World Academy of Science, Engineering and Technology
International Journal of Electrical and Computer Engineering
Vol:18, No:03, 2024

Increasing Efficiency of Own Used Fuel Gas by “LOTION” Method in Generating Systems PT. Pertamina EP Cepu Donggi Matindok Field in Central Sulawesi Province, Indonesia

Authors : Ridwan Kiay Demak, Firmansyahrullah, Muchammad Sibro Mulis, Eko Tri Wasisto, Nixon Poltak Frederic, Agung Putu Andika, Lapo Ajis Kamamu, Muhammad Sobirin, Kornelius Eppang

Abstract : PC Prove LSM successfully improved the efficiency of Own Used Fuel Gas with the "Lotion" method in the PT Pertamina EP Cepu Donggi Matindok Generating System. The innovation of using the "LOTION" (LOAD PRIORITY SELECTION) method in the generating system is modeling that can provide a priority qualification of main and non-main equipment to keep gas processing running even though it leaves 1 GTG operating. GTG operating system has been integrated, controlled, and monitored properly through PC programs and web-based access to answer Industry 4.0 problems. The results of these improvements have succeeded in making Donggi Matindok Field Production reach 98.77 MMSCFD and become a proper EMAS candidate in 2022-2023. Additional revenue from increasing the efficiency of the use of own used gas amounting to USD USD 5.06 Million per year and reducing operational costs from maintenance efficiency (ABO) due to saving running hours GTG amounted to USD 3.26 Million per year. Continuity of fuel gas availability for the GTG generation system can maintain the operational reliability of the plant, which is 3.833333 MMSCFD. And reduced gas emissions wasted to the environment by 33,810 tons of C02 eq per year.

Keywords : LOTION method, load priority selection, fuel gas efficiency, gas turbine generator, reduce emissions
Conference Title : ICEPE 2024 : International Conference on Electrical and Power Engineering
Conference Location : Tokyo, Japan
Conference Dates : March 18-19, 2024