-Bâsca, Siret. It is known for sure that he designed the hydroelectric plant from Sadu V-Sibiu, with a dam built with rockfill and reinforced concrete, the first one of this type in Romania. The river Sadu was used for obtaining electricity along the history. Let us present some information about it. In 1896 the first hydro-electric plant was built along this river, Sadu I. In 1907 in uphill it was built the second one, Sadu II, and in 1955 the hydroelectric plant Sadu V, supplied from Negoveanu lake with a dam of 62 m height.

It is known for sure that the engineer Cristea Mateescu participated in the designing of the dam from Valiug, built between 1946 and 1949, that he participated in the designing of the hydro-electric plant from Bicaz, built between 1951 and 1960. It is also known for sure that he was the head of the designing team of the hydro-energetic complex from Corbeni, built between 1958 and 1966. Fortunately, Cristea Mateescu lived enough to see or to read about the hydro-energetic arrangement of the river Olt which started in 1974.

Engineer at Electric Plant

In 1922, after graduation, he was employed at "Electrica" Company where he worked until 1926. Within this context I want to mention that the Electric Plant from the Peles Castle started to function in August 1884. In 1899 it is inaugurated the Hydroelectric plant from Sinaia, the biggest in Romania at that time. In 1898 the Romanian Society for Electric and Industrial Companies was set up. It managed the energetic activity of Prahova area.

On the 11th of May 1901, this society changed its name in "Electrica" Society Ltd. We can conclude that Cristea Mateescu started his professional career in one of the most important hydro-electric companies from Romania.



Professor

His results as a student, his specializations in Switzerland and France, his results as an engineer recommended him for a teaching career. In 1936 he became assistant at the rational mechanics and material resistance course.

In 1938 he defended his Ph.D. thesis with the subject "La résolution des systèmes hyperstatiques par deux méthodes récentes- critique et extension des méthodes Filipescu et Cross".

He became associate professor in 1939, and then professor in 1946. He taught several disciplines, among which the regime and water arrangement at the Construction Institute of Bucharest. This was the name of the present Technical Institute of Construction of Bucharest. It must be mentioned that he was the head of the Hydraulic Construction Department between 1950 and 1964.

Other accomplishments

Cristea Mateescu became an engineer at the National School of Bridges and Roads, so in his CV there are included also projects for famous civil constructions, for example "Asigurarea Română" ARO-Patria block from Bucharest.

Complex personality

He was editor-in-chief at "Hydro-techniques" journal. He was a collaborator at the national electrification plan. He was the president of the Romanian National Committee for Big dams during 1957-1963. He evoked in his works the contributions of two great Romanian engineers: Alexandru Davidescu and Ion Ionescu. He was chosen associate member of the Romanian Academy in 1955 and full member in 1974.

He died on the 14th of June 1979 in Bucharest.

Bibliografie

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