SOLAR PRO.

High temperature molten salt pump for solar power generation

Custom designed, high-temperature pumps for molten salt, liquid metal, or liquid sodium applications. Our high-temperature pumps are custom designed to match the requirements of cutting-edge ...

Thus, our group is working the development and demonstration of alternative materials, namely refractory materials, that can be used for the high-temperature pumps needed in future CSP plants.

Molten salt, with its high specific heat capacity and excellent heat transfer, is widely used as the main heat transfer medium in solar thermal power plants. These systems allow power generation for 6 to ...

Hayward Tyler, Inc (HTI) proposed development of journal bearing materials for use in vertical pumps designed for pumping high temperature molten salt on both the hot and cold sides of ...

In order to significantly reduce the levelized cost of electricity (LCOE) of the present commercial CSP plants, the next generation CSP technology with higher process temperature and ...

Commercially available Nitrate Salt Concentrating Solar Power (CSP) systems require molten salt pumps that are capable of withstanding corrosive salt environments up to 600°C [1].

Development of High Temperature (> 700°C) Molten Salt Pump Technology for Gen3 Solar Power Tower Systems

In concentrated solar power plants with central tower and molten salt, the sun"s energy is used to raise the temperature of molten salts, which are pumped into a steam generator that powers a turbine. The ...

Our review explores molten salts suitable for third-generation concentrating solar power (CSP) systems, focusing on carbonates, chlorides, and sulfates. We examine their thermal properties ...

This review presents the first comprehensive analysis of high-temperature molten salts for third-generation CSP systems. This highlights the potential of carbonates, chlorides, and sulfates as ...

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