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Works in progress

U.S. occupational electrical incidents, 1992–1998

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Abstract

Each day in the U.S. more than 17 workers are killed and an additional 15,000 sustain on the job injuries and illnesses. Electricity is involved in one occupational fatality and 10 lost-workday injuries everyday. The National Institute for Occupational Safety and Health (NIOSH) Pittsburgh Research Laboratory (PRL) is examining these electrical injuries in detail, in an attempt to more clearly define the workplace circumstances involved, as well as the personnel most at risk. This study is using 1992–1998 data from the U.S. Department of Labor's Bureau of Labor Statistics' (BLS) Census of Fatal Occupational Injuries (CFOI) and Survey of Occupational Injuries and Illnesses (SOII). There were 2,267 electrical fatalities and 33,848 nonfatal electrical injuries during the study period. Approximately one of every 500 lost-workday incidents was electrical in nature, but electricity played a role in nearly one of every 20 occupational fatalities. Clearly, electrical incidents are disproportionately fatal. Analyses of electrical nonfatal incidents revealed that 63% involved electrical shock, while 37% resulted in electrical burns of all types. The construction sector recorded the most nonfatal electrical injuries with 8,498, of which 47% were electrical shock injuries and 53% were electrical burns. The manufacturing sector had the second-highest number of nonfatal electrical injuries at 7,682, with 65% of those electrical shocks and 35% electrical burns. Nonfatal injury rate data per 10,000 employees show that the construction sector electrical shock injury rate is approximately two to four times greater than that of the manufacturing sector, while its electrical burn rate is five to eight times higher. Remaining work will further characterize occupational electrical incidents, focusing on how these events are distributed among occupations, industry sectors, work activities, work locations, etc. In addition, causal analysis will be conducted on the narrative data available. Work will develop recommendations for future NIOSH electrical research, based on analyses results. © 2001 National Safety Council and Elsevier Science Ltd. All rights reserved.
