

The electric field effect on angles of copper-type down-conductor

ABSTRACT

This paper is to study the effect of electric field on an angle variation of copper down-conductor due to voltage and current transient. Down-conductor which informs of numerous material, shape and dimension are mandatory for diverting the lightning current from air termination system to the grounding system in sheltered building. Hence, a numerical analysis method is applied emulating the comprehensible and particular model according to ordinarily used in the manufacturer's datasheet specification. A rigorous assessment in term of electric fields was reviewed in comparison with the critical breakdown value of air for a crucial study. Later, a foremost angle is proposed for the installation of down-conductor in order to achieve a reliable protection system.

Keyword: Copper conductor; Down-conductor; Lightning protection system