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## **Lightning Induced Challenges for Industry in General: Power Plants, Manufacturing Facilities, etc.**

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### **Abstract**

Many industries continue to struggle with lightning-related challenges, despite best efforts by national and international standards to provide guidelines for best engineering practices and the design/installation of adequate lightning protection. Some of the challenges that industry in general faces are: 1) complex installations where direct application of national and international standards is challenging or cumbersome, 2) installations or configurations that are not explicitly called out by national and international standards, 3) unqualified consultants providing inadequate recommendations that sometimes worsen the lightning protection posture, and 4) misleading information from vendors that claim to sell devices that reduce or eliminate the lightning threat. Two case studies are presented in this paper to illustrate these challenges. The first case study is a large steel factory building with several substations and multiple large machines, where lightning-related damage occurred coincident with severe thunderstorms. The second case study is a power plant that was supposed to be protected by early streamer emission devices. The plant experienced generator trips as a result of nearby lightning strikes. SLS visited these facilities and performed inspections, analysis, and measurements. The findings and recommendations are presented in this paper.

### **Topic Areas**

Other (Please note that the Scientific Committee may decline to consider an abstract with another focus)

### **Submission Format**

Oral