



AP DYNAMICS
engineering

Pressure Pulsation Analysis

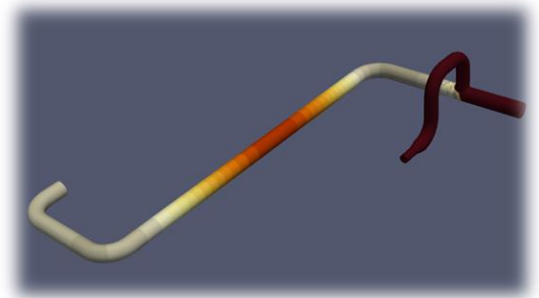
Solving Tough Engineering Problems

AP DYNAMICS provides a complete range of services related to **Pressure Pulsation Analysis** for pipelines, heat exchangers, pressure surge valves (PSV), control valves and compressors.

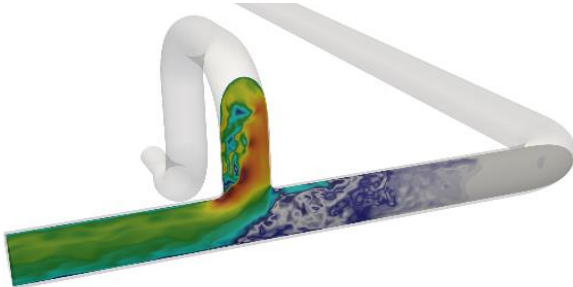
We offer high quality, cost-effective and client-oriented project services using proven state-of-the-art simulation techniques to identify the sources of flow-induced vibrations. This is achieved thanks to our experienced engineers understanding of compressible flow physics.

We utilize the latest numerical simulation technologies, such as OpenFOAM, AFT Impulse, FLUIDFLOW, in-house Python codes. Our analysis methods include both 1-D models and full 3-D models of compressible flow dynamics.

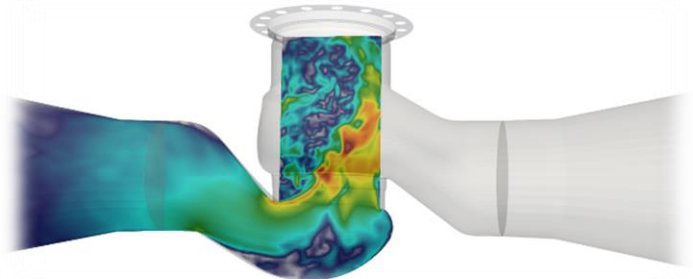
Acoustical pressure wave in a natural gas compressor station pipeline



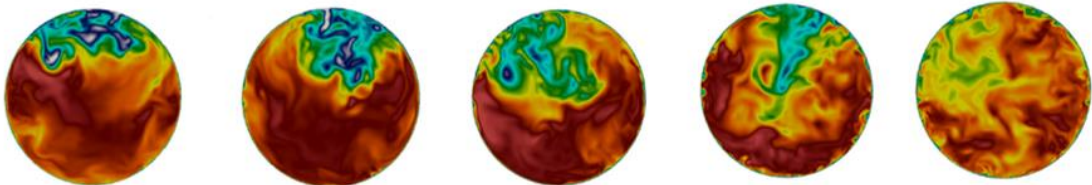
Flow-induced oscillations at a T-junction



Vortex shedding in the chamber of a control valve



Low-frequency flow-induced oscillations in a pipe



SAMPLE OF COMPLETED PROJECTS

- ✓ CFD modeling of flow-induced oscillations at control valves, pipe bends, and T-junctions.
- ✓ Surge analysis of compressors.
- ✓ PSV stability analysis.
- ✓ Tube rupture overpressure analysis on heat exchangers.
- ✓ Venting analysis.
- ✓ Valve closure time analysis.

