

Review Form 1.7

Journal Name:	Journal of Engineering Research and Reports
Manuscript Number:	Ms_JERR_110040
Title of the Manuscript:	Structural Design and Analysis of the Unloading Robot on the Broaching Machine
Type of the Article	Original Research Article

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. Is the manuscript important for scientific community? (Please write few sentences on this manuscript) 2. Is the title of the article suitable? (If not please suggest an alternative title) 3. Is the abstract of the article comprehensive? 4. Are subsections and structure of the manuscript appropriate? 5. Do you think the manuscript is scientifically correct? 6. Are the references sufficient and recent? If you have suggestion of additional references, please mention in the review form. <u>(Apart from above mentioned 6 points, reviewers are free to provide additional suggestions/comments)</u>	<p>This manuscript holds an important design for industrial manufacturing processes and it is vital aspect to understand the loading capabilities of any robotic arm or any other mechanism. Is your robotic mechanism has some validation from any previous work?</p> <p>Abstract claims “the automatic loading and unloading” and have missed the degrees of freedom for robot working. The title ”structural design and analysis of (X) DOF’s robot/manipulator for pick and place on the broaching machine” should be more appropriate for this manuscript and why there is a need of optimization scheme. Abstract must have highlighted the limitations of this mechanism in (if any).</p> <p>Abstract is too lengthy. It must has some introduction with strong emphasis on process variables and performance parameters. Analysis result and the validation if any.</p> <p>This manuscript has lacked in “problem formulation” and less “literature survey”. It is a suggestion to include it as separate section or otherwise increase the referencing of latest work regarding this type of mechanism in introduction section. This will put more interest for readers. Also add the geometric constraints.</p> <p>Yes it is scientifically correct as it has also discussed working vibrational range. Please add the range of working loads for this machine. Also add the variety of parts to be gripped by your gripper. Add the initial design for motor selection and other suggestions as described above.</p> <p>References are very less and are not latest either.</p>	<p>1. Yes, this work is a study done in conjunction with the actual production in the factory, and the whole equipment is already being tested and applied.</p> <p>2. Okay, thank you for your suggestion, appropriate changes have been made to the thesis title, and this research will be followed up with a multi-objective optimized structural design of the structure in terms of topology, size, shape, etc., and a lightweighting of the structure.</p> <p>3. Okay, the abstract has been revised to take into account your suggestions.</p> <p>4. Thank you, more research status and references have been added to the article.</p> <p>5. Well, the manipulator can grip splines and keyway flanges in the range of 50-200mm, and the structure has some redundancy in terms of stiffness and strength, which is a key direction for subsequent structural optimization.</p> <p>6. Okay, more recent studies and references have been added.</p>
Minor REVISION comments 1. Is language/English quality of the article suitable for scholarly communications?	<p>It needs to be more proficient.</p>	<p>Okay, I will carefully check for grammatical issues and make the appropriate changes.</p>
Optional/General comments		

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PART 2:

	Reviewer's comment	Author's comment <i>(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)</i>
Are there ethical issues in this manuscript?	<i>(If yes, Kindly please write down the ethical issues here in details)</i>	