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(54) **Method for reducing nitrogen oxide emissions and corrosion in a bubbling fluidized bed boiler and a bubbling fluidized bed boiler**

(57) To reduce nitrogen oxide emissions and corrosion in a bubbling fluidized bed boiler that burns biofuel or waste, air is supplied into the boiler furnace (1) in stages so that two sub-stoichiometric combustion zones (I), (II) and a superstoichiometric zone (III) are brought about. The first combustion zone (I) begins from the height level of primary air supply nozzles (3) and it extends above the fluidized bed (2), ending under the height level (h_S) of secondary air nozzles (6). The second combustion zone (II) begins from the height level (h_S) of the secondary air nozzles (6) and ends under the height level (h_T) of tertiary air nozzles (7). The third combustion zone (III) begins from the height level (h_T) of the tertiary air nozzles. The length of the first combustion zone (I) is optimized by placing the secondary air nozzles (6) at a height (h_S) from the top surface of the fluidized bed (2), which height (h_S) is chosen according to a given calculation formula and calculated according to furnace-specific variables, reference values and design point-specific variables. The design point-specific variables are different in a boiler with a high furnace load and in a boiler with a low furnace load.

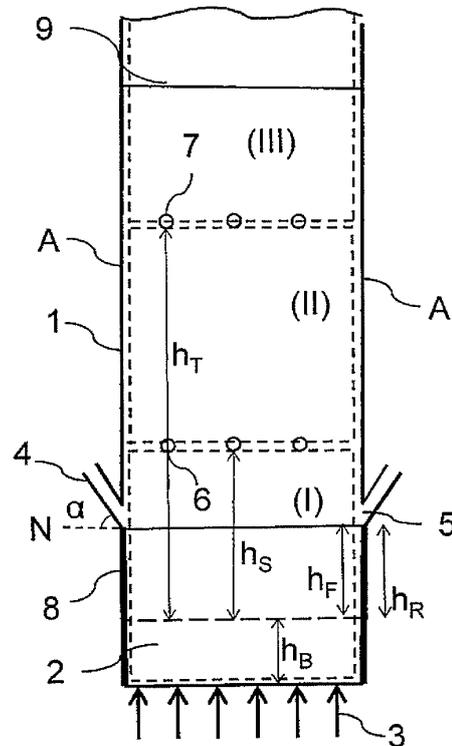


FIG. 3



EUROPEAN SEARCH REPORT

Application Number
EP 12 39 7524

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The present search report has been drawn up for all claims			
5	Place of search Munich	Date of completion of the search 17 January 2014	Examiner Rudolf, Andreas
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Munich		17 January 2014	Rudolf, Andreas
<p>CATEGORY OF CITED DOCUMENTS</p> <p>X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document</p> <p>T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document</p>			

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**ANNEX TO THE EUROPEAN SEARCH REPORT
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EP 12 39 7524

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For more details about this annex : see Official Journal of the European Patent Office, No. 12/82