



Contribution ID: 141

Type: Oral Presentation

Construction of the Solar trough Cavity receiver

Tuesday, 5 July 2022 15:15 (15 minutes)

Over the past years, we have developed a unique receiver geometry which allows for efficient conversion of solar energy at elevated temperatures in a solar trough unit. Due to the directional nature of the cavity, where the opening is facing the parabolic mirror, the focal length of the mirror is unconventional, and required its own design. Further, the location of the focal plane in relation to the receiver, and all related complications, needed to be simulated for maximum efficiency. The simulation have suggested design optimisations, and we present how these considerations are used in the construction of a 14kW solar trough prototype.

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

no

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

N/A

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Session Classification: Applied Physics

Track Classification: Track F - Applied Physics