CASE STUDY

Engineering Design Services

Engineering Design & Drafting | CAE Services: CFD & FEA | Reverse Engineering
Rapid Prototyping | Product Design | Value Engineering
PLM Services | Technical Documentation
The radiator fan with 7 blades was first analyzed through CFD simulations and the pressure difference between the fan inlet and outlet were measured. An experimental investigation was performed for the same configuration, in order to validate the CFD results. To improve the design further, 4 additional fan blades were suggested and flow analysis for the same was performed. Desired pressure difference was obtained through the modified design. Final results obtained were well in sync with the experimental data, validating the CFD setup. This solution can also be provided using OpenFOAM, STAR CCM+, Abaqus CFD, COMSOL Multiphysics.

**Benefits**

- Reducing experimental test trials and associated time and cost
- Modified fan design proving significant for radiator efficiency

**About Hi-Tech**

Hi-Tech CAE is a division of Hi-Tech Outsourcing Services, a pioneer engineering outsourcing company since 1992 based in India & USA. It provides expert Computer Aided Engineering - CAE consulting services for engineering / product design analysis by modeling & simulation.

The primary services extended include Computational Fluid Dynamics (CFD), Finite Element Analysis (FEA), product design optimization and value engineering services to Automotive, Building / Construction, Process industry, Power Generation, Manufacturing & Heavy Engineering industries.