

FLUID DYNAMICS

DOCAN's specialisms in fluid dynamics help clients solve a wide range of thermo-fluid engineering problems and deliver viable solutions to their projects.

CORE CAPABILITIES:

- ✓ 3D Computational Fluid Dynamics
- ✓ 1D Systems Analysis
- ✓ Fluid-Structure Interaction analysis
- ✓ Explosion & combustion analysis
- ✓ Fatigue & fracture analysis
- ✓ Multiphase flow analysis

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LEARN MORE



HOW WE CAN HELP

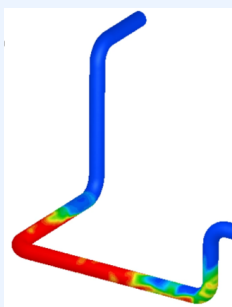
We have unrivalled experience performing fluid dynamics analysis to varying degrees, gained through working across a wide range of high-integrity industries. With a transferable set of skills, we can apply this knowledge and methodology to your engineering problem, no matter the complexity.

Identifying the fluid flow or heat transfer problem is the first step in the process, and we follow this up by providing you with effective, tangible solutions that can be implemented to overcome your project's setback.

We can assist in any project at any stage, providing the skills that your team requires and ensuring that all fluid dynamic analyses comply with NAFEMS industry standards.

KEY PROJECTS

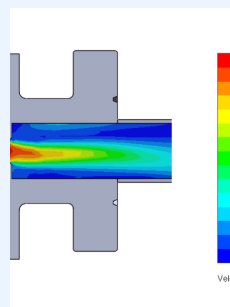
PIPING SLUG FLOW SIMULATION



PIPING

- ✓ Anticipating and mitigating slugging problems within pipework through detailed CFD analysis
- ✓ State-of-the-art simulation software used to approximate exact forces generated in a piping system during specific transient regimes
- ✓ Transient stress and deflection studies carried out

CFD ANALYSIS FOR CHOKE VALVES



OIL & GAS

- ✓ Determining the flow coefficient (C_v) curves for two size configurations of a choke
- ✓ Investigating cause of poor correlation between physical testing and manual calculations
- ✓ CFD analysis used to determine pressure drop across the valve at varying stages of opening, verifying flow coefficient data