

High voltage XPLE cable partial discharge localization technology based on high frequency signal transmission

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This paper is based on high frequency signal transmission characteristics, analyzing partial discharge localization of high voltage cables. The existing testing technology of partial discharge is focused on the low frequency section (less than 100MHz). Because of the long distance of low frequency signal transmission, it is difficult to determine fault location. Due to the high frequency signal transmission distance is limited, and the attenuation of the signal, the location where the high frequency signal generated could be found. For verify the method used in partial discharge localization, a representative experiment has been done, the writer created a partial discharge point in the lab. Using the method of this paper, the fault location can be determined accurately, error in centimeters.

Key words

XPLE cables; Partial discharge; Electromagnetic wave; High frequency signal