

Aspects regarding maintenance of the manufacturing system in Industry 4.0

Elisabeta Mihaela, CIORTEA

University "1 Decembrie 1918" of Alba Iulia,
Romania, Department of Science and Engineering,

ciorte31mihaela@yahoo.com, mciorte@uab.ro

Abstract

This paper highlights the role of Industry 4.0 for the maintenance of manufacturing systems. Due to the implementation of advanced technologies and ways of learning technological equipment, hard systems can adapt relatively easily to fluctuations in the manufacturing process over time. For the realization of the system subject to analysis we used the specialized petri nets simulation packages, and the final implementation is done on a specialized database. The model is intended to be a source of support for the activities of companies wishing to adopt new technologies in the manufacturing system and to identify as few errors as possible due to ensuring the necessary maintenance and control, imposed by the chosen technological process. The advantages are those of prototyping and analyzing the entire system after the implementation of tracking and being able to control the entire system, which leads to the prevention and subsequent elimination of queues or possible accidents.

Keywords. maintenance manufacturing system, IoT, cloud manufacturig systems

Conclusions

Using analysis of the control diagram obtained for a simple transport system between deposit and two machining centers using technical instructions accompanying the technical processing centers on the maintenance of equipment is developed a method to optimize the transmission system.

Considering the defects that can occur and eliminated the regular maintenance of machinery transport and processing centers eliminates errors and accidents that may occur and thus obtain transport optimization after analyzing the entire system.

THANK YOU FOR YOUR ATTENTION!

References

- D. CHESWORTH Industry 4.0, *Techniques as a Maintenance Strategy*, Jan 2018, Doi: 10.13140/RG.2.2.18116.32644
- E. M. CIORTEA Manufacturing analysis with discrete events using IoT platform, *Modern Technologies in Industrial Engineering VII*, (ModTech2019), IOP Conf. Series: Materials Science and Engineering 591 (2019) 012008, doi:10.1088/1757-899X/591/1/012008
- E. M. CIORTEA Prototyping manufacturing in the cloud, *IOP Conf. Series: Materials Science and Engineering* 227 (2017) 012028, doi:10.1088/1757-899X/227/1/012028
- E. M. CIORTEA The cloud manufacturing – technology of the future, *ANNALS of Faculty Engineering Hunedoara – International Journal of Engineering*, Tome XVII [2019] | Fascicule 4 [November], CD-ROM form, ISSN 1584 – 2673, online, ISSN 2601 – 2332