CAPABILITY STATEMENT

FEA AND CFD SIMULATION

Verico's expertise in modelling and simulation ensures that industrial machinery and structures meet operational requirements. Verico offers an integrated approach to industrial modelling, providing FEA and CFD simulation services reinforced with field testing and validation.

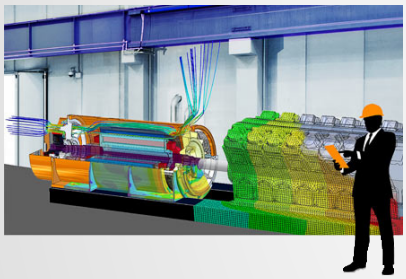
KEY RESOURCES:

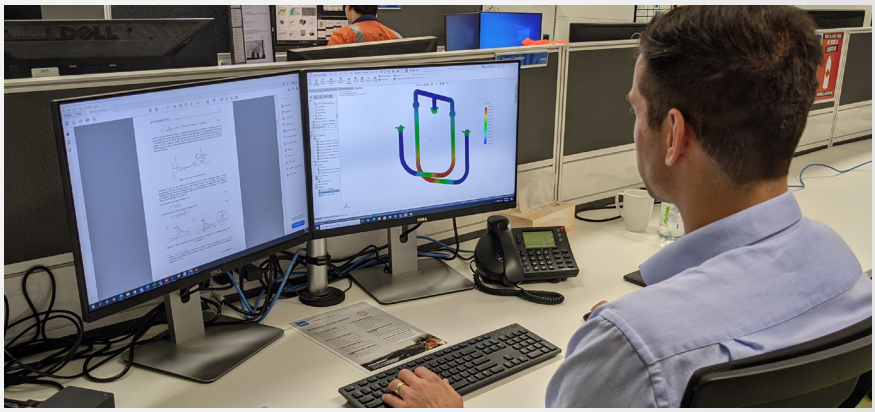
- Experienced engineers in modelling, simulation and site testing
- Market leading FEA and CFD software
- High speed computing capacity to solve large simulation models
- State-of-the-art high-speed data acquisition systems for measurements including strain, vibration, displacement and pressure.

THE VERICO DIFFERENCE

What sets Verico apart is our ability to **integrate field testing** into the overall simulation regime. Field testing is used to measure engineering parameters in order to validate simulation models, verify the accuracy of predictions and ensure the success of proposed modifications.

Verico bring decades of experience in condition monitoring and structural integrity services and incorporate the latest technologies and solutions to deliver the best possible outcomes.





FINITE ELEMENT ANALYSIS (FEA)

Key areas of expertise include:

- Advanced FEA analysis for stress, fatigue and dynamics
- Integrated FEA with physical testing
- Linear/non-linear analysis (deflection, material & contact)
- Modal analysis and frequency response analysis
- Steady state and transient vibration analysis
- Heat transfer analysis and thermal stress analysis
- Thermo-mechanical fatigue simulation for high temperature systems
- Virtual strain gauging and test instrumentation optimisation
- Lifting analysis of machinery packages

COMPUTATIONAL FLUID DYNAMICS (CFD)

Key areas of our expertise include:

- Laminar and turbulent steady state and transient flow
- Incompressible and compressible flow
- Heat transfer analysis including solid conjugate heat transfer (CHT)
- Stationary and rotating domains (fluid, solid and porous representations)
- Multi-component and multi-phase fluid flow modelling