



SDI Review Form 1.6

Journal Name:	Advances in Research
Manuscript Number:	2015_AIR_18480
Title of the Manuscript:	A MODEL FOR CALCULATING THE MACHINING TIME OF A LASER CUTTING MACHINE
Type of the Article	Original Research 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.

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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)
<u>Compulsory</u> REVISION comments	<p>Line 89: The calculation is wrong. When pi is 3.14159, the profile length should be 125.66. Hence, re-calculations and revisions are needed in all the mathematical formulas after line 93.</p> <p>Is the content of this article applied only when the HG LCY 300 and the CNC 2000 are used? As a scientific technical paper, general versatile description is desired.</p> <p>Conclusion: The contents of the conclusion are the description of results and discussions about the validation of the model formula. These contents should be stated in the section of "Validation of the model formula." (More detail analysis of the results in Table 2 is also needed.) In the conclusion, author is required to write down a summary of this study in the conclusion.</p>	
<u>Minor</u> REVISION comments	<p>Introduction: Why the model for calculating the machining time of the laser cutting machine should be developed? Author should explain the direct reason in the introduction.</p> <p>Line 72: Author states "their actual machining times were recorded". In this study, although the measurement accuracy of the actual machining times is important, its measuring procedure is not explained. Need to explain.</p> <p>Line 80: "If a cutting speed is selected to cut a particular profile, using work piece of different thicknesses, the machining time will be the same." is ambiguous. Need to rework.</p>	



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	<p>Table 1, Line 116, 119, 121, 124, Table 2: What “Speed” does it mean? Revolution speed of the stepper motor? Cutting speed? Author should distinguish clearly.</p> <p>Table 2: Selected speeds are different between each profile number. For example, while 50, 100, 150, 200 rev/min are selected in profile No. 1, 60, 80, 120, 200 rev/min are selected in No. 4. Why?</p> <p>Table 2: With speed of 150 rev/min in profile No. 2 and No. 3, difference between actual and calculated machining time is larger than that in any other conditions. Why?</p> <p>Conclusion: ‘Round up’ should be ‘round off’.</p>	
<u>Optional/General</u> comments		

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