



SDI FINAL EVALUATION FORM 1.1

PART 1:

Journal Name:	British Journal of Applied Science & Technology
Manuscript Number:	2014_BJAST_12111
Title of the Manuscript:	Power plant driven by residual heat rejected by the bottoming low pressure steam turbines

PART 2:

FINAL EVALUATOR'S comments on revised paper (if any)	Authors' response to final evaluator's comments
You state in your answer that your cycle is not a Carnot engine and your cycle can therefore not be compared with the Carnot efficiency. You need to explain this further. Your engine is, if I have understood you correct, a cycle because as the standard textbooks say it begins and ends at the same state. In the standard engineering textbook “Principles of Engineering Thermodynamics, SI version, 7th edition” by Moran and Shapiro et al. p 234 – they clearly state that “[...] it should be evident that the (Carnot)efficiency given by Eq. 5.9 is the thermal efficiency of <i>all</i> reversible power cycles operating between two reservoirs at temperatures T_H and T_L, and the <i>maximum</i> efficiency <i>any</i> power cycle can have while operating between the two reservoirs.” If I understand you correctly you state in your paper that you have a power cycle that is operating between two thermal reservoirs and still have a thermal efficiency greater than the Carnot efficiency. It seems to me that this would mean that you violate one of Carnot principles that states “The efficiency of all reversible heat engines operating between the same two reservoirs are the same”.	You have correctly understood the problem. It is a thermal cycle which begins and ends at the same state. However it is not a Carnot Engine, although it is a thermal engine. The cycle fulfils the first (Energy conservation) and second (Kelvin-Rankine and Clausius) principles. However doesn't satisfy the Carnot statement because it is not a Carnot engine. The actual state of the art regarding thermodynamic fundamentals must be revised and reconsider the Carnot definition as well as its interpretations. The actual books all around the world including the basic book of Shapiro et al. must be corrected as soon as possible. Please be advised that the real objective is to implement efficient thermal engines, or engines that could operate with low grade heat in order to avoid the use of fossil fuels. The fact of publication or not is not a relevant fact, but the implementation of efficient thermal engines where Carnot constraints are not present. In fact more than 5 patent applications are being managed. In order to clarify your doubts, please see the papers on-line at the following web address: http://www.sciencedomain.org/issue.php?iid=522&id=5; http://www.sciencedomain.org/issue.php?iid=592&id=5; The test rig where we are trying to obtain the ratio of the thermal efficiency to the net efficiency of the non Carnot cycle is shown in the above figure, which as mentioned before, all material IS SUBJECTED TO PATENT APPLICATIONS.  Thank you for your comments and suggestions.