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## ABSTRACT

**Title of Abstract** : Application of HIRARC Method for Risk Assessment in Loading and Unloading Operations at PT. X Makassar  
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**Background** : Workplace accidents during loading and unloading activities at ports remain a significant issue that affects worker safety. PT. X Makassar, as one of the main ports in Indonesia, faces challenges in managing safety risks in its working environment. Therefore, it is important to implement a systematic and proven method to assess and control risks effectively. One such method is HIRARC (Hazard Identification, Risk Assessment, and Risk Control).

**Objective** : This study aims to apply the HIRARC method to assess and manage workplace safety risks during loading and unloading activities at the port

**Research Methods/ Implementation Methods** : The research employs an explanatory sequential approach, combining quantitative data for risk assessment using the AS/NZS 4360:2004 matrix, and qualitative data gathered through in-depth interviews with workers and HSE staff

**Results** : The results show that various physical, mechanical, and human error hazards were identified with high-risk levels. The implemented risk controls include the use of Personal Protective Equipment (PPE), engineering controls, and administrative controls.

**Conclusion/Lesson Learned** : This study recommends improving port infrastructure and providing regular training for workers to enhance workplace safety in the future.

**Keyword** : HIRARC, Risk Assessment, Workplace Safety, Loading and Unloading