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The secure manufacturing IT system

Given the current and future development of computerization and information communications infrastructures, the manufacturing industries are facing more and more challenges how to secure their production and distribution plants in conjunction with the information flow within the organization and worldwide via Internet. The pervasive access to Internet introduces new challenges how to secure control and management of manufacturing plants and at the same time to provide access to authorized personnel at any-time and from-anywhere. The author discusses the development of Access Control to Manufacturing Information Systems using a secure web system. The proposed system authenticates the authorized users according to their function in the organization allowing them to control specific tasks on site or remotely. The system facilitates alternative ways to distinguish between the user authentication and access hierarchies. It keeps track of access logbook and lists past events performed via web interface. The author further discusses the issues related to user authentication and authorization based on their roles within the organization. The main contribution of this work is to provide solution and secure any large complex manufacturing industrial site that use Web-URL Security from cyber-attacks on site or remotely by unauthorized personnel.

Biography

Eduard Babulak is an International Scholar, Researcher, Consultant, Educator, Professional Engineer and Polyglot with more than thirty years of experience. His academic and engineering work was recognized internationally by the Engineering Council in UK, the European Federation of Engineers and credited by the Ontario Society of Professional Engineers and APEG in British Columbia in Canada. He was awarded higher Post-doctoral degree DOCENT-Doctor of Science (DSc) in the Czech Republic, PhD, MSc and High National Certificate (HNC) Diplomas in United Kingdom as well as MSc and BSc Diplomas in Electrical Engineering Slovakia.

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