

The Application of Simulation Techniques to Enhance Nitroglycerin Production Efficiency: A Case Study of the Military Explosive Factory in Nakhon Sawan Province

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Abstract : This study's goals were to enhance nitroglycerin manufacturing efficiency through simulation, recover nitroglycerin from the storage facility, and enhance nitroglycerine recovery and purge systems. It was found that the problem was nitroglycerin reflux. Therefore, the researcher created three alternatives to solve the problem. The system of Nitroglycerine Recovery and Purge was then simulated using the FlexSim program, and each alternative was tested. The results demonstrate that the alternative system-led Nitroglycerine Recovery and Nitroglycerine Purge System collaborate to produce Nitroglycerine, which is more efficient than other alternatives and can reduce production time. It can also improve the recovery of nitroglycerin. It also serves as a guideline for developing a real-world system and modeling it for training staff without wasting raw chemical materials or fuel energy.

Keywords : efficiency increase, nitroglycerine recovery and purge system, production improvement, simulation

Conference Title : ICIEMA 2023 : International Conference on Industrial Engineering, Management and Applications

Conference Location : Pattaya, Thailand

Conference Dates : February 16-17, 2023