

**DEVELOPMENT OF MAINTENANCE MANAGEMENT SYSTEM TO IMPROVE
AVAILABILITY PERFORMANCE OF CARGO SCANNER AT TANZANIA PORTS**

AUTHORITY:

A case of Dar Es Salaam Port.

BY

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Abstract

The availability performance of cargo scanner is a challenge for the port of Dar es salaam. The dare s salaam scanner unit faces high cargo scanner downtime because frequent failures will reduce the availability performance and causes traffic jams in the port. Therefore, this research set out to develop a maintenance management system to improve the availability of cargo scanners in Dar es Salaam.

To achieve this goal, necessary information and data have been collected through literature review, observation, and questionnaire survey .Analyses the collected data using a computer program: Social Science statistics package (SPSS) version 26, which applies multiple regression models and uses average value to classify the identified factors that influence current maintenance management strategies.

The results of the study identified the factors influencing the current cargo scanner maintenance strategy in the port of Dar es salaam. The study identified five factors and their coefficients, including unavailability of spare parts and tools (0.013), downtime caused by operating environment (0.005), the effective age of equipment (0.002), availability of effective maintenance plans and schedules (0.001), and downtime due to Human resources (0.008). According to these factors, the availability performance of cargo scanner maintenance management system has been developed.

To improve the effectiveness of the current maintenance management strategy, it is recommended to apply the developed availability performance and effective maintenance management to the port of Dar es salaam. In the case of its adequacy, the port management department can establish and define the availability of spare part and tools, ensure planning and scheduling to monitoring all maintenance activities to improve the availability of performance, Human resources are composed

of labour to promote the availability of performance, operation Environment and the service life of equipment and machinery to track the service life to reduce frequent failures.

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