AP DYNAMICS
engineering

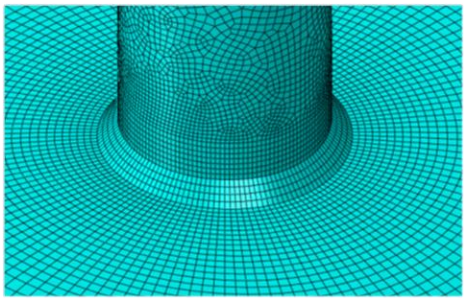
STRESS ANALYSIS

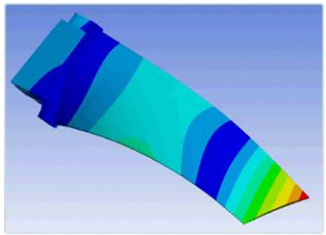
Solving Tough Engineering Problems

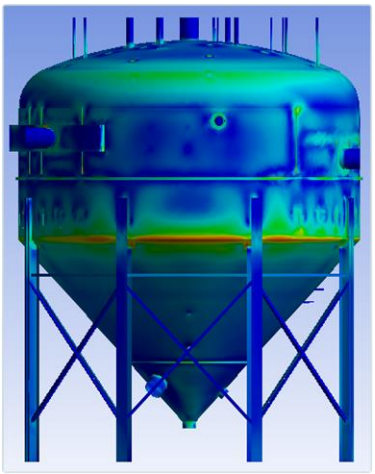
AP DYNAMICS provides a complete range of **Stress Analysis Services** whether it be for Forensic failure investigation, Integrity, Remaining life assessment or New construction.

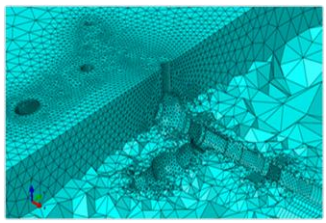
Our highly skilled engineers allow for solutions to **understand** and to **predict** the **physical behavior** of complex systems. We offer **high quality**, **cost-effective** and **client-oriented** project services using proven **state-of-the-art Simulation** techniques.

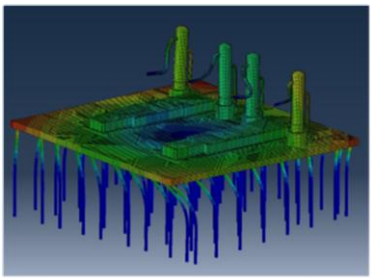
This is achieved thanks to our experienced Stress engineers specializing in numerical simulation.

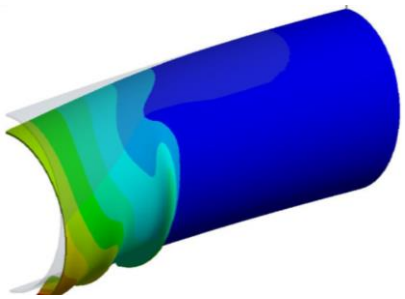










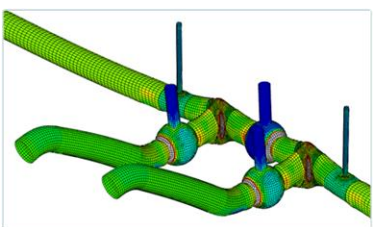


FIELDS OF APPLICATION

- ✓ Pipe and Pipelines
  - Code Calculation, Integrity Assessments, Pipe-Soil Interaction
- ✓ Pressure Vessel and Tank Analysis
  - Code and Fitness for Service
- ✓ Facilities Dynamic Analysis
- ✓ Failure Analysis of Equipment

TYPES OF ANALYSIS

- ✓ Linear and non-linear structures
  - 1D, 2D and 3D Continuum
  - Assessments of assembled parts
  - Optimisation and lifing assessments
- ✓ Non-linearities: geometric, material, loads, boundary conditions
- ✓ Material: elastic, composites, viscoelastic, visco-plastic and hyper-elastic, isotropic, anisotropic
- ✓ Static
- ✓ Vibration, stability with or without preload
- ✓ Dynamic with or without damping
  - Implicit and Explicit (crash, impact)
  - Modal : modal superposition, spectral, harmonic and transient response
- ✓ Mechanisms
- ✓ Heat transfer



TYPICAL CODES OF APPLICATION

CSA-Z662, API B31.x Series, B31G, API 1104, API 1102, API 1111, API 1110, ASME Section Viii Div 1 & 2, API 579, ASME FFS-1

SOFTWARE

ANSYSTM, ABAQUS, SAMCEF, AUTOPIPE, PV-Elite