



# AP DYNAMICS engineering

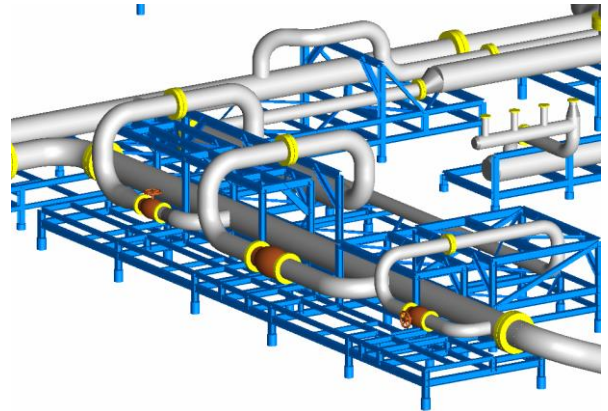
# STRESS ENGINEERING

Solving Tough Engineering Problems

**AP DYNAMICS** provides a complete range of **Stress Engineering Services** whether it be for machinery, piping system, pipeline, or facilities.

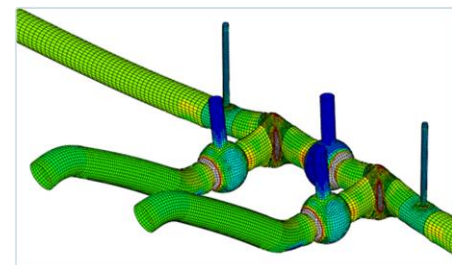
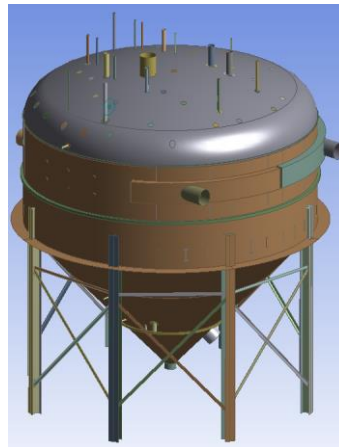
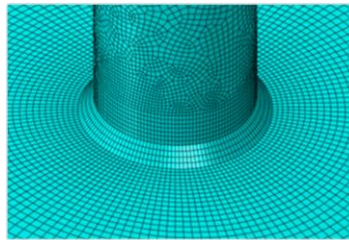
Our highly skilled engineers allow for solutions to **understand** and to **predict** the **physical behavior** of complex systems. We offer **high quality, cost-effective** and **client-oriented** project services using proven **state-of-the-art Simulation** techniques.

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



## TYPES OF ANALYSIS

- ✓ Code Check per CSA, API, ASME, ABSA, BS, ISO
- ✓ Linear and Nonlinear Structures  
1D, 2D and 3D Continuum  
Assessments of assembled parts  
Optimization and lifting assessments
- ✓ Nonlinearities: geometric, material, loads, boundary conditions
- ✓ Material: elastic, composites, viscoelastic, visco-plastic and hyper-elastic, isotropic, anisotropic
- ✓ Static, Thermal, and Flexibility Analysis
- ✓ Vibration, Stability with or without Preload
- ✓ Dynamic with or without Damping  
Implicit and Explicit (blasting, impact)  
Modal: modal superposition, spectral, harmonic and transient response
- ✓ Mechanisms



## TYPICAL APPLICATIONS

- ✓ Pipelines
- ✓ Launchers/receivers
- ✓ Valve sites
- ✓ Compressor packages
- ✓ Pump packages
- ✓ Turbines
- ✓ Pressure vessels
- ✓ Storage tanks
- ✓ Piping systems
- ✓ Metering stations
- ✓ LNG Facilities
- ✓ Petrochemical Facilities
- ✓ Mining Equipment

