



AP DYNAMICS engineering

FLUID MECHANICS

Solving Tough Engineering Problems

AP DYNAMICS provides a complete range of **Computational Fluid Dynamic Services to drive products and equipment from concept to reality** whether it be for Forensic Failure investigation, Optimization or New construction.

Our highly skilled engineers allow for solutions to **understand** and to **predict** the **physical behavior** of complex systems. We offer **high quality, cost-effective** and **client-oriented** project services using proven and **state-of-the-art Simulation** techniques.

This is achieved thanks to our experienced CFD engineers specialized in numerical simulation.

TYPES OF ANALYSIS

- ✓ Multi-Phase Flows
- ✓ Water Hammer and Slug Flows
- ✓ Anti-surge System Design
- ✓ PSV Stability
- ✓ Fluid Mixing
- ✓ Erosion
- ✓ Compressible Flows
- ✓ Incompressible Flows
- ✓ Pressure Pulsation
- ✓ Fluid Induced Vibration (FIV)
- ✓ Flow Induced Turbulence
- ✓ Vortex Induced Vibration
- ✓ Non-Newtonian Fluids
- ✓ Fluid Structure Interactions (FSI)
- ✓ RANS, DES, LES

TYPICAL APPLICATIONS

- ✓ Compressor Packages/Stations
- ✓ Pump Packages/Stations
- ✓ Pipelines
- ✓ Control Valves
- ✓ Pipe Bends and T-junctions
- ✓ Pressure Safety Valves
- ✓ Venting Systems
- ✓ Steam Generators
- ✓ SAGD Wells
- ✓ Separation Tanks
- ✓ Fan Optimization
- ✓ Multiphase Mixers
- ✓ Distillation Columns
- ✓ Erosion

