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Design and validation of an industrial control system model using blockchain technology to enhance cyber attack resilience

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Abstract:

Blockchain is considered, next to robotics and artificial intelligence, the third technological pillar of Industry 4.0. It is also expected to be used to ensure the authenticity of data in distributed production and the entire life cycle of the product. In this direction, the presented rheme of the dissertation also works. In addition to data, it also ensures the safety of the production process itself, which in the open and distributed system of production according to the Industry 4.0 concept will be exposed to a much greater risk of cyber attack than in the current linear scheme of the production process.

The aim of the dissertation is the design and verification of an industrial control system model which uses blockchain technology to substantially enhance cyber attack resilience and functional failure resilience.

Literature:

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