

A 150-foot solar-powered container used by a cement plant in Slovenia





Overview

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.

How calcined meal is used in a solar cement plant?

Solar cement plant operation during the day with a solar multiple (SM) > 1 . Once more, the storage or conventional calciner makes up the difference between the generated calcined material and the design point. After the solar reactor achieves its optimum value, the calcined meal is immediately provided for the subsequent process.

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.

How a solar cement plant is designed?

Solar cement plant was designed based on cement production and the Direct Normal Irradiation (DNI) data available at plant location. Total thermal energy and the amount of land needed for the solar cement factory were analysed. Additionally, total mirror surface, number of heliostats, and land requirement are estimated.



A 150-foot solar-powered container used by a cement plant in Slove

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