

Analysis of Determining Offshore Worker Schedules in PHE ONWJ Work Area During COVID-19 Pandemic

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Abstract

The COVID-19 pandemic entered its second year and had impact on all aspects. The implementation of PPKM and health protocols resulted in changes in the pattern of community activities. PT. PHE ONWJ as one of the national oil and gas mining companies has changed the cycle of offshore platform workers, which was originally 12:12 workdays schedules changed to 21:21 workdays schedules. However, the increasing number of positive confirmed cases of COVID-19 in Indonesia and in the PHE ONWJ, company has resulted in co-workers who are unable to perform crew changes or work cycle changes, forcing colleagues at the bridge to perform extended days. Based on questionnaire data in the field, 51% of workers have had an extended day with an average total work duration of 28 working days. The analysis continued with the NASA TLX method to determine the mental load condition of offshore platform workers. Data from the NASA TLX questionnaire is divided into 2 groups, workers who have experienced an extended day and those who have not experienced an extended day. NASA TLX had the dominant workload averages are mental demand (276) and time demand (271) with an average WWL 80.68 (high category of workload). So that an analysis was carried out to determine the more optimal duration of the working day during the COVID-19 pandemic using the AHP method with 4 criteria, namely the mental burden of workers, accommodation and transportation costs, health protocols and operational needs in the field with alternatives of 12 days, 14 days, 18 days and 21 working days.

Keywords

COVID-19 Pandemic, PPKM, NASA TLX, AHP, Schedule workday

Biographies

Tegar Jaya Saka Buana is an employee at oil and gas company in Jakarta, Indonesia who is also a student of the master's program at *Sekolah Interdisiplin Manajemen Teknologi (SIMT)*, Sepuluh Nopember Institute of Technology, Indonesia. In 2020, The Electro Industry of Engineering alumnus of the *Politeknik Elektronika Negeri Surabaya* began pursuing her master's degree in Industrial Management. His experience working in Operations and Production Oil and Gas that interested him in human safety management further.

Adithya Sudiarno is a doctor and lecture of master's program at *Sekolah Interdisiplin Manajemen Teknologi (SIMT)*, Sepuluh Nopember Institute of Technology, Indonesia. His research is about HSE (Health Safety Engineering), workload assessment, human factors-ergonomics, innovation management, and risk management. Nowadays, he holds an Intermediate Professional Engineer degree (IPM) and an ASEAN professional engineer degree (ASEAN Eng)