Review Form 1.7

Journal Name:	**Journal of Engineering Research and Reports**
Manuscript Number:	**Ms_JERR_106188**
Title of the Manuscript:	**Study on the law of blank and material properties on the free bending of pipes**
Type of the Article	**Case study**

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:

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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. 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.** **(Apart from above mentioned 6 points, reviewers are free to provide additional suggestions/comments)**	**1. The authors investigated the impact of various material parameters on the three-dimensional free bending behavior of metal pipes using numerical simulation along with experimental tests. The manuscript holds some value for the scientific community.** **2. The title of the article is suitable.** **3. - The whole content of the abstract is acceptable but it contains complex sentences and lacks information about the numerical simulation process and results.** **- In the last sentence of the abstract, it is stated that "while the alteration of pipe wall thickness was influenced by the hardening index, denoted as 'n'". It is not common in research articles to mention the definition of the parameters or their symbols in the abstract section. Moreover, this sentence needs clarification on whether the hardening index varies with the alteration of wall thickness or vice versa?** **4. - Some statements and claims are given in the "Introduction" section without citing any reference. How the accuracy and reliance of these claims can be approved without knowing their reference? Moreover, the Introduction lacks any explanations about TP2 copper pipes and their applications.** **- The manuscript in its present form doesn't contain "Materials and Methods" section. It is better to provide all the principles of the tests and their parameters, materials, preparation of samples, etc. in the section of "Materials and methods".** **- The section of "Results and Discussions" also has to be added to the manuscript.** **5. - Although the results of the tests are mentioned with some discussion, all of the sentences and claims provided as discussion or reason for the results are given without citing any reference. All discussions in all research articles have to be cited with the exact reference from which they were taken.** **- In Section 3.1, It is stated that "The material parameters of the stretched TP2 copper tube are shown in Table 1". However, it would be clearer to rephrase the sentence as follows: "Table 1 displays the mechanical properties of TP2 copper tube acquired through tensile tests."** **- If Table 1 contains the results of the tensile tests, why does the table also list the density of the material? Density is not a mechanical property and cannot be obtained through tensile testing. What is the reason for mentioning Density in this table?** **- It is necessary to provide a σ-ε curve in reporting the results of tensile testing. The results are not reliable without providing such a curve.** **- When using both numerical simulations and experimental tests, the results of the same properties have to be compared. In the present manuscript, tensile testing is performed experimentally. Why? What is the exact usage of tensile strength in the discussion of this research? It is not precisely determined in the manuscript whether the results are obtained by simulation or experimental tests. The way of comparison between these results is also not clear.** **- It is not clarified that the results mentioned in Table 2 are the ones obtained from**	

	numerical simulations or experimental tests. **- Elemental or phase analysis such as XRD, XRF, or EDS of the raw materials is highly recommended in every research concerning investigating different properties of materials.** **- If possible, it is better to provide SEM micrographs of the materials before and after each test. Microstructural evolutions are one of the most effective factors in determining the mechanical behavior of materials.** **- The reason for the difference in the range of eccentricity of the bending die in 6061-ALpipe compared to the TP2 and Ta1 pipes should be mentioned in the manuscript.** **6. It is obvious that the references in the present manuscript are insufficient. Most of the claims in this manuscript, indeed, are given without citing any reference.**	
Minor REVISION comments **1. Is language/English quality of the article suitable for scholarly communications?**	There are some grammatical errors and typos in the manuscript.	
Optional/General comments	The current form of the manuscript requires a significant and thorough revision.	

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?	*(If yes, Kindly please write down the ethical issues here in details)*	

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