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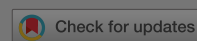
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# An application of Pareto analysis and cause-and-effect diagram (CED) to examine stoppage losses: a textile case from Bangladesh

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## Abstract

Spinning industries are facing challenges of improving productivity in the competitive market nowadays. Ring spinning, the most widely used yarn manufacturing process for short staple spinning, uses several types of machinery from blow room to ring frame for producing yarn. The process involves several steps, each of which can contribute to stoppage losses. By identifying the main causes of stoppage losses, it is possible to take corrective actions to improve productivity. This paper presents a case study of a textile mill in Bangladesh, where Pareto analysis and cause-and-effect diagram (CED) were used to identify the main causes of stoppage losses. The results show that the main causes of stoppage losses are related to machine breakdowns, operator errors, and material defects. The study also identifies the root causes of these problems and suggests corrective actions to improve productivity. The results of the study show that the main causes of stoppage losses are related to machine breakdowns, operator errors, and material defects. The study also identifies the root causes of these problems and suggests corrective actions to improve productivity.

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change in Draft Change Pinion (DCP) due to breakage of teeth of the gear during starting of machine by operators before lowering of ring rail and change of Twist Change Pinion (TCP) due to the displacement of TCP gear shaft. Finally, few recommendations are made to reduce stoppage losses and to increase the productivity of the ring frame section.

Keywords: Yarn manufacturing process ring frame OEE stoppage losses Pareto analysis cause-and-effect diagram loss prevention

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