[IJTech-02-79] Please Revised Based on Reviewer Comment

Dari: IJTech (ijtech@eng.ui.ac.id)

Kepada: renanto@chem-eng.its.ac.id

Cc: agusmirwan@yahoo.com; susianto@chem-eng.its.ac.id; alimohad@chem-eng.its.ac.id

Tanggal: Selasa, 11 Oktober 2016 10.15 WITA

Dear Mr./Mrs. Renanto Handogo,

The editorial board is pleased to inform you that your paper entitled
"MODIFIED SHRINKING CORE MODEL FOR LEACHING OF ALUMINUM FROM SLUDGE SOLID WASTE OF DRINKING WATER TREATMENT" has been reviewed by referee.

Please find in the attachment referee's comments, and please make a
necessary revision based on the comments. Also please read the submission guidelines.
Any revision of the paper should be submitted to ijtech@eng.ui.ac.id no later than **October 16, 2016.**

It is compulsory to return the revise paper with response comment as attached.
Please state clearly the revision based on reviewer's comment.

We look forward to receiving your revised paper at your earliest convenience.

--
Kind regards,
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IJTech-02-79-Review Form&Response-1st.docx
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59.6kB

IJTech-02-79_ 1st comment review #2.pdf
1023.2kB

INTERNATIONAL JOURNAL OF TECHNOLOGY
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Reviewer's Guide

PART A: ***Editorial Office Only***

SECTION I

Reviewer's Name:	
E-Mail:	
Manuscript Number:	IJTech-02-79
Title:	A MODIFIED SHRINKING CORE MODEL FOR LEACHING OF ALUMINUM FROM SLUDGE SOLID WASTE OF DRINKING WATER TREATMENT

PART B: ***Reviewer Only***

SECTION II: Comments per Section of Manuscript

General comment:	
Introduction:	In general, it is well written with the purpose of the studies and gaps have been stated clearly. However. Please add brief conclusion and/or statement of future work at the abstract section.
Methodology:	At Section 2.1 How much the SW samples were taken before the drying process? Were there taken by batches or sole intake? Last sentence in the paragraph 2.1 Material, please add ....before leaching process was carried out (or any statement that show it has been done). 2.3 Model development Second line, Cheng et al., (2012) reported that.... Third line, ...dissolution of aluminium more so the higher aluminium recovery ratio. (What the authors would like to address here? It seems to it is incomplete sentence and rather confusing. A paragraph before Figure 1. Perhaps it is better to change the present tense to past tense accordingly.
Results:	A paragraph before Figure 2. Please capitalise the 'l' in (Levenspiel, 1998)
Discussion:	Thoroughly and well discussed by the authors with appropriate supporting references. As well as tailored with the aims of the studies.

Bibliography/References:	Mostly updated references and suitable with the scope of the studies.
Others:	I strongly recommend this article to be published in Intl. J. Tech. with respect to corrections/suggestions have been revised and reviewed by authors. Well done !

SECTION III - Please rate the following: ***(1 = Poor) (2 = Fair) (3 = Average) (4 = Above Average) (5 = Excellent)***

Originality:	4
Technical Quality:	4
Methodology :	4
Readability :	4
Practicability:	4
Organization:	4
Importance:	4

SECTION IV - Recommendation: (*Kindly Mark with an X*)

Accept As Is:	
Requires Moderate Revision:	**X**
Reject On Grounds of (Please Be Specific):	

SECTION V: Additional Comments

Please add additional comments, if any:

RETURN OF COMMENTS

Thank you for contributing to International Journal of Technology by completing this review. Please return your comments to:

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ISSN: 2086-9614

Offline Review Form (3323-4685-1-RV)

SECTION I: Comments per Section of Manuscript

General comment:	Can be issued with some improvements : writing & contents
Introduction:	The reasons for the study are not clearly staked so that the urgency of the research cannot be grasped.
Methodology:	The theoritical aspects have been mentioned sufficiently, however the methodology doesn't depict the inter-relation between computation (modeling) and experimental. Need more explanation about the reason of variable used.
Results:	The author include some images that are not mentioned in the text and not discussed at all
Discussion:	Need more detail explanation of the results obtained and the pictures shown.
Bibliography/References:	inconsistent writing of citation in some places.
Others:	the grammar should be improved in some places.

