



**AUGUST 25 - 29, 1997  
MONTRÉAL, QUÉBEC, CANADA**

10<sup>th</sup> International Symposium on High Voltage Engineering  
10<sup>e</sup> Symposium international d'ingénierie haute tension

**USE OF SURGE ARRESTERS FOR PROTECTION OF OVERHEAD  
LINES AGAINST NEARBY LIGHTNING**

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***Abstract* - This paper presents some results concerning the effect of surge arresters on the reduction of the amplitudes of lightning induced voltages on overhead lines. Due to the complexity of the phenomenon and to the fact that this effect depends on many parameters, a 1:50 scale model was developed in order to enable an experimental analysis of the problem. This included also a model for representation of surge arresters. Two models of distribution lines were built and symmetrically disposed in relation to the model of the return stroke channel. One of the lines was equipped with surge arresters' models, whilst the other had no protection at all. The voltages induced on both lines were measured simultaneously. For the first time several tests were then performed under controlled conditions, in various situations, and it was possible to evaluate the influence of parameters such as the grounding resistance, spacing between surge arresters, stroke current amplitude, etc. on the lightning induced voltages.**