ANALYSIS OF REDUCING WASTE AT LINE PRODUCTION OF AUTO ROOTING AREA AT TIY MANUFACTURING USING 5S METHOD

UNDERGRADUATE FINAL PROJECT

Submitted as one of the requirements to obtain Sarjana Teknik (S.T.)

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ABSTRACT

PT MI toy manufacturing has a production place specifically for sewing doll hair called FAR (Full Auto Rooting). The FAR production area having a total of 319 sewing machines operating. The core issue in PT MI's FAR production area is the inadequate handling of generated waste, leading to potential work accidents. Analysis of waste data from May to July 2022 reveals significant quantities of yarn waste, reject sculpt, reject onyx, and feeddog scrap. This accumulation not only compromises workplace cleanliness but also contributes to safety hazards. To address these challenges, a 5S Checklist audit was conducted, resulting in a score of 53 out of 100, highlighting areas needing improvement. The proposed solution involves implementing Standard Operating Procedures (SOPs) aligned with 5S principles (Sort, Set in Order, Shine, Standardize, Sustain). These SOPs aim to enhance waste reduction practices, establish organizational standards, and promote a safer and more efficient working environment in the FAR production area. By integrating systematic sorting, organizing, cleaning, standardizing, and sustaining practices, PT MI seeks to mitigate waste-related risks and foster a culture of continuous improvement and safety awareness among its workforce.

Keywords: 5S, Five-Whys Analysis, Safety, Standard Operating Procedure, Waste, Work Accidents.

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LIST OF TERMINOLOGIES

5S	:	A systematic approach aimed at optimizing workplace operations by reducing waste, improving efficiency, and creating an organized environment. 5S stands for Sort, Set in Order, Shine, Standardise, Sustain.
5-Whys Analysis	:	Five-Whys analysis is a problem-solving method that explores the underlying cause and effect of a particular problem. The main objective is to determine the root cause of a defect or problem by asking successive "Why?" questions.
FAR	:	One type of production area in PT MI handles the rooting head for planting hair on each toys produced. FAR stands for Full Auto Rooting.
SOP	:	A standard operating procedure is a set of step-by-step instructions compiled by an organization to help workers carry out routine operations. SOP stands for Standard Operating Procedure.