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EVALUATION OF HIGH-VOLTAGE CIRCUIT BREAKER INTERRUPTION RESOURCE

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Abstract

The overall effect of precision of interruption curve approximation, accuracy of current measurement and evaluation of root-mean-square value of circuit breaker interrupted current on precision its switching resource under condition was investigated. Based on the results of several ways of approximation of interruption curve of circuit breaker, using different amount of points, given by manufacturer, the conditions of qualitative and accurate approximation of such curve were identified. ABB HPL 362 B1 circuit breaker was considered as example and it was shown that one of the possible ways to increase the accuracy and improve technology of circuit breaker interruption resource evaluation is its resource curve approximation by using cubic

spline and improving the accuracy of measurement of instantaneous values of fault currents in the period of interruption of fault currents. References 11, figures 6, tables 3.

Key words: high-voltage circuit breaker, interruption resource, approximation, interrupted current, current transformer.

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