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## Simulation of two-phase flow in a hydraulic cyclone tank



Presented at the STAR Global Conference 2012

This presentation highlights the CFD results of a gas-liquid two-phase flow in a cyclone tank.

The Eulerian multiphase approach using a k-epsilon turbulence model is used to simulate air bubbles dispersed in hydraulic oil. Hydraulic tanks are employed to evacuate air from the hydraulic oil. The advantage of pumping the oil through a cyclone inside the tank is that air is evacuated while, at the same time, the pressure drop is lower compared to a tank without cyclone.

The performance of the cyclone is demonstrated by measuring the amount of air evacuated, and its dependence on the differential volume flow through the cyclone. Based on the simulation results, optimization of the design of the cyclone is suggested.

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**Industries:**

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**Products:**

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