An Investigation on Hand Injuries Among an Oil Company Employees

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Abstract

Oil and gas production industry is potentially dangerous due to its nature of operation. Hand injuries resulting from manual handling and use of equipment are a common injury in this industry. In Petroleum Development Oman (PDO), statistics showed that these type of injuries accounted for 44%, 50%, 58%, and 68% of the total Lost Time Injuries (LTI) in 2001, 2002, 2003 and 2004, respectively. The objectives of this study were to investigate and analyze the causes of hand and finger injuries and formulate strategies that would reduce or eliminate these injuries in the drilling operations of Petroleum Development Oman. Injury data from 1998 to 2004 were analyzed in terms of the following factors: (1) year, (2) month, (3) tools or equipment, (4) category of severity, (5) type of incident, (6) immediate cause, and (7) underlying cause. The study showed that number of incidents escalated in years in which higher number of new staff joined the workforce. Months of September and August followed by June had the highest mean incident rates. This was related to staff retuning from leave and beginning their shifts. Doors, against all expectations caused major hand and finger injuries during the period mentioned followed by manual ongs, rolling tubulars, elevators and other equipment. However, with regards to severity manual and power tongs had the most sever injuries. Traps accounted for almost 67% of the incidents. Analysis of the immediate and underlying causes showed that behavioral factors attributed most to these causes. Some of the main recommendations made were: (1) enhance employee training by providing hands on training that involves staff in physical and practical simulation of incidents in order to develop clear knowledge of certain hazards and the risk of incidents, and (2) behavioural factors should be the key area where efforts should be made in order to arrest the incidents rate. The study will have an impact on the way the injuries are analyzed and in reducing or eliminating these injuries in the company.