Purging of hydrogen in spaceplane through liquid helium with analysis on interaction through smooth particle hydrodynamics ARPAN SHARMA, Vel Tech University — The purging of liquid hydrogen in drain lines of spaceshuttle was carried out using helium but for the analysis through smooth particle hydrodynamics(SPH) liquid helium is used to purge the hydrogen fuel. The kernel function is developed for the particle based interaction. The analysis of interaction at different time t(0), t(1), t(2),.. is performed. The aim of the project is to develop computational environment for the purging by particle based interaction for simulation purpose. The particle based simulation is meshless method and mesh-free methods are more flexible than finite elements, because they do not depend on a fixed topological connectivity.

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