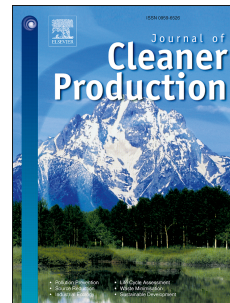


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Energetic end exergetic performance of a parabolic trough collector receiver: An experimental study

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1 **Energetic end exergetic performance of a parabolic trough collector receiver: an**
2 **experimental study**

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8 **HIGHLIGHTS**

- 9 • A parabolic trough collector (PTC) system was designed, manufactured and
10 evaluated.
- 11 • An experimental study was conducted to evaluate the thermal behavior.
- 12 • A detailed energy and exergy analysis for typical days and for a daily
13 monitoring was performed.
- 14 • The energy and exergy efficiency as well as the exergy factor were evaluated.
- 15 • The average energy and exergy efficiency are found to be higher under clear
16 sky days than the cloudy days.

17 **Abstract**

18 In this article, an experimental investigation is evaluated with the aim of assessing
19 the thermal performance of a receiver tube of a parabolic trough collector. The
20 parabolic trough collector is designed, constructed and installed in the Laboratory of
21 Thermal Processes, Research and Technology Center of Energy (CRTE_n), Borj

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