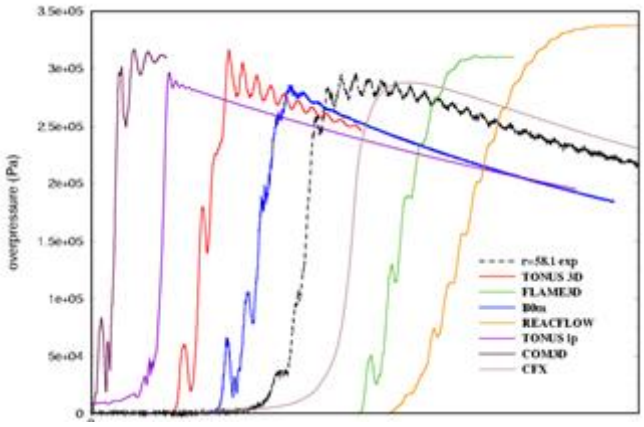
Verification type	Numerical Solution
Database reference	NUM-10
Topic / Application	Nuclear Safety
Physics	Combustion Flame front
Summary	Comparison of 6 CFD codes simulating turbulent combustion
Description	Blind pre-test calculations have shown that several codes satisfactorily predict pressure loads in certain geometries and mixture compositions. Lumped parameter models perform better in cases of slow flames, while CFD codes provided better description of fast deflagrations. Code comparisons using six different CFD codes and one lumped parameter code have demonstrated that predictions of global parameters, e.g. maximum pressure in slow and fast turbulent combustions regimes, are consistent and in good agreement with experimental data. However dynamic data like flame speed or pressure rise time show significant variation
Case Title	MULTIDIMENSIONAL SIMULATION OF HYDROGEN DISTRIBUTION AND COMBUSTION IN SEVERE ACCIDENTS
Authors	W. Scholtyssek (coordinator)
Year	2003
Online reference	69969451EN19
Case image	 Example of comparison of pressure evolution predicted by various codes.
Governing equations	

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