

Economical Working Hours per Workday for a Production Worker under Hazardous Environment

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Abstract : Workplace injuries cost organizations significant amount of money. Causes of injuries at workplace are very well documented in the literature and attributed to variety of reasons. One important reason is the long working-hours. The purpose of this paper is to develop a mathematical model that finds the optimal working-hours at workplace. The developed model minimizes the expected total cost which consists of the expected cost incurred due to unsafe conditions of workplace, the other cost is related to the lost production due to work incidents, and the production cost.

Keywords : 8-hour workday, mathematical model, optimal working hours, workplace injuries

Conference Title : ICIEOR 2019 : International Conference on Industrial Engineering and Operations Research

Conference Location : New York, United States

Conference Dates : April 22-23, 2019