

Application of Lean Manufacturing Tools in Hot Asphalt Production

Authors : S. Bayona, J. Nunez, D. Paez, C. Diaz

Abstract : The application of Lean manufacturing tools continues to be an effective solution for increasing productivity, reducing costs and eliminating waste in the manufacture of goods and services. This article analyzes the production process of a hot asphalt manufacturing company from an administrative and technical perspective. Three main phases were analyzed, the first phase was related to the determination of the risk priority number of the main operations in asphalt mix production process by an FMEA (Failure Mode Effects Analysis), in the second phase the Value Stream Mapping (VSM) of the production line was performed and in the third phase a SWOT (Strengths, Weaknesses Opportunities, Threats) matrix was constructed. Among the most valued failure modes were the lack training of workers in occupational safety and health issues, the lack of signaling and classification of granulated material, and the overweight of vehicles loaded. The analysis of the results in the three phases agree on the importance of training operational workers, improve communication with external actors in order to minimize delays in material orders and strengthen control suppliers.

Keywords : asphalt, lean manufacturing, productivity, process

Conference Title : ICLESC 2019 : International Conference on Logistics Engineering and Supply Chain

Conference Location : Berlin, Germany

Conference Dates : May 21-22, 2019