



SDI Review Form 1.6

Journal Name:	Journal of Energy Research and Reviews
Manuscript Number:	Ms_JENRR_48514
Title of the Manuscript:	Efficient thermal cycle undergoing adiabatic contraction based work by releasing heat
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>)

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	The work is interesting both from a scientific and practical point of view. Scientific interest is it shows that there are schemes of thermal machines that have a coefficient of performance greater than the Carnot cycle. The use of such schemes is of practical interest to reduce heat losses in modern industry. However, the work has a significant flaw. According to equation (12), the considered scheme of the heat machine violates the principle of energy conservation. This conclusion cannot be made without a detailed description of the thermodynamic processes of the experimental device. Moreover, the authors have an experimental device on which the described effects are observed. To avoid contradiction with the law of energy conservation, a detailed description of this device is necessary. Then the balance equations of energy transfer from external sources and exchange processes inside the plant should be written. As a result, the total energy balance will be obtained. The resulting equations will also include exchange processes that are not taken into account in equations (1) – (7). The result should be not only the efficiency of the thermal machine circuit, but also it will be possible to explain by what processes the efficiency of the heat machine in question exceeds the efficiency of the Carnot cycle. In General, such an analysis is difficult to carry out. We can recommend the authors to describe in detail the energy balance for the device of figure 3. Without such a change in the theoretical part of the work, I can not recommend the article for publication.	
Minor REVISION comments		
Optional/General comments		

PART 2:

	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)
Are there ethical issues in this manuscript?	<i>(If yes. Kindly please write down the ethical issues here in details)</i>	

Reviewer Details:

Name:	Alex Guskov
Department, University & Country	Russian Academy of Sciences, Russia