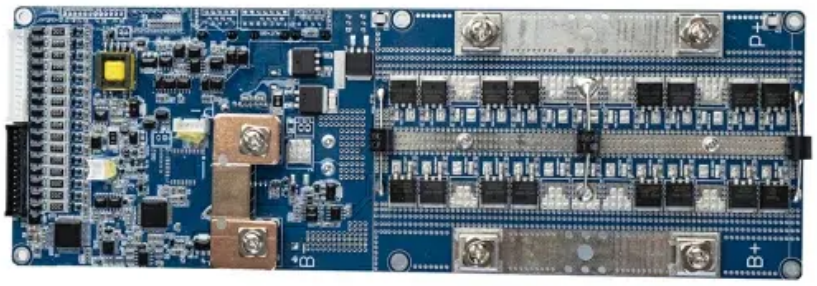
EQACC SOLAR

High-Temperature Resistant Solar Container for Oil Refineries in Jakarta



Overview

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. A validated ASPEN HYSYS model w.

Can a high-temperature solar tower integrated system power a petrochemical refinery?

Green hydrogen and power produc-tion using a high-temperature solar tower integrated system have been previously investigated but not in the con-text of a petrochemical refinery. Hydrogen is a significant raw material in petrochemical hydrogenation process (e.g., hydrocracking, hydrotreating), whereas steam has multiple uses within a refinery.

Can solar-assisted petrochemical refineries greenize oil refineries?

This paper proposes a solar-assisted method for a petrochemical refinery, considering hydrogen production deployed in Yanbu, Saudi Arabia, as a case study to greenize oil refineries.

Can solar energy drive crude oil refineries?

Employing solar energy to drive crude oil refineries is one of the investigated pathways for using renewable energy sources to support lowering the carbon emissions and environmental impact of operating the processing of fossil-based fuels.

Can solar energy support the decarbonization of crude oil refineries?

Solar energy has great potential to support the decarbonization of crude oil refineries in different pathways . As is well known, the methods and industries of exploiting, refining, transporting, and trading crude oil are well established.

High-Temperature Resistant Solar Container for Oil Refineries in Jak

Analysis of a Solar-Assisted Crude Oil Refinery System

Solar tower technology gener-ating superheated steam at 550 °C is being used to energize high-temperature refinery processes such as heavy oil crack-ing reactions: CnHm -> ...

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Using concentrated solar power for crude oil ...

This leads to a higher potential CO2 reduction of up to 17%. Conclusion: opportunities for solar heat integration in refineries All ...

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Solar-assisted hybrid oil heating system for heavy refinery ...

The present study investigates the feasibility of solar hybrid system to generate steam in the oil refinery to maintain the temperature of heavy crude oil products before ...

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Solar-assisted hybrid oil heating system for heavy ...

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. A validated ...

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Solar Thermal Technologies for Process Heat Applications in Oil ...

Further, medium- to high-temperature steam can be generated using concentrating solar power systems which can replace conventional fuel boilers. This chapter deals with the ...

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Concentrated solar power integration with refinery process ...

They concluded that solar thermal-based or supplemented steam systems for oil recovery appear to be a preferred choice, or complement, to completely conventional natural ...

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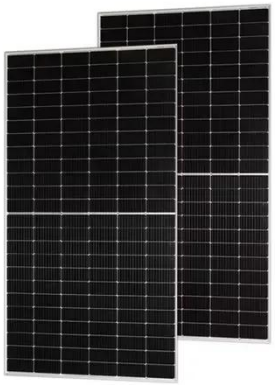

Using concentrated solar power for crude oil distillation: a ...

This leads to a higher potential CO2 reduction of up to 17%. Conclusion: opportunities for solar heat integration in refineries All findings point out the tremendous ...

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Decarbonizing Oil Refineries: The Transition to Green ...

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 ...

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Solar Power Container for Mining Industry, Oil and Gas ...

Mining area; Oil field exploration; Remote Telecommunication bases and Radar stations; Solar power containers can provide a stable and reliable power supply for mining equipment, lighting ...

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(PDF) Solar-assisted hybrid oil heating system ...

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fossil fuel consumption and ...

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(PDF) Solar-assisted hybrid oil heating system for heavy ...

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