

Wishtibeev A. V., Gluschenko E. A., Guzeev A. V., Zhigalov E. S.

Features of lines relay protection for active-adaptive networks on the example of the system of series capacitance.

Uses of the system of series capacitance on long lines a special approach to construct of relay protection are demands. Occurrence of consistently switched capacitor of large capacity leads to complication of scheme-regime characteristics of the line owing to sharp change of full longitudinal resistance in a point of the capacitor switch. It in turn leads to change of short circuit current which can have as inductive and capacitor character depending on the point short circuit.

Key words: *relay protection, the bypass switch, protective gap, system of series capacitance, differential protection, differential phase protection, distance protection, current directional protection of zero sequence, current inversion, current phase reversal, voltage inversion.*

Wishtibeev Alexey Vladimirovich, PhD. tech., docent, Head of the Department Development of Power Systems and of Power Facilities of the Scientific and Technical Center of Unified Power System (STC UPS).

E-mail: nijpt@nsk.so-ups.ru, vishtibeevav@nsk.so-ups.ru

Gluschenko Евгений Анатольевич, leading specialist of the Department Development of Power Systems and of Power Facilities of the Scientific and Technical Center of Unified Power System (STC UPS).

E-mail: gluschenkoea@nsk.so-ups.ru

Guzeev Alexey Viktorovich, leading specialist of the Department Development of Power Systems and of Power Facilities of the Scientific and Technical Center of Unified Power System (STC UPS).

E-mail: guzeevav@nsk.so-ups.ru

Zhilalov Evgeny Sergeyevich, leading specialist of the Department Development of Power Systems and of Power Facilities of the Scientific and Technical Center of Unified Power System (STC UPS).

E-mail: zhigaloves@nsk.so-ups.ru