



Journal Name:	<u>Advances in Research</u>
Manuscript Number:	2013_AIR_8240
Title of the Manuscript:	Effect of Distributor Plate Configuration on Pressure Drop in a Bubbling Fluidized Bed Reactor
Type of the 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.

To know the complete guideline for Peer Review process, reviewers are requested to visit this link:

(<http://www.sciencedomain.org/page.php?id=sdi-general-editorial-policy#Peer-Review-Guideline>)

**PART 1: Review Comments**

	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>
Compulsory REVISION comments	<p>This paper finds the effect of distributor plate configuration on pressure drop in a bubbling fluidized bed reactor. Although the work is worthy for literature, still lots of work have done on it. Different configurations of distributor plates and bed particles have used to study the bed pressure drop. I suggest the the following major and minor revisions of the manuscript.</p> <p>1. Line 16: The authors comments that a decrease in angle of convex and increase in angle of concave resulted in a decreased pressure drop. This statement is contradicting according to figure.7.Which makes me quite confusing. Which one is true?</p> <p>2. In figure.1, F-Conical Inlet section is not included in the figure.. From which part the sand particles are fed to the reactor. Show it in the figure.1</p> <p>3.The authors have not specified the type of pitch used for the distributor plates .I am afraid to read that yours total open area of holes is only 1.63% of bed cross-sectional area. Please the results may re-examine.</p> <p>4. How you controlled the moisture content of the air, it has significant effect on the bed pressure drop. U have written a filter (line 199) is used for supplying dust and moisture free air. What is the mechanism behind the moisture control in the filter used in your experimentation?</p> <p>5. If the pressure drop is decreasing from concave to convex, what would be optimum angle for the plate for minimum pressure drop? If possible, Please add a simulation work.</p>	<p>Has been properly corrected</p> <p>Added</p> <p>The total area of holes and area of the plate are given</p> <p>Was very controlled</p> <p>Is not a part of this work</p>



	<p>6. All the equations are quite not readable, seems to be like copied. Please use equation editor to rewrite the equations.</p> <p>7. I suggest removing the figure.12 from conclusion section to results and discussion section.</p> <p>8. I suggest to provide the photocopy of yours experimental set up and distributor plates in the manuscript. This will improve clarity to the readers.</p> <p>9. Line 177: lengths of 127.5, 255.0, 382.5mm (0.5, 10, 1.5 D) respectively. Whether it is 10D or 1D. Clarify.</p> <p>10. Line 185: Sides were inclined at 30° from vertical. It should be 30°.</p> <p>11. Line 205: This was connected to a 100mm long vertical pipe. It should be 100mm. Am I right.</p> <p>12. Line 237: 10 mm diameter. I think it should be 10mm. Please correct it throughout the manuscript.</p> <p>13. Please rephrase the line 346: The 0° convex and 10°</p> <p>14. Rephrase the line 372: Velocity of $1.75 U_{mf}$.</p> <p>15. How the authors predicted that, the fluidization type is of bubbling one. Will you please justify me? The type of fluidization depends on the Reynolds number through the bed. The authors nowhere found the Reynolds number through the bed.</p>	<p>Done</p> <p>It is a part of results</p> <p>Not necessary</p> <p>Corrected</p> <p>Ok</p> <p>Ok</p> <p>Ok</p>
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<u>Minor</u> REVISION comments	<p>1. Line 539: please rephrase according to your experimental results.</p> <p>2. The manuscript contains large number of spelling error. I request the authors to go through the manuscript seriously. All the words should be separated and clear to be readable.</p>	<p>Ok</p> <p>These errors are from the journal type stting and have been corrected</p>
<u>Optional/General</u> comments	<p>Fluidization is very old from research point of view. Still your work has some importance to the literature. I suggest to the authors to make the major and minor changes.</p>	<p>Thank you for your effort and good review</p>