

ABSTRACT

Lightning protection of transmitting antennas is a crucial aspect in maintaining the reliability and safety of communication system operation. Lightning protection systems are designed to prevent damage caused by lightning strikes which can damage equipment and cause operational disruption. The main components lightning protection system include lightning rods, conductors, grounding systems, and surge protection devices, grounding system, and surge protection devices. The lightning rod is installed at the highest point of the antenna to attract lightning strikes and conduct them through a conductor to a grounding system designed to dissipate the lightning current to the ground with as low a resistance as possible. to the ground with the lowest possible resistance. Surge protection devices are installed at critical points to protect electronic equipment from voltage surges. The design and installation of lightning protection system must follow applicable standards such as NFPA 780 and IEC 62305 to ensure effectiveness and safety.