



AP DYNAMICS engineering

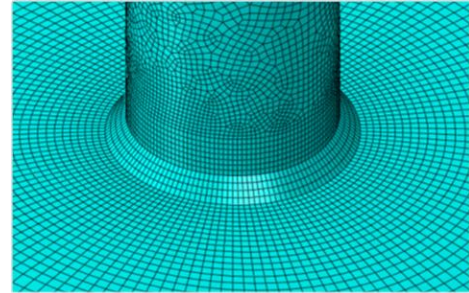
STRESS ANALYSIS

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.

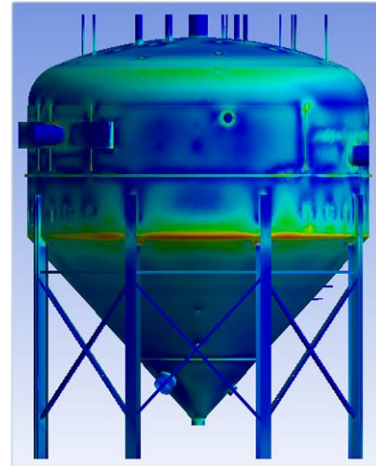
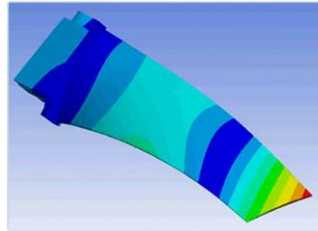
Our highly skilled engineers allow for solutions to **understand** and to **predict** the **physical behavior** of complex systems. We offer **high quality, cost-effective** and **client-oriented** project services using proven **state-of-the-art Simulation** techniques.

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



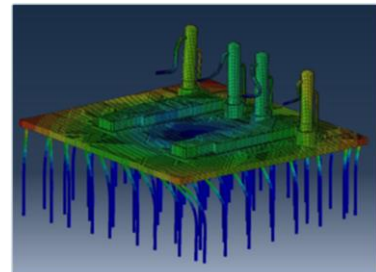
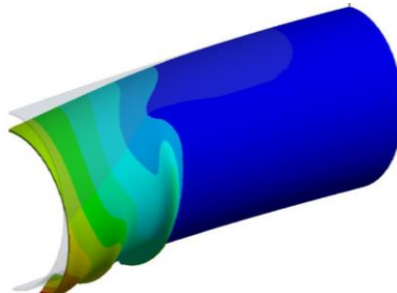
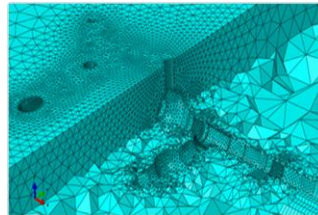
FIELDS OF APPLICATION

- ✓ 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
Optimization and lifting assessments
- ✓ Non-linearities: geometric, material, loads, boundary conditions
- ✓ Material: elastic, composites, viscoelastic, viscoplastic 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

ANSYS, ABAQUS, SAMCEF, AUTOPIPE, PV-Elite

