



SDI Review Form 1.6

Journal Name:	American Chemical Science Journal
Manuscript Number:	Ms_ACSJ_26486
Title of the Manuscript:	Two step and regression re-aging heat treatment of Al-5.2%Zn-2.3%Mg alloy applied in cigarette making machines
Type of the Article	Original research papers

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	1-Introduction ➤ It is better to updating this paragraph. ➤ Introduction did not have any literatures review recently about the roles of RRA on mechanical properties. 2- Results ➤ Figure of DSC curve is not clear to see more information. Need to cleared and bigger. ➤ No have more clarification about transition phases and their creating. ➤ Need to do more details about the precipitate phase. ➤ Also here the author did not mention more details about effects of deformation due to strain of hot rolling. 3-Conclusions are very long, it is better to briefly it	Thanks very much for the reviewer's comments. Introduction ➤ We have updated this paragraph. ➤ We have added some references on RRA on mechanical properties which could further introduce the recent developments in this field and help readers understand the current research highlights. We have also added some references form Prof. HT Naeem. Results ➤ We have make DSC curves bigger. ➤ Analysis on transition phases and their creating has been illustrated in our previous paper, and we have added illustration in the revised paper. ➤ More details of precipitate phase has been added. ➤ we did not mention more details about effects of deformation due to strain of hot



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		rolling, which is difficult to illustrate too much content in one research paper, and in this manuscript we mainly focused on two step and regression re-aging heat treatment of Al-5.2%Zn-2.3%Mg alloy applied in cigarette making machines. We want to illustrate the content which the reviewer mentioned in next paper in detail. Conclusions We have make this part shorter.
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<u>Minor</u> REVISION comments	1-Experimentel work ➤ How many passes of hot rolling do it on Aluminum slab? ➤ Author mentioned two type of aging treatment, what the difference between them? ➤ What is the media of cooling after the aging treatment? Water, air, or other media. ➤ Paragraph of aging need re arrangement of temperatures with times of aging treatment ➤	➤ Single pass of hot rolling do it on Aluminum slab. ➤ After artificial aging is suitable for regression treatment, and later repeating the original artificial aging, which would effectively improve mechanical properties and corrosion resistance of aluminum alloy, and the heat treatment process is called RRA treatment. Through peak aging, tensile strength of alloy could achieve ideal value, but the corrosion resistance decreases. In RRA, the temperature and time of second two-step aging is critical to the whole aging process. The main difference between them is the existence of the third aging which will obviously improve properties of Al alloy. Both mechanical properties and conductivity were enhanced after RRA treatment. ➤ The media of cooling after the aging treatment is air, and we have added this information in the revised paper. ➤ We have rearranged the paragraph of aging
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		temperatures with times of aging treatment
<u>Optional/General</u> comments		