

Dear readers,

The third edition of 2018 of the journal Produção Online presents 15 articles related to the areas and related disciplines of production engineering.

The first article analyzes the complexity of business processes in order to provide support for the decision making of its managers. The case study was carried out in a large public organization, using the data of a sample of its processes to evaluate the complexity according to metrics established in theory. The following article, on the other hand, seeks to analyze the proposed BPM models from 2008 to 2017. For this analysis a descriptive synthesis of the models was used, a comparison of their phases, a survey of their convergences and variations, as well as the alignment of these models with key BPM attributes identified from the literature. The third article analyzes the overall efficiency of a manufacturing cell of a Brazilian automotive industry. The research method was based on the capacity management model proposed by Pacheco et al. (2012), which integrates the concepts of Restriction Theory and Total Productive Maintenance (TPM). The fourth article proposes the application of continuous functions to solve the problem of equipment replacement. The fifth article presents a general comparison in selected countries in the area of energy efficiency, in order to propose relevant aspects to improve the Brazilian case. The Search Method was a systematic mapping conducted along with a patent analysis for the purpose of providing an overview of the area.

The sixth article analyzes the characteristics of thermal comfort publications in classrooms in the Scopus and Web of Science (WOS) databases, identifying the main sources, the main authors and some particularities about the scientific production of this theme. The seventh article presents a process of improvement of parameters of injection of parts produced in ABS plastic. An experimental design with four variables of the injection process and two critical dimensions for the assembly of the final product was carried out in a company that manufactures hospital medical products located in the city of Pelotas, RS. The eighth article presents a model in Petri nets to analyze the performance of a BRT corridor in relation to the operational speed. For validation, the model was applied to a stretch of a BRT corridor in the Metropolitan Region of Recife (RMR). The ninth article proposes measures to evaluate the performance of internal reverse storage operations, through a case study in a beverage distribution company. The tenth paper presents a method of identifying opportunities for improvement that combines Monte Carlo simulation and value stream mapping to take into account the uncertainties of the value stream in its lead

time analysis.

The next article presents a survey of the relevant scientific production on the application of lean production in service operations. This survey allows us to identify research gaps based on the literature review. Article twelve analyzes the recovery time of investment in rainwater harvesting systems for use in single family homes in the state of Santa Catarina. Next, article thirteen proposes to identify, evaluate and prioritize the existing risks in a company belonging to a piped natural gas supply chain in the State of Paraíba. The following article presents an approach of the financial plan to evaluate the economic-financial feasibility of a small microbrewery in the city of São Luís do Maranhão. Finally, our fifteenth evaluates the quality of services provided by the campus of a public university, based on the level of customer satisfaction, in relation to the real moments identified. The research method has a qualitative approach, using as a research method the case study and as a result identifies that the majority of students' dissatisfactions are related to the services facilitating goods, such as book availability and the internet.

The content of the articles evidences the growing scientific and practical relevance of research in the area of production engineering. It is also evident the constant concern with the resolution of real problems of several regions, which results in the increase of the competitiveness and the sustainable development of Brazil. As always, we hope that this collection of articles, which reflects the state of the art of production engineering, can contribute to the enrichment of your learning.

Prof. Dr. André Luís Helleno Editor-in-chief (2018 – 2020)

Prof. Dr. Antonio Cezar Bornia Co-Editor-in-chief (2018 – 2020)

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