



# Drilling rig microgrid energy saving system

Therefore, this rig owns remarkable energy-saving effect compared with the conventional drilling rig, and the energy-saving effect of the energy-saving oil drilling rig is also ...

The findings of this study can help to better understand which type of storage system is the most efficient for energy systems with temporary high load peaks, like drilling rigs. ... including in the oil and gas industry. The work to develop ...

The schematic layout of the land-based oil drilling rig alternating-current (AC) microgrid is illustrated in Fig. 1. It is typically powered by a diesel generator-based power-plant ...

In Wyoming, Ensign Energy Services Rig 147 uses an innovative system that consists of three 1-MW Cat &#174; G3512 generator sets fueled by natural gas, paired with lithium-ion batteries that store ...

The "FlexGen" system is just the start in bringing greater energy efficiency to oil and gas drilling, according to Moore. Earl Energy also has developed a way to capture the ...

ESS-based microgrid energy management control system 2 This section outlines the proposed energy management control strategy for the drilling rig microgrid, which includes the 3 ...

Two jack-up rigs were retrofitted with Siemens Energy's BlueVault(TM) lithium-ion energy storage system. Initial data show that the low-emission upgrades in batteries, data ...

23 drilling rig microgrid active and reactive power data recorded during the 30 day period. The analysis has indicated that fuel ... 15 savings and carbon-dioxide ... 21 energy systems subject ...

the diesel generators of the drilling rig [16, 17]. A drilling rig is selected as a case study, and the characteristics of the load, size of the microgrid, and battery storage system are used as input ...

23 drilling rig microgrid active and reactive power data recorded during the 30 day period. The analysis has indicated that fuel ... 15 savings and carbon-dioxide (CO2) emissions reductions ...

The diesel generators are usually used for supplying the electrical demand of the semi-submersible oil drilling rigs. The specific fuel consumption (SFC) of each diesel engine ...

(hybrid drilling rig) system in the same working condition and analyzed the fuel economy and the energy-saving efficiency of rotary drilling rig and hybrid drilling rig. Ye et al. [16] presented a ...



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The components of the microgrid test system considered such as energy resources and storage systems are also reviewed later. The meta-heuristic methods are found to be the mostly used ...



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