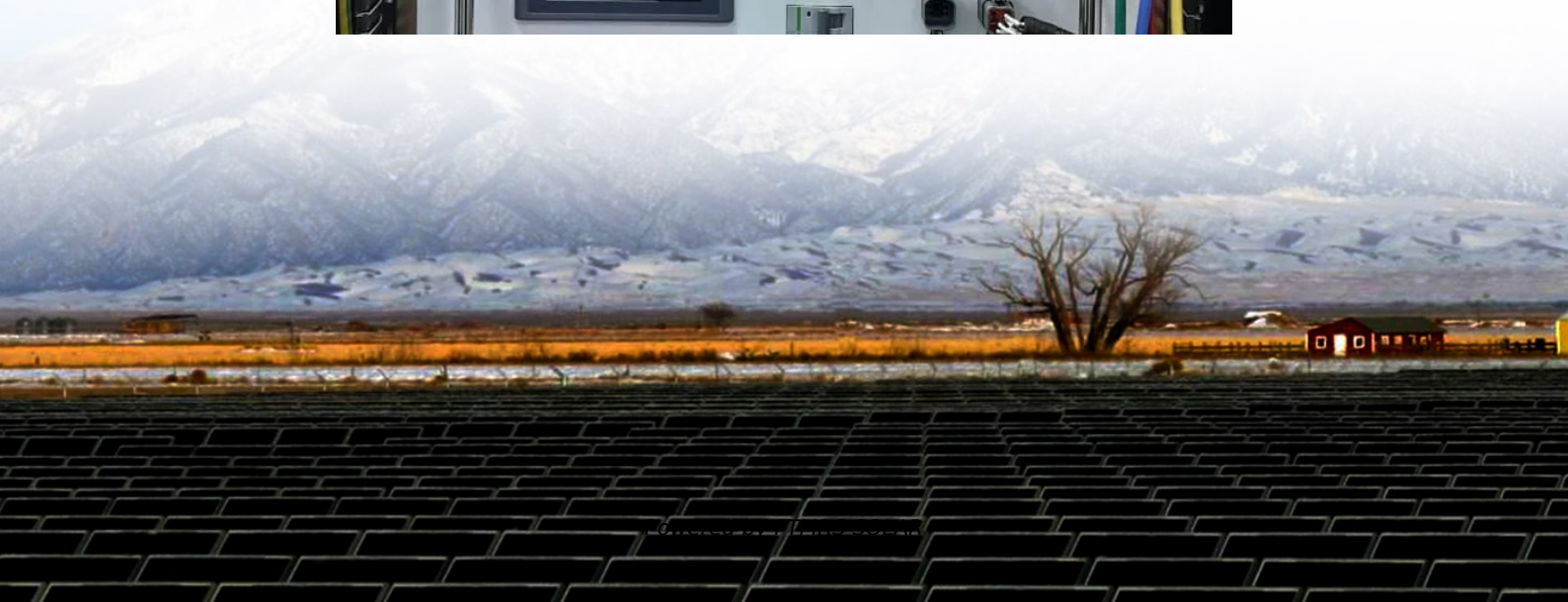


100kW Spanish Solar Container Used in Cement Plant





Overview

Can solar clinker be used for cement production?

For the first time ever, CEMEX and Synhelion successfully connected the clinker production process with the Synhelion solar receiver, producing solar clinker. This revolutionary innovation is an initial step to develop fully solar-driven cement plants.

Can solar calciner technology help cement plants in Spain?

An analysis of cement plant locations in Spain shows that 39% of plants today are located in areas with sufficient solar irradiation, which makes the application of solar calciner technology feasible.

What is a solar clinker?

This revolutionary innovation is an initial step to develop fully solar-driven cement plants. CEMEX, S.A.B. de C.V. ("CEMEX") and Synhelion announced today the successful production of the world's first solar clinker, the key component of cement, a significant step towards developing fully solar-driven cement plants.

What is the clinker production capacity in Spain?

Drawing from the clinker production data provided in Oficemen, the clinker production capacity in Spain for the 11 plants, with a minimum DNI of 2000 kWh/m²a, is determined as 39 kt/d of a total of 99 kt/d clinker production capacity installed in 32 Spanish cement plants.



100kW Spanish Solar Container Used in Cement Plant

Synhelion and Cemex produce building material using solar ...

Feb 14, 2022 · Synhelion and Cemex engineers have built a pilot plant, on the solar tower of the IMDEA Energy research centre in Spain. Synhelion's solar concentrated solar power system ...

Producing cement with solar energy

Mar 2, 2022 · This is where the CemSol project comes in, short for "solar production of cement with integrated CO₂ capture". The team of scientists is developing a process in which the ...

Cement Industry Solar Update - Cement ...

Oct 25, 2023 · This marks a significant milestone in the companies' journey toward the world's first fully solar-powered cement plant. An early 2022 ...

CO₂ emission reduction in the cement industry by using a solar ...

Jan 1, 2020 · Increasing the reactor efficiency by 15% points reduces the avoidance costs by 26%. Additionally, the CO₂ emission reduction potential is calculated for Spain through 2050. ...

CEMEX and Synhelion achieve breakthrough in cement ...

Feb 2, 2022 · CEMEX and Synhelion announced today the successful production of the world's first solar clinker, the key component of cement, a significant step towards developing fully ...

CEMEX and Synhelion ace the First "Hot Solar" Cement Trial

Apr 12, 2022 · Now Synhelion and CEMEX engineers have built a pilot plant, on the Very High Concentration Solar Tower of IMDEA Energy in Spain to produce zero CO₂ cement, by ...

Synhelion starts building solar tower for cement production

Aug 7, 2023 · Switzerland-based Synhelion and Mexican construction materials supplier Cemex have started building a high-concentration solar tower designed to produce synthetic fuels for ...

Design of solar cement plant for supplying thermal energy in cement

Nov 10, 2023 · Abstract This work describes the implementation of concentrated solar energy for the calcination process in cement production. Approach used for providing solar energy ...

Producing cement with solar energy

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Cement Industry Solar Update - Cement Optimized

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Cemex, Synhelion sustain cement-grade heat from solar power

Aug 4, 2023 · Fossil fuels used in the calcination and subsequent clinker phases typically account for 40 percent of a cement plant's carbon dioxide emissions. A 2022 energy lab demonstration ...

CEMEX and Synhelion achieve breakthrough ...

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Solar Cement Production: This Plant Did It

Aug 7, 2023 · With this milestone in place, Synhelion and Cemex are moving forward with plans to build a solar-powered industrial-scale cement pilot plant . Clinker, the main component in the ...

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Aug 4, 2023 · Fossil fuels used in the calcination and subsequent clinker phases typically account for 40 percent of a cement plant's carbon dioxide ...

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