



SDI Review Form 1.6

Journal Name:	British Journal of Applied Science & Technology
Manuscript Number:	2014_BJAST_11152
Title of the Manuscript:	Preliminary study of an efficient OTEC using a thermal cycle with closed thermodynamic transformations.
Type of the Article	

General guideline for Peer Review process:

This journal's peer review policy states that **NO** manuscript should be rejected only on the basis of '**lack of Novelty**', provided the manuscript is scientifically robust and technically sound.

To know the complete guideline for Peer Review process, reviewers are requested to visit this link:

(<http://www.sciencedomain.org/page.php?id=sdi-general-editorial-policy#Peer-Review-Guideline>)



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PART 1: Review Comments

	Reviewer's comment	Author's comment (if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)
Compulsory REVISION comments		
Minor REVISION comments	1 I suggest a deepest cycle simulation by commercial and shareware codes, to compare the author's results. 2 I suggest to indicate the fixed inlet values chosen for this preliminary study. Improve also the feasibility analysis. 3 No relevant reference on OTEC (also available) are mentioned.	1 Your comment is reasonable and interesting. Thus briefly, a table including simulation results has been included at the end of the section of results, where a few lines added to scaling up of the proposed model has been added with data regarding with the size of cylinders, heat exchangers flows, etc to make a 10 MW size OTEC based power plant. However, since the objective of this research work is to combine a low temperature power source such the ocean thermal energy with a thermal engine capable for achieve higher efficiency than the existing thermal engines such the Organic Rankine Cycle, our point of view relay on the fact that your reasonable comment will be the topic and objective of another research work. The results has been compared with the results achieved in the reference [18], and the processes involved in this study are documented in the reference [19] R. Ferreiro Garcia, B. Ferreiro Sanz, C. Ferreiro Sanz, Contributions on Closed System Transformations Based Thermal Cycles. British Journal of Applied Science & Technology. 2014; 4(19): 2821-2836. 2 The assumed fixed inlet values chosen for this preliminary study are shown in the tables of the appendix A. For instance in the table Nominal fixed inlet values has been added into a table 1 and 3 corresponds respectively to the bottom and top temperatures of the working fluid assumed as 280 K and 298 K, for which, cold seawater inlet is at 278 K and warm seawater is at 300 K as shown in Fig. 2. 3 Properly references have been added



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<u>Optional/General</u> comments	Paper is well structured and organized. Each part is linked properly. Some editing mistake, as well as, page 1, line 12 there is a double comma..... Paper lacks of an appropriate reference and detailed simulation procedure. No, but I suggest to the authors to compare their result and procedure to other papers (i.e. Gérard C. Nihous: A Preliminary Assessment of Ocean Thermal Energy Conversion Resources, or Daniel, T. H., Ocean Thermal Energy Conversion: An Extensive, Environmentally Benign Source of Energy for the Future, etc. etc.)	(1). Comma corrected as suggested (2). References added as suggested (3). Among other interesting references, the following suitable references have been justified and added: This relevant paper from [Gérard C. Nihous: A Preliminary Assessment of Ocean Thermal Energy Conversion Resources. Journal of Energy Resources Technology. Transactions of the ASME. Vol. 129, March 2007] deals with the sustainability of ocean thermal energy and although it is a very interesting research work, it is outside the scope of our paper, which strictly is focused towards the ideal thermal efficiency of a new cycle type which violates by first time the Carnot factor, without violating the second law. We regret to inform you that the paper written by Daniel, T. H., 2000, "Ocean Thermal Energy Conversion: An Extensive, Environmentally Benign Source of Energy for the Future," Sustainable Development International, 3, pp. 121–125; unfortunately is not indexed in any known database, so that we cannot access such reference, although it appears in Google. Thank you for your valuable help on the enhancement of the work
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