



SDI Review Form 1.6

Journal Name:	Advances in Research
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:

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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	<p>Authors should revise the edition of the paper. More than 120 issues concerning wrong spacing between words were detected. Highlights in yellow in the attached pdf.</p> <p>Problems with units, because there is a mixing of dimensions in cm and in mm. A unique criterion should be used and may be dimensions in mm should be privileged.</p> <p>Variables should be in italic.</p> <p>Line 81 - Authors should clearly refer which studies showed pressure drop larger than the bed weight particles per unit cross section area.</p> <p>Figure 1 The item F of the caption is not in the picture.</p> <p>Item L- U tube manometers (not manimoters).</p> <p>Line 200 - A filter has a maximum flow rate if a maximum pressure drop is defined.</p> <p>Line 221 -What is the uncertainty of the flow meter measurement because of its dependence with the air pressure drop when flowing through it and through the bed. In other words, as the air flow rate increases pressure drop increases in the pipe and through the bed distributor, thus the air pressure changes and consequently its density. So how this change enters in the flow rate correction?</p> <p>Line 328 to 339. Authors mixed the concave and convex words and changed the meaning of the discussion. See attached pdf file. This paragraph should begin with a sentence like "According to the same authors Muller et al...".</p> <p>Line 347 - Incomplete sentence</p> <p>Table 4 - There is no clear definition or discussion about the criteria for defining the grouping introduced in this table.</p> <p>Line 372 - Incomplete sentence.</p> <p>Figure 8- In the text there is no explanation about tracer experiments reported in this figure. Where did they come from? Any reference?. Nothing is said in the Figure 8 caption.</p>	



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	<p>These experiments were carried out in a shallow bed. This is the reason why the pressure drop has the evolution shown in Figure 11. Authors should have said that. One of the works referred in the discussion, Menon and Durian (1997), used very small particles, belonging to group C or A of Geldart classification. These are prone to channelling and slugging, thus, having a pressure drop increase in the fluidisation regime. The same happens with shallow beds. The authors of the present paper did not clarify this during the discussion. Have the authors identified interferences of these bed pressure drop variations that could influence the measurement of distributor pressure drop?</p> <p>In the present circumstances as the bed pressure drop changes in the fluidisation range, the use of a ratio of distributor to bed pressure drop is not convenient. So the discussions in sections 4.3 and 4.4 are a bit confusing because of this mixture of effects.</p>	
<u>Minor</u> REVISION comments	<p>Some terms are wrong, or units are missing and there are also some strange symbols. Highlights in orange in the attached pdf.</p> <p>See also sticky notes in the attached pdf.</p>	
<u>Optional/General</u> comments	<p>The paper should be carefully written again in order to solve the editing issues. As far as the experimental conditions are concerned authors should refer that the behaviour of the bed clearly defines it as a shallow bed.</p> <p>Also in the discussion of the works referred, authors should be aware of the different conditions covered in such works, different classification of particles and different bed operating regimes. These explain the differences found in the evolution of bed pressure drop with the flow rate of fluidising gas.</p>	

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