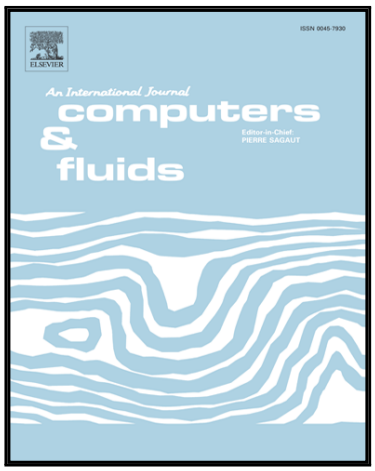

Investigations on the influence of swirl intensity on solid-fuel ramjet engine

Omer Musa, Chen Xiong, Zhou Chang-sheng, Li Ying-kun, Liao Wen-He

PII: S0045-7930(18)30083-5
DOI: 10.1016/j.compfluid.2018.02.033
Reference: CAF 3757

To appear in: *Computers and Fluids*

Received date: 15 May 2017
Revised date: 5 October 2017
Accepted date: 25 February 2018

Please cite this article as: Omer Musa, Chen Xiong, Zhou Chang-sheng, Li Ying-kun, Liao Wen-He, Investigations on the influence of swirl intensity on solid-fuel ramjet engine, *Computers and Fluids* (2018), doi: 10.1016/j.compfluid.2018.02.033

Highlights

- Experiments on solid-fuel ramjet engine have been carried out to validate the numerical model.
- We investigate the effect of swirl intensity on swirling reacting unsteady flow in a SFRJ.
- An in-house code to simulate the unsteady swirling reacting flows in a SFRJ is developed.
- Increase swirl intensity increases the residence time, heat transfer, regression rate and mixing degree.