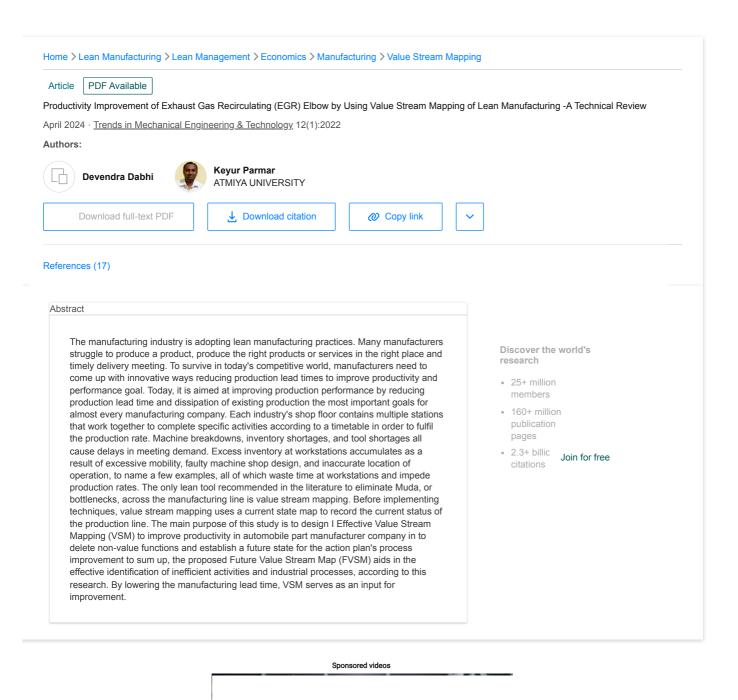
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## Trends in Mechanical Engineering & Technology

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Review

TMFT

ISSN: 2231-1793 (Online)

ISSN: 2347-9965 (Print)

Volume 12, Issue 1, 2022 DOI (Journal): 10.37591/TMET

## Productivity Improvement of Exhaust Gas Recirculating (EGR) Elbow by Using Value Stream Mapping of Lean Manufacturing – A Technical Review

Devendra Dabhi<sup>1,</sup>\*, Keyur Parmar<sup>2</sup>

## Abstract

The manufacturing industry is adopting lean manufacturing practices. Many manufacturers struggle to produce a product, produce the right products or services in the right place and timely delivery meeting. To survive in today's competitive world, manufacturers need to come up with innovative ways reducing production lead times to improve productivity and performance goal. Today, it is aimed at improving production performance by reducing production lead time and dissipation of existing production the most important goals for almost every manufacturing company. Each industry's shop floor contains multiple stations that work together to complete specific activities according to a timetable in order to fulfil the production rate. Machine breakdowns, inventory shortages, and tool shortages all cause delays in meeting demand. Excess inventory at workstations accumulates as a result of excessive mobility, faulty machine shop design, and inaccurate location of operation, to name a few examples, all of which waste time at workstations and impede production rates. The only lean tool recommended in the literature to eliminate Muda, or bottlenecks, across the manufacturing line is value stream mapping. Before implementing techniques, value stream mapping uses a current state map to record the current status of the production line. The main purpose of this study is to design I Effective Value Stream Mapping (VSM) to improve productivity in automobile part manufacturer company in to delete non-value functions and establish a future state for the action plan's process improvement to sum up, the proposed Future Value Stream Map (FVSM) aids in the effective identification of inefficient activities and industrial processes, according to this research. By lowering the manufacturing lead time, VSM serves as an input for improvement.

Keywords: Lean manufacturing, Value Stream Mapping (VSM), takt time, time study, waste

## INTRODUCTION TO LEAN MANUFACTURING

Japanese car company, Toyota, has launched Lean Production (LM) or Toyota Production System

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Received Date: March 22, 2022 Accepted Date: April 04, 2022 Published Date: April 13, 2022

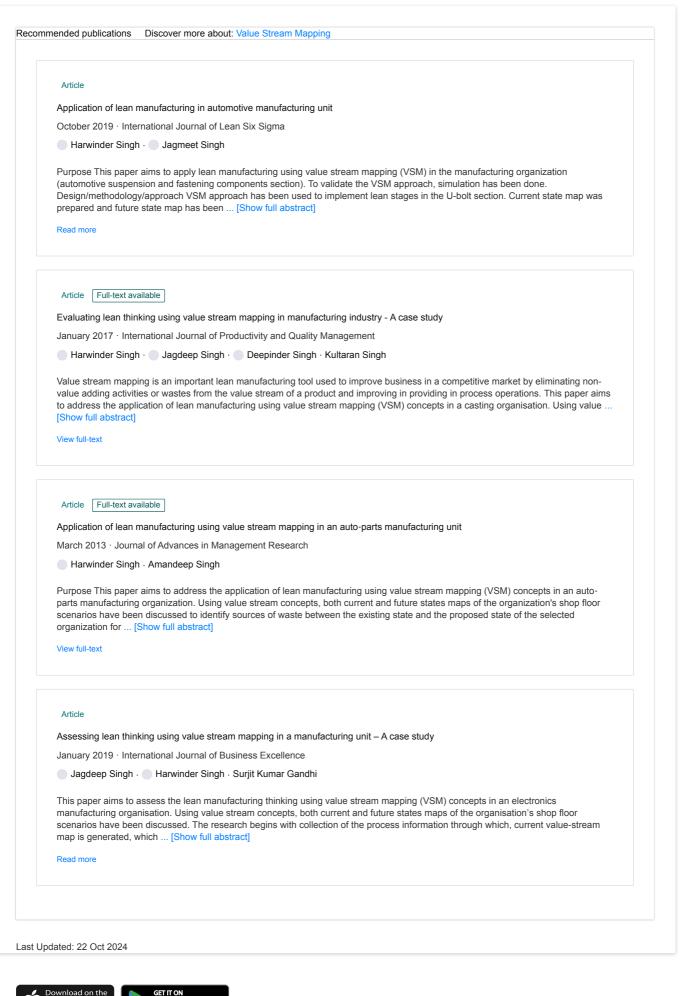
Citation: Devendra Dabhi, Keyur Parmar. Productivity Improvement of Exhaust Gas Recirculating (EGR) Elbow by Using Value Stream Mapping of Lean Manufacturing -A Technical Review. Trends in Mechanical Engineering & Technology. 2022; 12(1): 39-44p.

(TPS), and has now been approved. many countries in every name because of its proven benefits of quality improvement, cost reduction, flexibility and speed. answer. Reduced production can best be described as waste disposal in a production-related production system effort, time inventory at various stages of production. Depending on production is an effective and popular tool in many manufacturing industries and resources to deal with non-essential tasks as well waste. Any kind of waste, in the literal sense that work does not add any value to the final product, it must be reduced or possibly, eliminated by low production costs. As the saying goes the saved cent is earned by the cent and is very important in production. The main theme of the

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