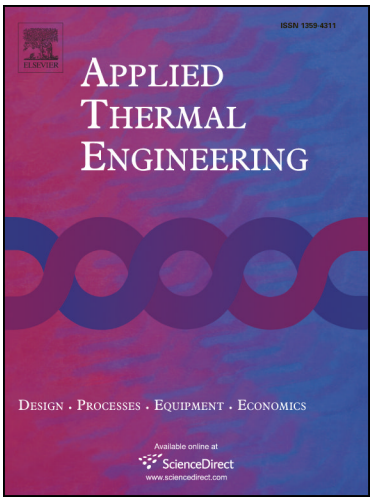

Research Paper

New comprehensive investigation on the feasibility of the gel solar pond, and a comparison with the salinity gradient solar pond

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PII: S1359-4311(17)30682-8
DOI: https://doi.org/10.1016/j.applthermaleng.2017.11.056
Reference: ATE 11426

To appear in: *Applied Thermal Engineering*

Received Date: 31 January 2017
Revised Date: 8 November 2017
Accepted Date: 11 November 2017

Please cite this article as: A.H. Sayer, H. Al-Hussaini, A.N. Campbell, New comprehensive investigation on the feasibility of the gel solar pond, and a comparison with the salinity gradient solar pond, *Applied Thermal Engineering* (2017), doi: https://doi.org/10.1016/j.applthermaleng.2017.11.056

New comprehensive investigation on the feasibility of the gel solar pond, and a comparison with the salinity gradient solar pond

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Highlight:

- The feasibility of the gel solar pond has been investigated.
- The temperature of the LCZ and the UCZ has been calculated.
- The cost of the gel pond was calculated and compared with that of the salinity gradient solar pond (SGSP)
- A gel pond normally costs more than a SGSP.
- Gel ponds can be seen as a viable alternative to SGSPs only if cheap and environmentally friendly polymers are used.

Abstract

Solar energy is increasingly being exploited to supply energy for many purposes. This paper explores the feasibility of gel solar ponds as a source of renewables, using theoretical evaluation. This could be of critical future utilization in areas such as desalination, where the gel solar pond could in effect be a means to deliver fresh water in the Middle East and other regions where water scarcity is predicted to become an increasingly critical issue to resolve.