

## **Development of a Work-Related Stress Management Program Guaranteeing Fitness-For-Duty for Human Error Prevention**

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**Abstract :** Human error is one of the most dreaded factors that may result in unexpected accidents, especially in nuclear power plants. For accident prevention, it is quite indispensable to analyze and to manage the influence of any factor which may raise the possibility of human errors. Out of lots factors, stress has been reported to have a significant influence on human performance. Therefore, this research aimed to develop a work-related stress management program which can guarantee Fitness-for-Duty (FFD) of the workers in nuclear power plants, especially those working in main control rooms. Major stress factors were elicited through literal surveys and classified into major categories such as demands, supports, and relationships. To manage those factors, a test and intervention program based on 4-level approaches was developed over the whole employment cycle including selection and screening of workers, job allocation, and job rotation. In addition, a managerial care program was introduced with the concept of Employee-Assistance-Program (EAP) program. Reviews on the program conducted by ex-operators in nuclear power plants showed responses in the affirmative, and suggested additional treatment to guarantee high performance of human workers, not in normal operations but also in emergency situations.

**Keywords :** human error, work performance, work stress, Fitness-For-Duty (FFD), Employee Assistance Program (EAP)

**Conference Title :** ICIEOM 2017 : International Conference on Industrial Engineering and Operations Management

**Conference Location :** Prague, Czechia

**Conference Dates :** July 09-10, 2017