

DOI: <https://doi.org/10.15407/techned2018.02.025>

ON SOME CONCEPTS IN ELECTRICAL ENGINEERING CONTAINED IN PAPER BY V.V. SOTNIKOV ("Tekhnichna Elektrodynamika". 2017. No 3. Pp. 22–28)

Journal	Tekhnichna elektrodynamika
Publisher	Institute of Electrodynamics National Academy of Science of Ukraine
ISSN	1607-7970 (print), 2218-1903 (online)
Issue	No 2, 2018 (March/April)
Pages	25 – 28

Author

Yu.M. Vasetsky

Institute of Electrodynamics National Academy of Sciences of Ukraine,
pr. Peremohy, 56, Kyiv, 03057, Ukraine,
e-mail: yuriy.vasetsky@gmail.com

Abstract

In this paper, in connection with various definitions in the literature, the concepts of "potential", "voltage", "voltage drop" are considered. Two approaches to the definition of the concept of "voltage" are analyzed: as the potential and as the work of the electric field forces on the displacement of a unit charge. Wrong and unreasonable positions in the paper by V.V. Sotnikov were noted. References 10.

Key words: electrical field, potential, voltage, voltage drop, definition.

Received: 23.08.2017

Published: 01.03.2018

References

1. Vasetsky Yu.M. Asymptotic methods for solving electrodynamics problems in systems with bulky curvilinear conductors. Kyiv: Naukova dumka, 2010. 271 p. (Rus)
2. Zeveke G.V., Ionkin P.A., Netushil A.V., Strakhov S.V. Bases of the theory of electrical circuits . Moskva: Energiia, 1975. 752 p. (Rus)
3. Polivanov K.M. Theoretical bases of electrical engineers. Vol. 3. The theory of electromagnetic field. Moskva: Energiia, 1969. 352 p. (Rus)
4. Polivanov K.M. Theoretical bases of electrical engineers. Vol. 1. Linear electrical circuits with lumped parameters. Moskva-Leningrad: Energiia, 1965. 360 p. (Rus)

5. Savelev I.V. Fundamentals of theoretical physics. Vol. 1. Mechanics and Elektrodynamiks. Moskva: Nauka, 1991. 496 p.
(Rus)

6. Sotnikov V.V. Physical nature of stationary electric field and terminological definition of related quantities. *Tekhnichna Elektrodynamika*. 2017. No 3. Pp. 22–28.
(Rus)

7. Tamm I.E. Bases of the theory of electricity. Moskva: GITTL, 1956. 620 p. (Rus)

8. Tozoni O.V. Method of secondary sources in the electrical engineer. Moskva: Energiia, 1975. 296 p. (Rus)

9. Fedorchenko A.M. The theoretical physics. Classical electrodynamics. Kyiv: Vyshcha shkola, 1988. 280 p.
(Rus)

10. Shimoni K. Theoretical electrical engineer. Moskva: Mir, 1964. 775 p. (Rus)

[PDF](#)