Troubleshooting Petroleum Equipment Based on Wireless Sensors Based on Bayesian Algorithm

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Abstract : In this research, common methods and techniques have been investigated with a focus on intelligent fault finding and monitoring systems in the oil industry. In fact, remote and intelligent control methods are considered a necessity for implementing various operations in the oil industry, but benefiting from the knowledge extracted from countless data generated with the help of data mining algorithms. It is a avoid way to speed up the operational process for monitoring and troubleshooting in today's big oil companies. Therefore, by comparing data mining algorithms and checking the efficiency and structure and how these algorithms respond in different conditions, The proposed (Bayesian) algorithm using data clustering and their analysis and data evaluation using a colored Petri net has provided an applicable and dynamic model from the point of view of reliability and response time. Therefore, by using this method, it is possible to achieve a dynamic and consistent model of the remote control system and prevent the occurrence of leakage in oil pipelines and refineries and reduce costs and human and financial errors. Statistical data The data obtained from the evaluation process shows an increase in reliability, availability and high speed compared to other previous methods in this proposed method.

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