

**Review Form 3**

Journal Name:	<a href="#">Journal of Engineering Research and Reports</a>
Manuscript Number:	Ms_JERR_127137
Title of the Manuscript:	THERMAL AND STRUCTURAL CHARACTERIZATION OF COKE DEPOSITION ON SPENT NiMo CATALYST USED DURING CATALYTIC UPGRADING OF HEAVY OIL
Type of the Article	Original Research Article

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**PART 1: Review Comments**

<b>Compulsory</b> REVISION comments	Reviewer's comment	<b>Author's Feedback</b> (Please correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)
Please write a few sentences regarding the importance of this manuscript for the scientific community. Why do you like (or dislike) this manuscript? A minimum of 3-4 sentences may be required for this part.	This manuscript can help the reader understand the procedures and results that the researcher obtained on catalyst deactivation, and thus make the science of catalysts increasingly developed. The researchers meticulously tried to create a manuscript to communicate their unique ideas and new findings to both the scientific community and the general public.	
Is the title of the article suitable? (If not please suggest an alternative title)	Yes, the article title is appropriate.	
Is the abstract of the article comprehensive? Do you suggest the addition (or deletion) of some points in this section? Please write your suggestions here.	The article summary is comprehensive	
Are subsections and structure of the manuscript appropriate?	<p><b>INTRODUCTION</b> When it states that "due to the industrial importance of catalytic cracking of heavy oils, many articles have been published on the process and on the characterization of coke deposition on used catalysts" there should be cited references.</p> <p>In the final two paragraphs there is only a description of the characterization techniques. What is the contribution and strength of the work compared to those reported in the literature??? Include it in the manuscript.</p> <p><b>RESULT AND DISCUSSION</b> Only the results of the TGA, XRD, FTIR and SEM analyses are presented, but there is no discussion of these results with the literature or correlation of the techniques used in the characterization process. Are these results similar to those found in the literature? Discuss in the manuscript.</p> <p>Check the sequence of the numbering of the Figures, for example, Figure 6 does not exist because it is together with 5, from Figure 5 it goes to Figure 7. Correct this.b</p> <p>Figures 5 and 6 need to be improved, it is not possible to analyze the information on the y and x axes. In Figures 7 and 8, the spectral information needs to be expanded and improved. The FTIR information also needs to be revised.</p> <p>The presence of carbon was confirmed by elemental analysis, as shown in Figure 9, which indicates the presence of almost 4.5% carbon in the spent catalyst. It is strongly suggested to verify this statement by means of EDS spectra of the chemical composition of the catalyst and compare it with the fresh catalyst.</p> <p>Figure 10 is not mentioned in the manuscript.</p>	
Please write a few sentences regarding the scientific correctness of this manuscript. Why do you think that this manuscript is scientifically robust and technically sound? A minimum of 3-4 sentences may be required for this part.	The manuscript, despite presenting a very current theme, as it deals with a subject on catalytic deactivation, however, needs small revisions as already mentioned.	

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<b>Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.</b> -	<b>The references are recent.</b>	
<u>Minor</u> REVISION comments  <b>Is the language/English quality of the article suitable for scholarly communications?</b>	I do not feel qualified to evaluate the language	
<u>Optional/General</u> comments		

**PART 2:**

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

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