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To cite this version:

Artemio Plana-Fattori, Etienne E. Chantoiseau, Christophe Doursat, Denis Flick. Modeling the heat treatment of a starch suspension inside a tubular exchanger. 4th European COMSOL Conference, Nov 2010, Versailles, France. hal-03144706

HAL Id: hal-03144706

https://hal.science/hal-03144706v1

Submitted on 17 Feb 2021

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MODELING THE HEAT TREATMENT OF A STARCH SUSPENSION INSIDE A TUBULAR EXCHANGER

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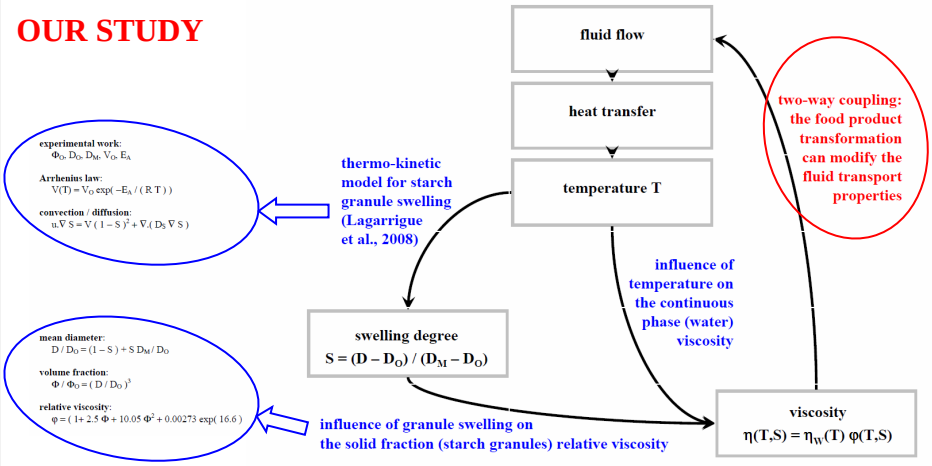
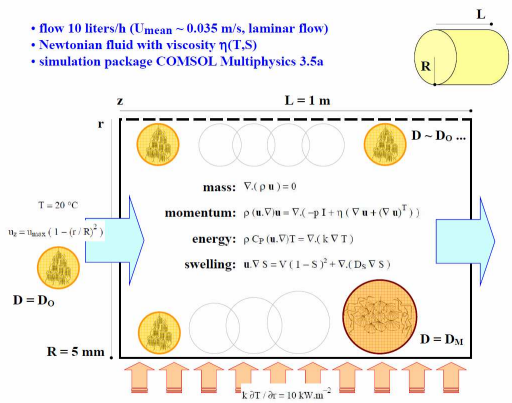
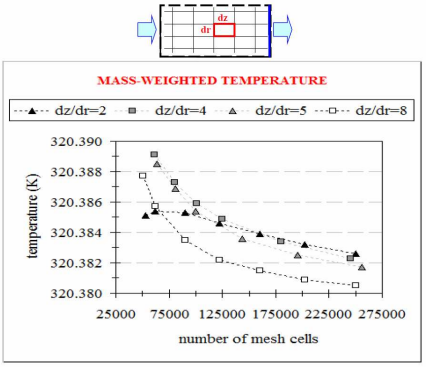
OUR STUDY



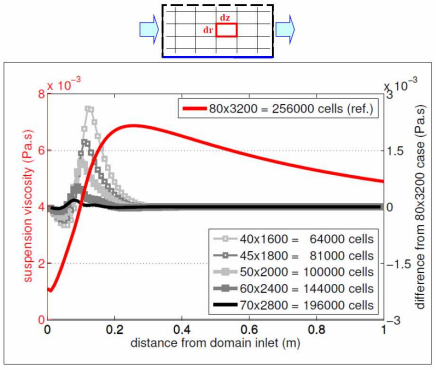


STABILITY OF RESULTS

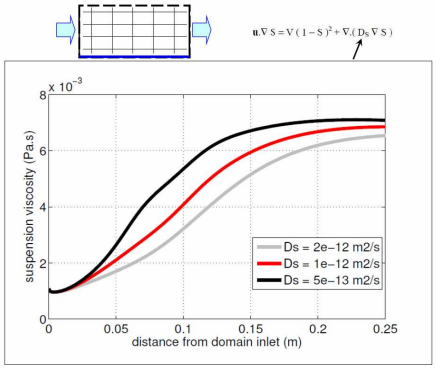
INFLUENCE OF MESH RESOLUTION AT THE DOMAIN OUTLET



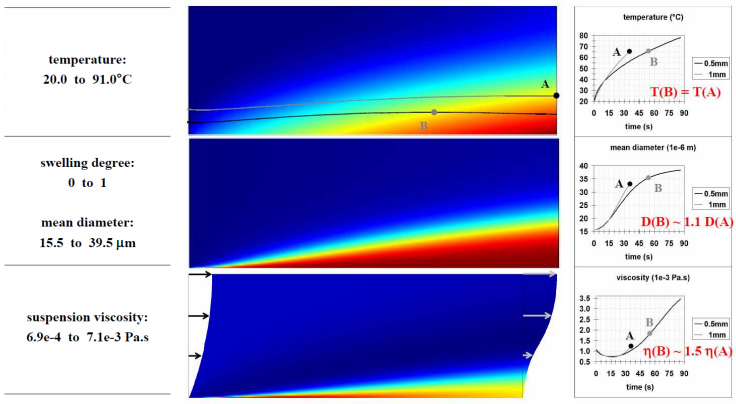
INFLUENCE OF MESH RESOLUTION AT THE HEATING WALL



INFLUENCE OF DIFFUSIVITY AT THE HEATING WALL



MAIN RESULTS



CONCLUSIONS

+ starch granule swelling can be coupled with fluid flow and heat transfer, provided a thermo-kinetic model based upon experimental work
+ <u>thermal histories cannot be neglected in evaluating starch suspension viscosity</u>

PERSPECTIVES

+ other starch suspensions can be similarly studied
+ <u>other transformation processes can be coupled, provided a kinetic-type model</u>
+ fluid flow behavior can be represented with the help of non-Newtonian models

COMSOL CONFERENCE 2010
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SEVENTH FRAMEWORK PROGRAMME