JOURNAL INFORMATIC, EDUCATION AND MANAGEMENT (JIEM)
Vol 8 No 1 (2026): September 2025 - February 2026, pp. 793 ~ 803
ISSN: 2716-0696, DOI: 10.61992/jiem.v8i1.272

Analysis of Washing Machine Maintenance Strategy Using Preventive Maintenance Approach in Laundry Unit of XYZ Hospital

Rio Isnu P [1*], Lili Kimawan [1], Leonardo Candra K [1], Riki Ridwan Margana [1]
[1] Universitas Widyatama

Article Info

Article history:
Received 13 January 2026
Revised 16 January 2026
Accepted 19 January 2026

Keywords:
Machine Reliability, Hospital Laundry, Machine Maintenance, Preventive, Reactive

ABSTRACT

Hospital laundry units play a crucial role in supporting healthcare services, particularly in maintaining the availability of clean and hygienic linen. Conditions at the Laundry Unit of XYZ Hospital revealed problems such as relatively frequent washing machine breakdowns, high operational downtime, and reactive maintenance activities. These conditions hamper the smooth running of the linen washing process and increase maintenance costs. This study aims to analyze washing machine maintenance strategies using a preventive maintenance approach to improve machine reliability and reduce the risk of breakdowns. The research method used was a case study with a descriptive-analytical approach. Data were collected through direct observation, interviews with operators, and historical machine breakdown data. Analysis was conducted using maintenance performance indicators such as breakdown frequency, machine downtime, and critical components that frequently experience problems. The results showed that the dominant damage was caused by a lack of routine maintenance and the absence of a structured preventive maintenance schedule. The outputs of this study were a proposed preventive maintenance schedule, a periodic maintenance checklist, and recommendations for maintenance strategies that could reduce machine downtime and improve the operational reliability of the laundry unit at XYZ Hospital. Maintenance performance analysis was conducted using MTBF, MTTR, and availability indicators as the basis for preparing preventive maintenance proposals.

Corresponding Author:
Rio Isnu P | Universitas Widyatama
Email: rio.isnu@widyatama.ac.id