High-Temperature Resistant Solar Container for Oil Refineries in Jakarta

Title: High-Temperature Resistant Solar Container for Oil Refineries in Jakarta
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Can solar hybrid system generate steam in oil refinery?
Conclusion The present study investigates the feasibilityof solar hybrid system to generate steam in the oil refinery to maintain the temperature of heavy crude oil products before despatching from storage tanks. Due to the intermittent behaviour of solar energy,the solar hybrid system is integrated with a sensible heat storage tank.

Can a PTC-based solar heating system be used in a refinery?
Using TRNSYS software, the proposed Parabolic Trough Collector (PTC)-based solar heating system paired with the boiler is modelled. Sensible thermal energy storage (TES) system is integrated into the refinery's process heating to handle the intermittent nature of solar energy. It was discovered * Corresponding author. ** Corresponding author.

Can a TRNSYS solar heating system be used in a refinery?
Using TRNSYS software, the proposed Parabolic Trough Collector (PTC)-based solar heating system paired with the boiler is modelled. Sensible thermal energy storage (TES) system is integrated into the refinery's process heating to handle the intermittent nature of solar energy.

Can solar energy systems decarbonize oil refineries?
Other studiesin the literature considered coupling solar energy systems to oil refineries to decarbonize their operation. The applicability and feasibility of introducing a concentrated solar power (CSP) system to reduce partial reliance on process heaters of a crude oil refinery was studied by Danish et al. .

With the particular emphasis put on introducing green electricity into the high-temperature processes, this document offers the means of doing so by decarbonizing oil ...

The purpose of this study is to investigate the potential use of solar energy within an oil refinery to reduce its fossil fuel consumption and greenhouse gas emissions.

Herein, a solar multi-energies-driven hybrid chemical oil refining system, exemplified by residual oil cracking, has been ...

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A validated ASPEN HYSYS model was used to investigate the products produced from heavy crude oil in the refinery. Using TRNSYS software, the proposed Parabolic Trough Collector ...

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The crude oil heating system comprises of hybrid conventional fuel oil-fired heaters and the currently proposed solar system. The proposed solar system with a capacity of 36 MW ...

Solar and wind energy are emerging as viable options to power refinery operations, reducing reliance on fossil fuels and cutting operational costs.

Herein, a solar multi-energies-driven hybrid chemical oil refining system, exemplified by residual oil cracking, has been successfully developed and formulated in solar ...

A study by ENEA and the University of Palermo has shown that integrating concentrated solar heat into oil distillation processes could significantly reduce CO2 emissions ...

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