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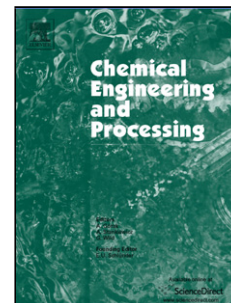
Title: CFD Aided Design of Integrated Spray Pyrolysis Furnace for Liquid Ore Exploitation

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PII: S0255-2701(17)30197-6
DOI: <http://dx.doi.org/10.1016/j.cep.2017.09.007>
Reference: CEP 7071

To appear in: *Chemical Engineering and Processing*

Received date: 28-2-2017
Revised date: 9-7-2017
Accepted date: 11-9-2017



Please cite this article as: Wei Du, Ze Sun, Guimin Lu, Jianguo Yu, CFD Aided Design of Integrated Spray Pyrolysis Furnace for Liquid Ore Exploitation, Chemical Engineering and Processing <http://dx.doi.org/10.1016/j.cep.2017.09.007>

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CFD Aided Design of Integrated Spray Pyrolysis Furnace for Liquid Ore Exploitation

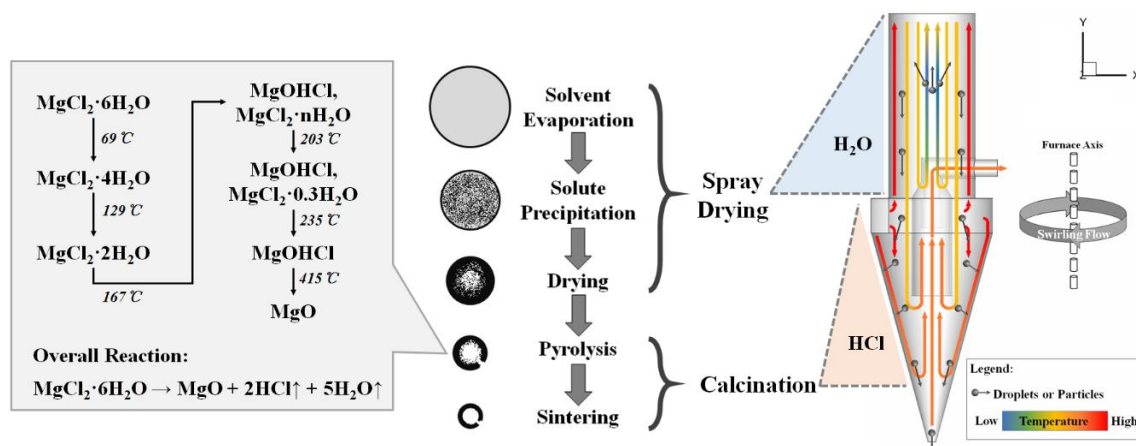
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Graphical Abstract



Highlights

- A novel spray pyrolysis furnace was designed and investigated through CFD.
- The flow pattern can be controlled by the inlet velocity and structural parameters.
- Drying, pyrolysis and separation processes were integrated into one unit operation.
- The furnace was suitable for the direct spray pyrolysis of various liquid ores.

Abstract

Traditional spray pyrolysis of liquid ore includes the two processes of spray drying and calcination. A novel spray pyrolysis furnace was designed to integrate the two processes into one unit operation and separate solid particles from the furnace gas at the same time.

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