SECTION II - Please rate the following: ***(1 = Poor) (2 = Fair) (3 = Average) (4 = Above Average) (5 = Excellent)***

Originality:	3
Technical Quality:	3
Methodology :	2
Readability :	3
Practicability:	3
Organization:	3
Importance:	3

SECTION III - Recommendation: (*Kindly Mark with an X*)

Accept As Is:	
Requires Moderate Revision:	X
Reject On Grounds of (Please Be Specific):	

SECTION IV: Additional Comments (if any)

RETURN OF COMMENTS

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E: or

List of Changes

Manuscript: MODIFIED SHRINKING CORE MODEL FOR LEACHING OF ALUMINUM FROM SLUDGE SOLID WASTE OF DRINKING WATER TREATMENT

Response and Revision made by Author(s)

Reviewer #1:

No	Comments	Revision/Changes
1	**General comment**: -	
2	**Introduction:** In general, it is well written with the purpose of the studies and gaps have been stated clearly. However. Please add brief conclusion and/or statement of future work at the abstract section. ***Response:*** *I thank you for your suggestion* *I've added a brief conclusion and provide information on future work for the purposes of the simulation, optimization, scaling-up, design of leaching process at the end of the abstract section*	..... The proposed model could describe the kinetics of aluminum leaching from the SSW DWT in accordance with test parameters and the relevant statistical criteria. Valuable information on the results of this work can be given for the purposes of the simulation, optimization, scaling-up and design of leaching process.
3	**Methodology:** At Section 2.1 How much the SW samples were taken before the drying process? Were there taken by batches or sole intake? ***Response:*** *I thank you for your question* *SSW samples were collected from the sludge ponds (one big bucket = about 15 L) of drinking water treatment (DWT) Banjarmasin, Indonesia* Last sentence in the paragraph 2.1 Material, please add ....before leaching process was carried out (or any statement that show it has been done). ***Response:*** *I thank you very much for your statement and correction.* *I've added a sentence as you suggest* 2.3 Model development Second line, Cheng et al., (2012) reported that.... Third line, ...dissolution of aluminium more so the higher aluminium recovery ratio.	SSW were collected from the sludge ponds of DWT Banjarmasin, Indonesia, and washed and dried under direct sunlight for 24 hours, and then oven-dried at 105°C for 3 hours. They were milled in a grinder, sieved to select particles 0.074-0.044 mm in with particle size of 0.0585 mm before leaching process was carried out.

	(What the authors would like to address here? It seems to it is incomplete sentence and rather confusing. ***Response:*** *I thank you very much for your statement and correction* *I would like to explain that the low pH in the dissolution of aluminum will be obtained the higher aluminum recovery ratio in accordance with the statement of Cheng et al., (2012).* *I have fixed the sentence as suggested* A paragraph before Figure 1. Perhaps it is better to change the present tense to past tense accordingly. ***Response:*** *I thank you very much for your correction. I have fixed the sentence as suggested.*	..... According to Cheng et al., (2012), a lower pH between 1 and 3 in the aluminum dissolution would be obtained the higher aluminum recovery ratio approximately 70-90%. ... The aluminum ions were formed by appending acid ions to dissolve aluminum hydroxide from SSW, and by a dispersion mechanism, the aluminum ions can be dissolved and leached out from SSW (Cheng et al., 2012). The hydrochloric acid ions first were diffused through the film surrounding the SSW particles to the surface of the solid. Furthermore, the acid ions will be continued to penetrate and to diffuse through the blanket of a product layer to the surface of the unreacted core and reacted with the aluminum precipitates. And ultimately aluminum ions would be diffused out of the SSW particles to the surrounding fluid. ...
4	**Results:** A paragraph before Figure 2. Please capitalize the 'l' in (Levenspiel, 1998). ***Response:*** *I thank you very much for your correction. I have fixed the word "Levenspiel, 1998" as suggested.*	..... (Levenspiel, 1998).

5	**Discussion:** Thoroughly and well discussed by the authors with appropriate supporting references. As well as tailored with the aims of the studies. ***Response:*** *I thank you very much for your statement.*	
6	**Bibliography/References:** Mostly updated references and suitable with the scope of the studies. ***Response:*** *I thank you very much for your statement.*	
7	**Others:** I strongly recommend this article to be published in Intl. J. Tech. with respect to corrections/suggestions have been revised and reviewed by authors. Well done ! ***Response:*** *I thank you very much for your correction/suggestion and statement.*	

Reviewer #2:

