Safety performance in petrochemical industries

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Abstract

In the view of loss prevention, the petrochemical industry is one of the high risk industries. This study assesses the effects of organizational and individual factors on safety performance in petrochemical industries in central Taiwan. An exploratory factor analysis (EFA) using the SPSS 12.0 was employed to examine the construct validity and internal reliability of safety performance scale (SPS) including leading and lagging indices. The results of MANOVA indicate that there are interaction effects on safety performance between plant size and nature; there are main effects of safety audit frequency, job title, safety training experience on safety performance. Practical implications of these results for process safety management in the petrochemical industries are discussed.

Keywords: Petrochemical industry; Safety performance; Exploratory factor analysis (EFA); MANOVA; Interaction effects