



Maintenance Challenges in the Industry 4.0 Era

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Abstract:

The paper presents part of the research related to how maintenance must adapt to the requirements of Industry 4.0.

Maintenance, as part of the industrial process, has as its main objective the maintain of equipment in working order or their restoration to nominal parameters after an accidental failure. This implies an adaptation of maintenance techniques and technologies to the techniques and technologies used in manufacturing.

This adaptation involves a series of challenges, among which were identified:

- Artificial intelligence. The emergence of automatic solutions in solving incidents of the operation of industrial equipment
- Completing the collected data with data specific to the maintenance activity (the connection between the level of loading of the equipment with the level of wear and tear and the maintenance system)
- Data analysis and from the point of view of maintenance activity (statistics)
- Increasing the degree of interconnection of equipment, the Internet of Things (IoT)
- Prediction of future states of industrial equipment
- Decision making, data analysis and cloud computing
- Increasing the degree of staff specialization and poly-qualification
- Use of integrated cyber and physical systems,
- Cyber security.