OTTO VON GUERICKE UNIVERSITÄT MAGDEBURG

WORKGROUP FOR MULTIPHAS FLOWS

Particle agglomeration and agglomerate structure

Grant number

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Project title

Particle agglomeration and agglomerat structure for the calculation from gas-cyclones

Project leader

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Realized by

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Keywords

Agglomeration, turbulent two-phase flow, mathematic modeling

Problem position

The goal of this project was the development of a model to simulate dust laden gas flows. The devised improvements of the numerical models lead to an extended description and therefor improved quality of prediction – real life applications can be rendered more exact and are better understood. This improved understanding of a process enables an optimization and further development of process-relevant system components. The considered flows are found in various industry-relevant applications. For example, the examined gas-particle flows form the basis of processes like dust separation and pulverized coal-fired boilers. However the results can also be applied in other disperse multi-phase flows like liquid-particle flows in water purification or liquid gas flows in bubble columns.

Final report of the research project