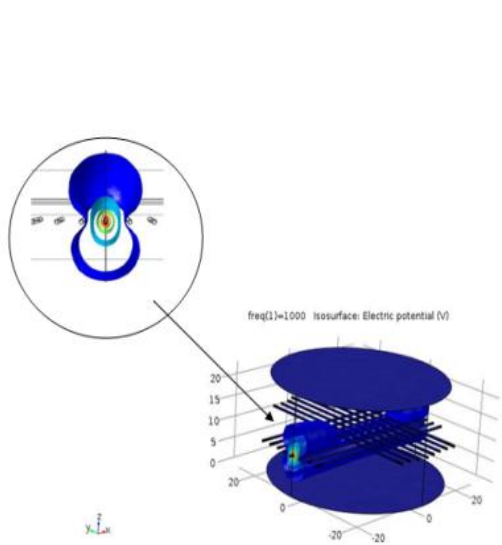
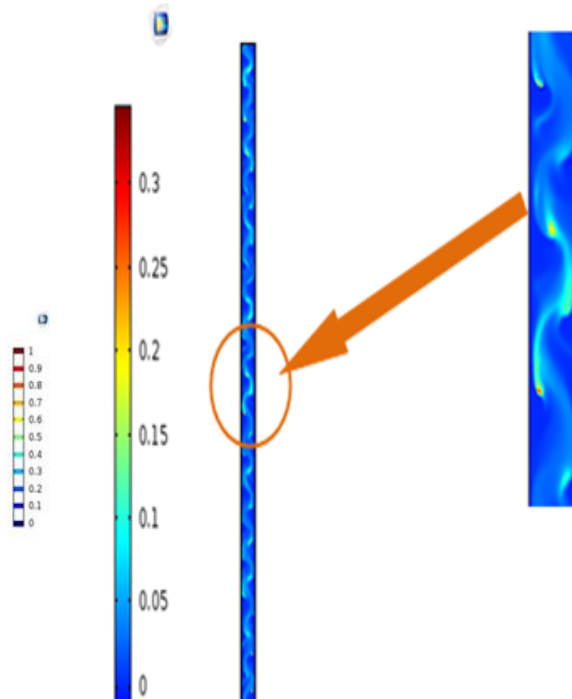


Development of Wire Mesh Sensor – Sensor Modelling & Simulation



WMS Modeling & Simulation Studies



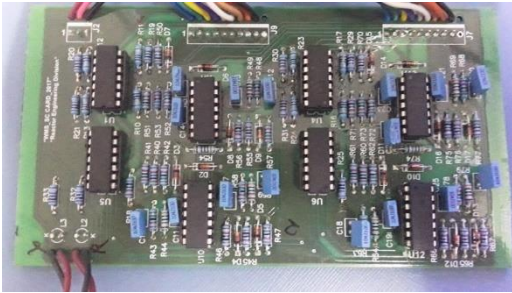
Two-phase CFD Modeling for Bubbly Flow



8X8 WMS Installed in Two-phase Air-Water Set-up

Wire Mesh Sensor (WMS) was designed for optimum specifications by FEM modelling and simulations. Prototype sensor was experimentally qualified in air-water set-up and performance evaluated.

Development of Wire Mesh Sensor- Design of Electronics and Experimental Results



Sensor Electronics Developed

Experimental Results

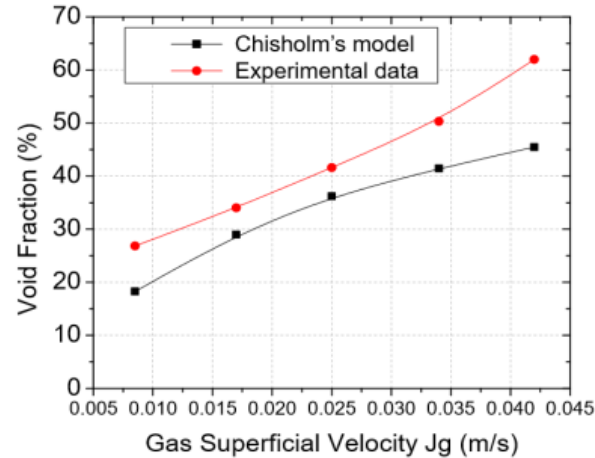
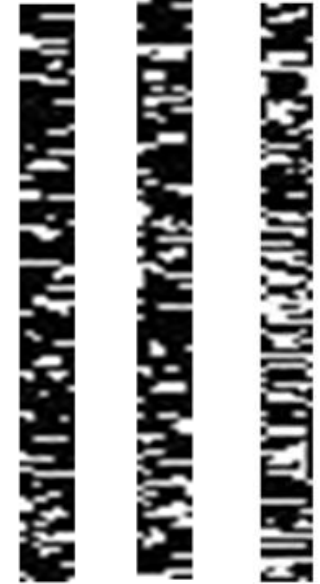


