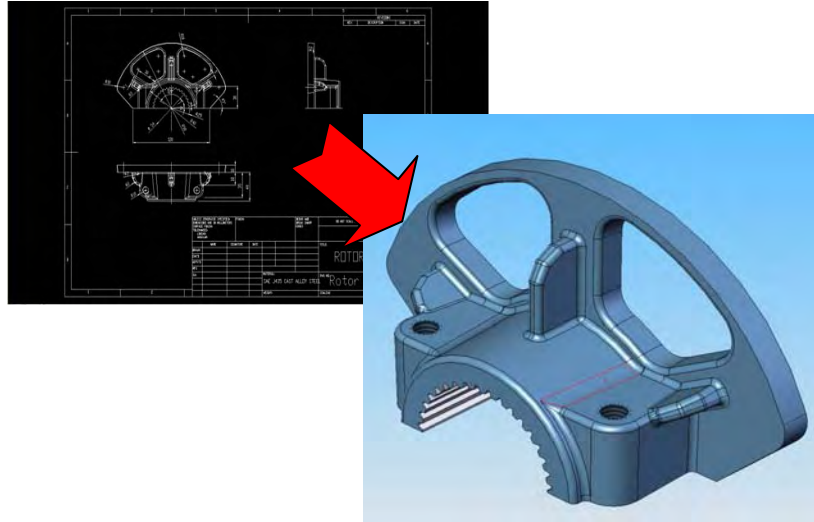


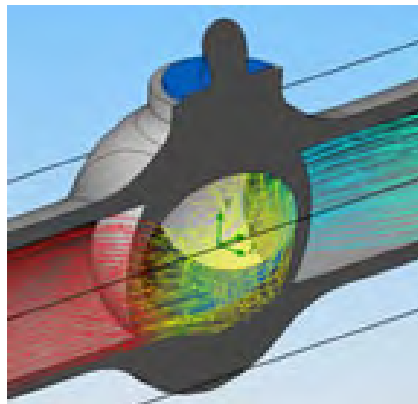
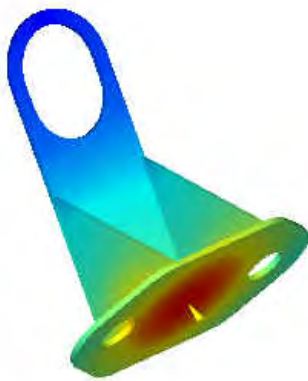
Pipeline Design and Analysis

Flash Engineering is a design consultancy focused on Oil & Gas field development and Services. We offer design and analysis solutions in the area of 2D to 3D CAD modeling and virtual simulation of the 3D models of the Pipes, Valves, and Tanks, Mixing vessels or complex processing system.

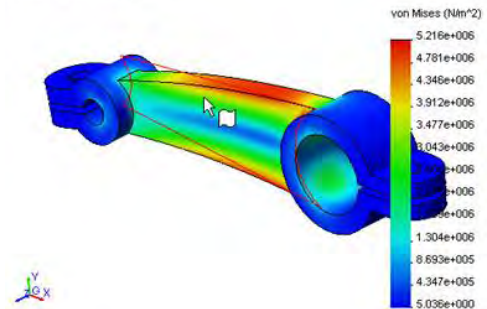
Our models are based on real data. We will develop 3D CAD models to run FEA/CFD (Finite Element Analysis/Computational Fluid Dynamics) test scenarios based on your needs.



Why rely on drawings and manual calculations? **PROVE** your designs with virtual 3D simulation and analyzed test results.



Model name: 89-NCAO-4200-1366
Study name: COSMOSXpressStudy
Plot type: Static Nodal stress - Plott
Deformation Scale: 507.36



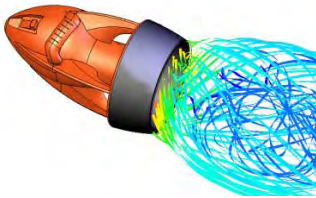
For more information or to arrange for a presentation at your convenience, contact our Flash Engineering sales team

Tel: (+65) 6372-1416

Email: sales@flash-eng.com

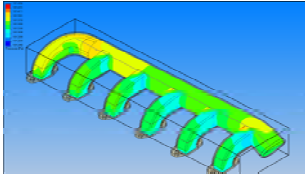
Website: www.flash-eng.com

Pipeline Design and Analysis



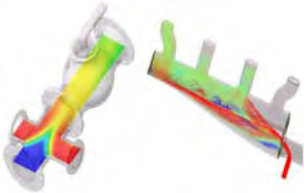
Our Services

- Outsourced support and solutions to Engineering departments
- Conversion of 2D CAD drawings into 3D models
- Simulated, virtual and complex test analysis
- Time or Contract based system design support
- System concept design proving



Virtual Testing for Maximum Design Performance

- Force, Pressure, temperature and stress loadings
- Stress, Strain and Displacement
- Vibration
- Thermal Stress and Buckling
- Heat Dissipation



Complete simulation and analysis of flow through pipelines

Pipe system pressure test analysis

Fluid or Gas flow rates

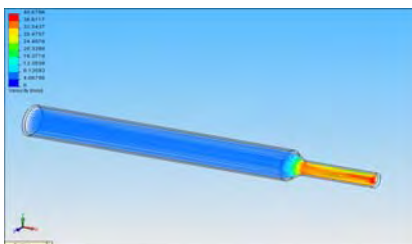
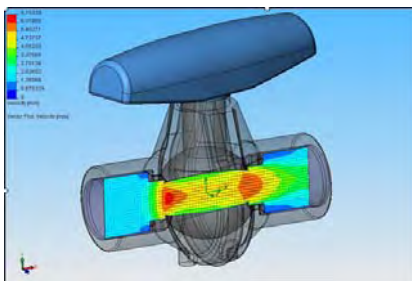
- Examine effects of density and viscosity on Fluid/Gas rates
- Examine effects of design changes on flow rates
- Bottle Necking or restrictions
- Volumetric flow calculations
- Temperature dependent Velocity/Mass or Volumetric Flow rate
- Simulate internal pipe roughness
- Simulate various material properties

System design types

- Pipe Weld analysis
- Pipeline sizes
- Flow and behavior through pumps
- Flow and behavior through mixing vessels or valves

Full analysis reporting on each test parameter:

- Conversion to Video AVI of test performances
- Internet (HTML) and Word document results for easy transfer of data between departments
- No complex software packages needed



For more information or to arrange for a presentation at your convenience, contact our Flash Engineering sales team

Tel: (+65) 6372-1416

Email: sales@flash-eng.com

Website: www.flash-eng.com