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Computational Fluid Dynamic Model for Glycerol Gasification in Supercritical Water in a Tee Junction Shaped Cylindrical Reactor

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SCWG: Supercritical Water Gasification

CFD: Computational Fluid Dynamics

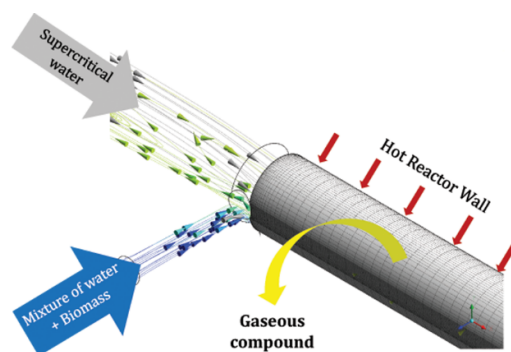
SCW: Supercritical Water

TLSM: Tracer Liu-Silva-Macedo

CGE: Carbon Gasification Efficiency

UDF: User Defined Function

Graphical abstract



HIGHLIGHT

- CFD model for glycerol gasification in supercritical water is developed
- Model provides good match, from 6 % up to 16 % error, with experimental validation
- Flow swirls create a non-uniform concentration and temperature distribution

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