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Storage Battery System Using Lithium-ion Batteries for the operating DC voltage system.

The article describes the developed options for the circuit solutions for the operating DC voltage system of electric substations and power plants based on lithium-ion batteries. The results of the comparative analysis of operating conditions of the energizing of load using lead-acid or lithium-ion batteries is presented. Measures for overcurrent limiting are described. The result of the feasibility estimation of the installation of lithium-ion batteries in comparison to lead-acid batteries are given.

Key words: operating DC current, electric circuit, structure of the operating DC current system, voltage, charging device, discharging characteristic of the battery, lead-acid battery, Li-Ion battery.

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