Countermeasures to Improve Workers’ Performance and Reduce Errors due to Inadequate Sleep and Fatigue

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Abstract

Workers in the process industries are often required to work long hours performing monotonous tasks, various times of the night and day. Their work performance can suffer from inadequate sleep caused by a variety of factors including sleep disorders such as sleep apnea that affects the quality of sleep, sleep deprivation resulting in limited hours of sleep, or other sleep related issues associated with working varying shifts which can influence the ability to sleep. Research has shown that inadequate sleep can be detrimental to vigilance, information integration, and cognitive abilities. These performance effects can have significant and dangerous results in the processing industry where workers are often involved in monotonous monitoring tasks that periodically require critical decision making and problem solving skills.

This paper presents recommendations to address the potential impact of inadequate sleep on individual’s work performance. This includes countermeasures to be consider when designing operational procedures, work schedules, facilities, and operator interfaces.