No	Comments	Revision/Changes
1	**General comment:** Can be issued with some improvement: writting & contents ***Response:*** *I thank you very much for your suggestion.*	
2	**Introduction:** The reasons for the study are not clearly stated so that the urgency of the research cannot be grasped. ***Response:*** *I thank you for your suggestion.* *I've added a statement about the urgency of this research*	.... Most of them concentrate on the determination of rate controlling steps using three reaction mechanisms with whole leaching time process for removing and recovering some metals from different materials. In the development of the leaching process, the leaching kinetics of aluminum from SSW is necessary for process optimization and reactor design. In spite

		of many studies using different methods to remove and recover metals from sludge, however, an appropriate model for aluminum leaching kinetics is not available.
3	**Methodology:** The theoritical aspects have been mentioned sufficiently, however the methodology doesn't depict the inter-relation between computation (modeling) and experimental. Need more explanation about of variable used. ***Response:*** *I thank you for your correction and suggestion.* *I have written explanation of the inter-relationship between experiment and computation (modeling)*	..... At selected time interval (5, 10, 20, 30, 40, 50 and 60 minute), all samples were collected using a syringe and filtered for analysis determine aluminum content in solution using inductively coupled plasma cluster optical emission spectrometer (ICP-OES) (9060-D Teledyne Leeman Labs. the USA). Each analysis was repeated three times and deputized with average values. The total of aluminum can be leached out in the acid condition and calculated based on the standard methods for examination of water and wastewater (Cheng et al., 2012). SSW was added in nitric acid with a ratio of 1:1 and filtered. The filtrate will be analyzed using ICP-OES to know the amount of soluble aluminum. The result indicates that approximately 61.8 mg of aluminum ions can leach from 1 g of WTS, and the aluminum leaching recovery (x) can be stated as $x = (X/X_0) \times 100$, where X_0 denotes total aluminum obtained through acid leaching process and X is the amount of aluminum obtained at different conditions (mg/g).

4	**Results:** The author include some images that are not mentioned in the text and not discussed at all ***Response:*** *I thank you for your correction and suggestion.* *I already wrote an additional explanation about it within manuscripts.*	... Figure 2 shows that the aluminum leaching recovery increased with increasing temperature as the function of time. Equation (12) was adapted to experiment data by minimizing the difference of *RMSE*. The shape of the curve obtained from the calculation model has followed the curve of leaching experiment data. Based on Figure 2 and Table 1, this model is appropriate to estimate the leaching kinetics of aluminum from SSW which confirmed by $c_{coef} \geq 0.995$, $RMSE \leq$ 0.399 mg/g, and E value lower than 6.415% for all temperatures. ...
5	**Discussion:** Need more detail explanation of the results obtained and the picture shown ***Response:*** *I thank you for your correction and suggestion. I already wrote an additional explanation about it within manuscripts.*	Figure 3 shows that graph slope and intercept were obtained 1.5967 and 7.6666, respectively, which using the data presented in Table 1. Activation energy can be obtained by multiplying slope value to a global gas constant and the result is 13.27 kJ/mol.
6	**Bibliography/References:** Inconsistent writing of citation in some places ***Response:*** *I thank you for your correction. I have fixed the citation as you suggested*	.....(Levenspiel, 1998; .... (Levenspiel, 1998).
7	**Others:** The grammar should be improved in some places ***Response:*** *I thank you for your correction. I have fixed grammar in some sentences as you suggested*	

[IJTech-02-79] Acknowledgement of Receiving 1st Revised Paper

Dari: IJTech (ijtech@eng.ui.ac.id)

Kepada: agusmirwan@yahoo.com

Cc: renanto@chem-eng.its.ac.id; alimohad@chem-eng.its.ac.id; susianto@chem-eng.its.ac.id; agusmirwan@unlam.ac.id

Tanggal: Senin, 17 Oktober 2016 09.42 WITA

Dear Mr. Agus Mirwan,

We confirmed that the editorial board has received your first revised paper. We appreciate your effort to refine your paper to meet the quality of IJTech publication standard. We will contact you again to inform the status of your manuscript. Thank you.

--
Kind regards,
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> On 2016-10-15 10:58, agus mirwan wrote:
>
> > Dear Mr./Mrs.
> > in Secretariat IJTech
> > International Journal of Technology (IJTech)
> >
> > I would like to thank you for your email October 11, 2016 about reviewer's comment of our paper.
> > We are already discuss and revise our paper with response comment based on reviewer's comment as attached.
> > We hope that you can be received our paper and response comment with satisfactory
> > Thank you very much for your kind attention
> >
> > Best regards,
> > Agus Mirwan
> > Department Chemical Engineering
> > Institut Teknologi Sepuluh Nopember (ITS) Surabaya, Indonesia
> >
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RE: [IJTech-02-79] Acknowledgement of IJTech Acceptance Letter

Dari: Renanto (renanto@chem-eng.its.ac.id)

Kepada: ijtech@eng.ui.ac.id

Cc: agusmirwan@yahoo.com; susianto@chem-eng.its.ac.id; alimohad@chem-eng.its.ac.id

