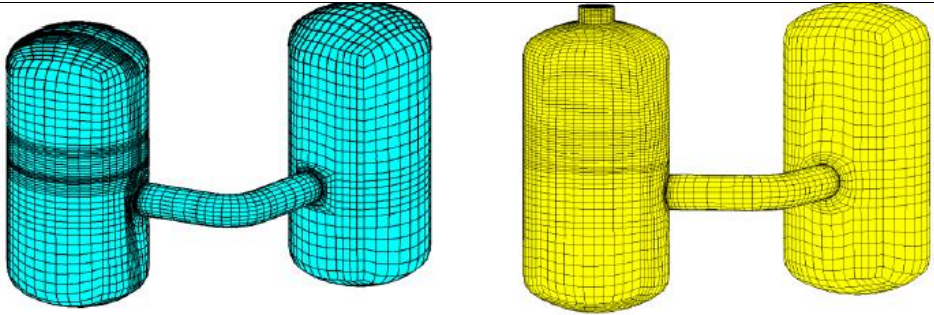


## *SUpport to SAfety ANalysis of Hydrogen and Fuel Cell Technologies*

<b>Verification type</b>	Sensitivity Studies (Grid and Parameter sensitivity)
<b>Database reference</b>	SEN-7
<b>Topic / Application</b>	Nuclear safety
<b>Physics</b>	Hydrogen release Stratification Spray cooling Thermal-hydraulics
<b>Summary</b>	Primarily concerned with validation of complex multiphase flows with heat transfer, but with some sensitivity analysis of CFD simulation.
<b>Description</b>	Sensitivity variables included 2D to 3D representation; grid refinement, turbulence modelling, and timestep.  However no formal verification work is undertaken, and both the physical phenomena and flowfields are very complex so it is challenging to transfer learning to distinct applications.
<b>Case Title</b>	CMFD SIMULATION OF ERCOSAM PANDA SPRAY TESTS PE1 AND PE2
<b>Authors</b>	Filippov et a, Nuclear Safety Institute of Russian Academy of Sciences (IBRAE RAN)
<b>Year</b>	
<b>Online reference</b>	
<b>Case image</b>	 <p style="text-align: center;">Coarse and fine meshes for PANDA model</p>
<b>Governing equations</b>	
<b>Results</b>	Study indicated weak dependence of results on meshing.