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**Badania trakcyjne taboru wąskotorowego Warszawskich Kolei Dojazdowych
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**Traction research of narrow-gauge rolling stock of Warsaw Local Trains
done by Professor Albert Czczott**

SUMMARY

An outstanding railway engineer and scientist in the field of railway technology, Professor Albert Czczott (1873–1955) was in the early Russian period a steam locomotive constructor, but his most notable achievement was the pioneering work he did in traction research of rolling stock in Russia and Poland.

In the Second Polish Republic, Czczott created the first Polish research institute in that field – Independent Research Department of the Transport Ministry. His greatest accomplishments cover working out a new method of traction research of steam locomotives, which was called a “double-fraction method” and in 1925 it was adopted by Polish State Railways. He was doing traction and thermal research of all steam locomotive lines of Polish State Railways constructed before and after the war.

The subject of this article deals with unknown research of narrow-gauge rolling stock supervised by Czczott in the years 1927–1930, on the lines of the Joint-Stock Association of Warsaw Local Railways operating narrow-gauge local trains in Warsaw district – Grójecka, Wilanowska and Jabłonna-Karczew lines. Research that was done enabled more regularity in train running, shortening the time of rides, determining standards for coal consumption, as well as setting permissible railway capacity in particular sections. Results of this research were also of vital scientific importance because they showed particularly unfavourable consumption conditions in the engines of narrow-gauge steam loco-motives and their poor working parameters (exhaustion of boilers, pressure drop). Until this research was made, there had been no information whatsoever concerning research of narrow-gauge rolling stock in the international specialist literature. The results were presented in form of a paper during the 4th technological convention of engineers employed in technical departments of the Polish State Railways.

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