Tanggal: Selasa, 17 Januari 2017 20.08 WITA

Dear Editor,
Thank you for your notification. We are waiting for the next process.
In addition, we will be happy to send good quality papers worth publishing in IJ Tech.
Regards,
Renanto
Professor in Chemical Engineering
Institut Teknologi Sepuluh Nopember
Kampus ITS Sukolilo Surabaya 60111
Indonesia

From: IJTech [mailto:ijtech@eng.ui.ac.id]
Sent: Tuesday, January 17, 2017 8:27 AM
To: renanto@chem-eng.its.ac.id
Cc: agusmirwan@yahoo.com; susianto@chem-eng.its.ac.id; alimohad@chem-eng.its.ac.id
Subject: [IJTech-02-79] Acknowledgement of IJTech Acceptance Letter

Dear Mr./Mrs. Renanto Handogo,

On behalf of the Editorial Board, I am pleased to inform you that your revised paper entitled: "A MODIFIED SHRINKING CORE MODEL FOR LEACHING OF ALUMINUM FROM SLUDGE SOLID WASTE OF DRINKING WATER TREATMENT" has been accepted to be published in International Journal of Technology (IJTech).
We will notify you again for the next process required toward publication. Thank you for your contribution to IJTech and looking forward to a good collaboration in the next future.

With warm regards,

Dr. Mohammed Ali Berawi
Editor-in-Chief
International Journal of Technology
ISSN : 2086-9614

Re: [IJTech-02-79] Final proof reading & copyright

Dari: renanto@chem-eng.its.ac.id

Kepada: ijtech@eng.ui.ac.id

Cc: renanto@chem-eng.its.ac.id; agusmirwan@yahoo.com; susianto@chem-eng.its.ac.id; alimohad@chem-eng.its.ac.id

Tanggal: Senin, 23 Januari 2017 22.15 WITA

Dear Editor,
thank you for your email.
Please be advised that we have proofread the manuscript that has been revised before. We acknowledge that the manuscript is ready for printing.
In addition, we hereby provide our office telephone number and fax number to be +6231-5946240 and +6231-5999282 respectively.

Warm regards,
Renanto Handogo

>
>
> Dear Mr./Mrs. Renanto Handogo,
>
> The editorial boards delighted to inform you that your paper has been
>
> accepted to be published in IJTech next Volume 8 Issue 1, 2017.
> Congratulations!
>
> We have carried out necessary layouting and editing of your
> manuscript. Prior to publication we need your final proof and
> copyright of the paper. Here some notes from editor:
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>
> On behalf of editorial boards, we want to express you and your
> collaborators our deep appreciation for your contribution to IJTech.
>
> We look forward to receiving the copyright form and proofs at your
> earliest convenience.
>
> With kind regards,
> Nyoman Suwartha
> Managing Editor
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[IJTech-02-79] Acknowledgement of Receiving Final Proof & Copyright of The Paper

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Kepada: renanto@chem-eng.its.ac.id

Cc: agusmirwan@yahoo.com; susianto@chem-eng.its.ac.id; alimohad@chem-eng.its.ac.id

Tanggal: Selasa, 24 Januari 2017 11.26 WITA

Dear Mr./Mrs. Renanto Handogo,

We confirmed that the editorial board has received your final proof and copyright of the paper. We appreciate your effort to refine your paper to meet the quality of IJTech publication standard. Thank you.

--
Kind regards,
Secretariat IJTech
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On 2017-01-23 21:15, renanto@chem-eng.its.ac.id wrote:

> Dear Editor,
> thank you for your email.
> Please be advised that we have proofread the manuscript that has been
> revised before. We acknowledge that the manuscript is ready for printing.
> In addition, we hereby provide our office telephone number and fax number
> to be +6231-5946240 and +6231-5999282 respectively.
>
> Warm regards,
> Renanto Handogo
>
> > Dear Mr./Mrs. Renanto Handogo, The editorial boards delighted to inform you that your paper has been accepted to be published in IJTech next Volume 8 Issue 1, 2017. Congratulations! We have carried out necessary layouting and editing of your manuscript. Prior to publication we need your final proof and copyright of the paper. Here some notes from editor: 1. please provide telephone & fax number Enclosed please find the copyright form and the paper for a final check and please confirm that the article ready for printing. Any confirmation of the final check should be submitted no later than JANUARY 24, 2017. Copyright form can be printed, signed, scanned and send by email to ijtech@eng.ui.ac.id. On behalf of editorial boards, we want to express you and your collaborators our deep appreciation for your contribution to IJTech. We look forward to receiving the copyright form and proofs at your earliest convenience. With kind regards, Nyoman Suwartha Managing Editor International Journal of Technology (IJTech) ISSN : 2086-9614 http://www.ijtech.eng.ui.ac.id [1] Links: ------ [1] http://www.ijtech.eng.ui.ac.id/
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