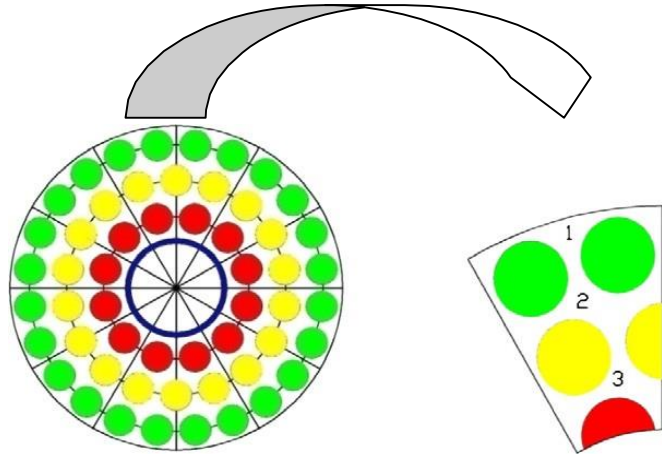
Image processed WMS output for different void fractions



$\alpha=10%$ $\alpha=28%$ $\alpha=41%$

Development of Wire Mesh type sensor and signal conditioning Electronics for high speed measurement and image processing for void profile visualization in AHWR sub-channel geometry were carried out.

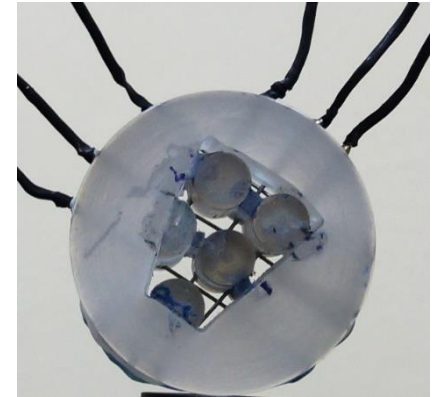
Fuel Sub-Channel Void Distribution & Visualisation



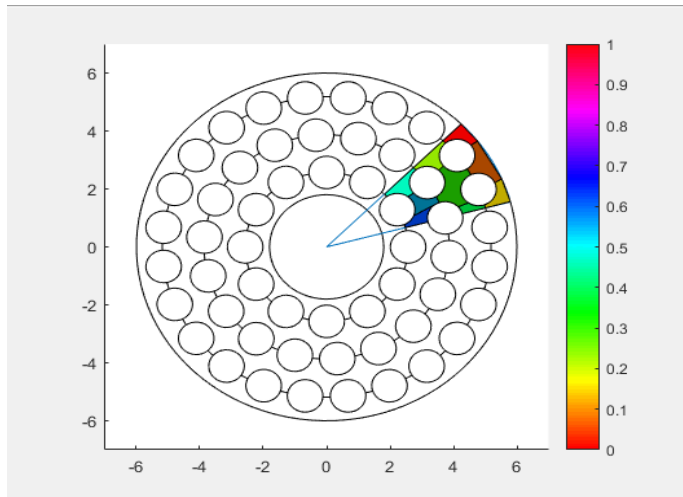
AHWR Sub-channel geometry



1/12th the segment of AHWR fuel rod bundle



3X3 WMS for Sub-Channel



Sub-Channel 2D Void Visualisation

3X3 Wire Mesh Sensor was designed for AHWR Fuel Sub-Channel Void Distribution Visualisation and Experimental data generated successfully.