



*CIGRÉ INTERNATIONAL WORKSHOP ON  
LINE SURGE ARRESTERS AND LIGHTNING  
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**ARRESTERS APPLIED FOR TRANSMISSION LINE PROTECTION:  
AN ENGINEERING ANALYSIS AND A TRIAL INSTALLATION**

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**Summary - Studies were undertaken in determining the conditions, type and characteristics of line arresters to be installed by the first time on a few transmission lines operated by FURNAS in order to improve their performance for lightning. Line arrester application principles, line arrester characteristics, their position along the lines and the line performance before and after the arresters' installation are discussed. Technical and economical comparisons are done between line arresters and the conventional methods to improve line performance (counterpoises and shield wires). Transmission line and arrester field monitoring devices, arrester electrical characteristics, arrester/line disconnecter tests and future investigations on line arrester for switching surge control are also presented. A manufacturer of line arresters - ABB - joined recently to the group in order to have field tested some 138 kV arrester on line lightning assessment and in a field program of testing 500 kV line arresters for switching surge control.**