

Reduction of Excessive Trimming and Reject Leather by Integration of 7 QC Tools and QC Story Formula: The Case Report of Sheba Leather PLC

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Abstract

At the present time most of Ethiopian leather manufacturing industries are facing tough competition globally due to deteriorated quality of leather. Clearly known that poor quality results in increasing manufacturing cost. Lastly, the industry becomes unprofitable. In addition, the industries are forced to lose their customers. Sheba leather Industry PLC is one of Ethiopian leather manufacturing industry facing this problem. So, the purpose of the project is to decrease extreme trimmed and rejected leather, to introduce a system that is capable of solving the problem, to expand findings to other sections of the industry. There was a problem of trimmed and rejected skin leather at re-tanning and crust preparation section. 14,879.92 kg of trimmed skin leather and 8,164 pieces of rejected leather. The problem solving methodology approach was used during the project work to reduce both trimmed and rejected leather. Quality control 7 tools were also applied as per the nature of the steps of problem solving. The findings after completion of the implementation period the excessive trimmed leather is reduced to 8,524 kg by 42.71% improvement. The rejected leather of minimized to 5,241 pieces of leather by 35.80% improvement. In addition, systems like standard operation procedure, standardization of four basic autonomous maintenance activities, quality control process chart and operator skill analysis are introduced on potential areas. Besides, the area of the finished leather also improves by 2.2% relative to the input size of the leather. Finally, the department managers took responsibility to sustain the substantial improvements and expand these systems to hide production section of the company.

Keywords

Minimization; Excessive; Leather; Quality

Introduction

The Ethiopia Kaizen Institute in collaboration with Japanese International Cooperation Agency - JICA implementing intermediate level kaizen at companies which have been successfully completing the first level of kaizen implementation in considering their activities on sustaining. Now a days, 12 manufacturing industries are known implementing the intermediate level kaizen at nationwide. From these companies, Sheba Leather Industry is one of these companies currently implementing. The reporter wants to discuss Kick-off was held with Sheba top and middle managements by performing the following activities during the first ICT visit: 'Diagnosis of the current activity of Kaizen office, shoes and tannery section, 'Discussion with HRD manager on how to continue ICT activity and their necessary requirement, 'Conduct Kick off meeting for 13 management members with JICA expert, including: Objective of the project, Managements expectation from the advanced kaizen, Applicable technics by factory type, Schedule of ICT with Detail time schedule, Benefits of the project, CSFs for the successful completion of the project associated with top, middle mgmt. and employees, Wet blanket lists for the project, Discussion whether we exceed their expectation or not, 'Discussion with JICA expert on how to proceed the project activity

Highlight training for top and middle managements including selected divisions and supervisors was given by performing the following activities. Preparation of training material for top and middle managements. High light training about applicable techniques was given for 20 male management members: TQM, TPS, TPM, A-KPT, PRODUCTION SCHEDULING, MATERIAL REQUIREMENT PLANNING. Company challenges or chronic problems were exploited from the management during discussion. In addition, Extracted challenges from the company convenient

three year strategic business plan as seen in the next slide.

This was originated from not achieving delivery time of Venice model shoe. The management via brainstorming agreed on minimization of long delivery time theme to be tackled by the project. Meanwhile, cross functional team was established from different departments related to theme. The team analysed original situation of the problem starting from order preparation to final storage time. They confirmed that more than 3 months are taken to produce 240 pairs of shoe. Therefore, the team set a target to reduce by 50 percent. An action plan contained problem solving steps was prepared. Based on studied original situation, cause analysis was done to identify critical root causes. During analysis fish bone diagram, why - why analysis and cause priority number criteria were used. After identifying critical root causes, possible countermeasures were established using criteria's. The possible countermeasures were implemented as per the countermeasure action plan. After the completion of the implementation period, the team evaluated the process and certain achieving tangible result by shortening delivery time to 18,236.55 min. This result is control point of Venice model shoe.

The team was trained to standardize, maintain, and improve this control point. At the end, future plan was prepared to implement left best solutions and to solve another new theme.

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