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Introducing the 10kW Solar Trough Prototype

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This paper introduces our newly constructed solar trough collector featuring a cavity-type receiver design. This prototype has a receiver area of approximately 10kW, and includes an innovative focal length arrangement tailored for cavity-type receivers. A high-temperature pump is used to circulate a mineral oil as the heat transfer fluid. The receiver design incorporates a highly reflective inner cavity wall, encased by a vacuum sleeve, which helps to minimize thermal radiation losses. The unit can be controlled using a web application, with remote temperature sensors providing data collection capabilities in the cloud, and the mechanics controlled by an IoT web. Initial temperature measurements have been taken, and the efficiency values will be presented.

Apply to be considered for a student ; award (Yes / No)?

no

Level for award;(Hons, MSc, PhD, N/A)?

na

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