

## FACTORS CONTRIBUTING TO HAZMAT-RELATED ACCIDENTS IN MARINE TRANSPORTATION

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### ABSTRACT

Transportation of hazardous materials (HAZMAT) especially via sea has continuously caught attention and drawn international concern with continual increases in the number of accidents reported by the industries in the recent years. The accidents have resulted in various effects from, ranging from insignificant damages to very severe losses particularly on the environment and property. In order to avoid such accidents or reduce the risks of having one, it is vital to first, understand the factors that could lead to marine transportation accidents involving HAZMAT. Surveys were conducted among 25 representatives from various shipping industries in Malaysia. The purpose was to get them to assign the appropriate ranking point for each factor based on their experiences and opinions on the significance of the factors in causing the accidents. This information is valuable in serving as an initial screening for safety assessment in HAZMAT marine transport operation so that the potential hazards can be avoided or reduced. Based on the assessment results using the factors selected from the surveys, a more comprehensive assessment which is particularly relevant to enhance the existing safety assessment in HAZMAT operation can then be performed towards achieving an inherently safer HAZMAT marine transportation.

**Keywords:** HAZMAT, Marine transportation, Risk, Hazard, Assessment.