



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.

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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) Section 2.4: The slab was cold rolled to 2.4 mm sheet, but there was no mention of single pass/multipass cold rolling. 2) Section 3.2: What is the reason for hardness increase after cold rolling? 3) In Figure 5 the magnification(20μ) should be placed on the same position for all of the images. 4) Section 3.3: various mechanical properties were measured in three different aging temperature. Why the mechanical properties aged at 120°C is better than 110°C and 130°C?	Thanks very much for the reviewer's valuable comments. 1) In our revised manuscript, we added the instruction that the slab was rolled by single pass cold rolling. 2) The reason for hardness increase after cold rolling is mainly there is a vibration of microstructure before and after cold rolling, which we have illustrated in another paper of the reference and we have added that paper. 3) The magnification has been placed on the same position for all of the pictures. 4) The mechanical properties aged at 120°C is better than 110°C and 130°C, and the phenomenon is from both our experiment and microstructure analysis. Aging hardening appears in aluminum alloy: as the aging temperature and aging time ascend, the alloy strength ascends gradually and declines after the peak aging process. Aging intensity variation is mainly



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		caused by three factors: (1) solid solution strengthening; (2) substrate's recovery and recrystallization; (3) new phase precipitation. Both factors could make strength decrease as the aging time decreases, while the third factor makes the strength increase, but the strength will descend when the coherent relationship of precipitation phase and the parent phase is destroyed and the precipitated phases become coarse.
<u>Minor</u> REVISION comments	1) In Figure 3: "(a)" and "(b)" should be mentioned on the images.	We have added (a)(b) in the revised manuscript.
<u>Optional/General</u> comments	1) Introduction: There are only 12 references in introduction. The authors should include more references in introduction.	We have included more references in the introduction.