Simulation of Hydrogen Flame Acceleration by using XiFoam

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What is the Purpose?

Feasibility of XiFoam?

Hydrogen Safety in Nuclear Power Plant

Second explosion at Fukushima nuclear power plant
2 Validation Cases

XiFoam can predict Flame Acceleration successfully, but not DDT. Further development is needed to consider the shock-driven combustion, Detonation.

Hydrogen Behaviour in Containment (HBC)

1. Knudsen’s case (30% Hydrogen-Air)

2. ENACCEF’s case (10%~13% Hydrogen-Air)