

**STATISTICAL APPROACH TO MINIMIZE WASTE IN  
TYRE MANUFACTURING PROCESS: A CASE STUDY**

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**DECLARATION OF THE CANDIDATE**

I hereby declare that the work presented here is genuine work done originally by me except as cited in the reference and has not submitted elsewhere for the requirement of degree programme or published any time before.

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The above candidate has carried out research for the Master Dissertation under my supervision.

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## **ABSTRACT**

The main focus of this study was to assess the wastes occurring because of defect tyres in air tyre manufacturing process in the Loadstar Pvt. Limited. This lost accounts for 37.75 million during the last five months. In this study a complete statistical analysis about defect tyres were carried out for five tyre types in air tyre manufacturing process by means of Parato diagram. The average run lengths were found for each tyre type. Explanatory statistical analysis revealed that the defect tyre cost is high due to factors such as under cure, bladder pleat, air bubble in, plate damage, air bubble lug, low pressure and less side wall thickness. These statistical analyses are recommended to help manufacturers to identify the exact issues in the manufacturing process and rectify those.

**Keywords:** Average run length, Chi-square test, NP chart, Parato diagram, P chart, X-bar chart

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