

Discussion on Electrification Disaster Prevention for Welding Operations
on Construction Projects

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Abstract

Steel structure is commonly used in large-scale constructions project; while welding operation is essential when large-scale component are being manufactured. Based on historical records, this study investigates and analyzes the current usage of electric welding machines, including the causation of electrification hazards and discusses a hazard prevention measurement which focuses on three aspects: the safety of the electric welding machine, personnel safety and operational safety. Specific mechanisms includes electric shock prevention devices, primary side and secondary side of the electric welding machines, the maintenance of the proper function of operational protection devices and the handle of the welding machine, the automatic examination of the machine and the proper inspection prior to constructions. The goal is to maintain the safety of the welding construction process and to educate the workers with the proper construction method. The ultimate goal is to reduce the electrification hazards caused by welding constructions.

Keyword : Welding machine; Construction Project; electrification hazards; electric shock