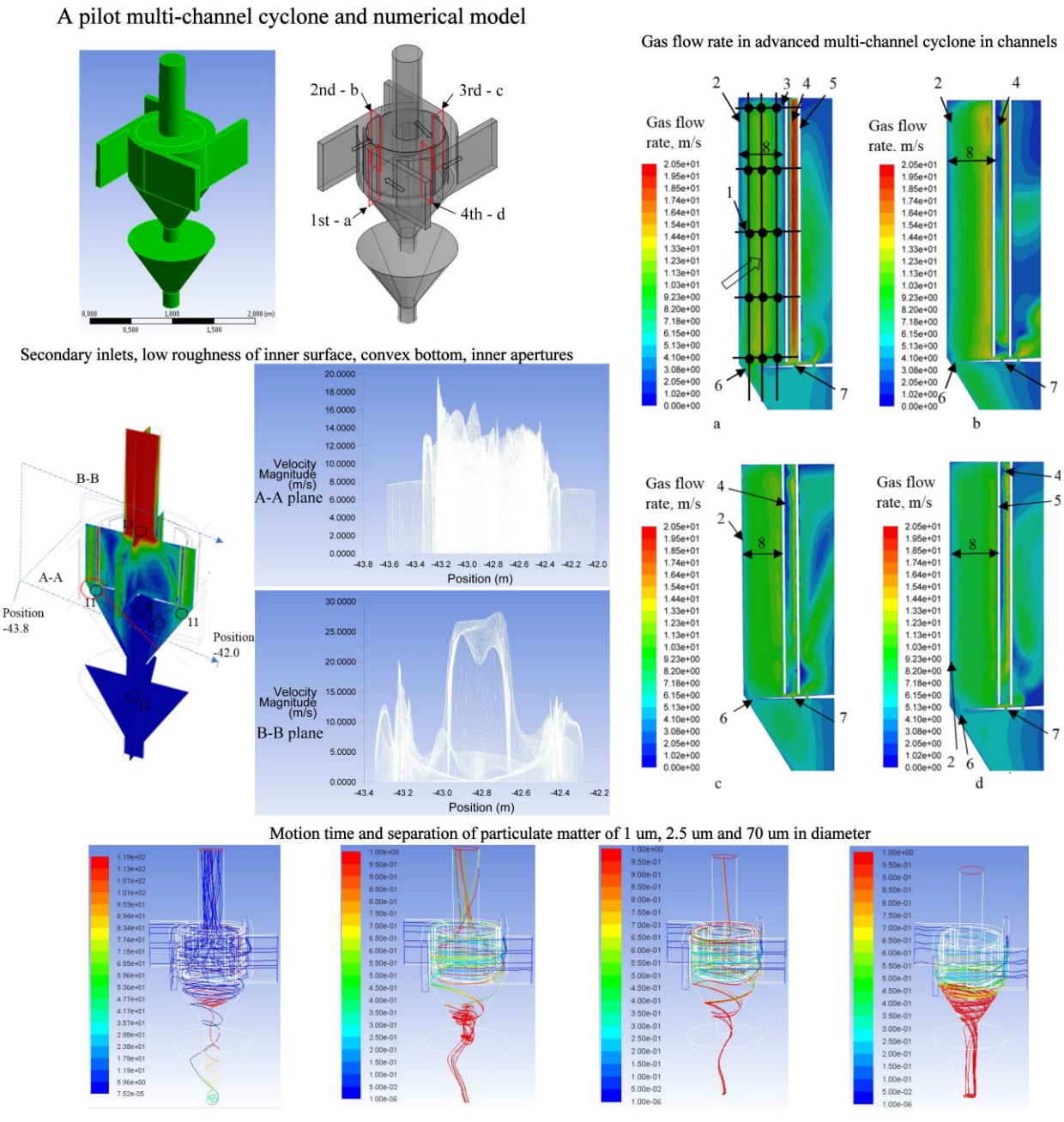
Supplementary Materials

Graphic Abstract



Highlights

Aerodynamic and particulate matter motion in a secondary inlet multi-channel cyclone-separator were investigated.

k–omega SST viscosity model at aggressive conditions and specific surface roughness were used.

The relative residuals of the gas flow rate values were varied from 4.3 to 17.6%.

The separation efficiency obtained experimentally and based on numerical model are varied less than 15% and equals to 11.8%.