

On The Analysis Of Lightning Surges Arriving To Cable Terminated transformer Using (EMTP)

Shwehdi, M.H. Bakhashwain, J.M. Aburaida, M.A.;Dept. of Electr. Eng., King Fahd Univ. of Pet.Miner., Dhahran;

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King Fahd University of Petroleum & Minerals

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Summary

Power transformers and other system apparatus are the most valuable and essential equipment in the transmission of electrical energy. The protection of such equipment against transient overvoltages resulting from lightning and other causes is of an important consideration in power system design. This paper presents an analysis using EMTP software on a segment of a power system consisting of a 100 km, 345 kV transmission line terminated at a substation transformer 345/115 kV through a cable. This study is used to determine the optimum cable size and length that may attenuate and distort overvoltage waveshapes due to a lightning surge on a transmission line. A base EMTP case for the power system under study is evaluated without the presence of a terminated cable, and later used with different scenarios

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