

Turbomachinery Design & Analysis



Cost effective turbomachinery design & analysis solutions

Impact Technologies provides comprehensive design, analysis and testing services to rotating machinery manufacturers, suppliers and end users. We specialize in the design or re-design of all types of rotating equipment. Based upon years of design and analysis experience with a wide range of machines, and through the use of the most sophisticated software tools available, Impact Technologies can provide superior mechanical design and analysis in a timely and cost-effective manner.

The design and analysis services offered include assessment of existing equipment and prediction of structural performance at alternative conditions. Complete mechanical design and analysis services, ranging from analytical FEA calculations, rotating telemetry testing through modal testing can be performed for rotating machines.

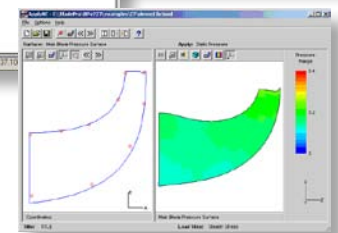
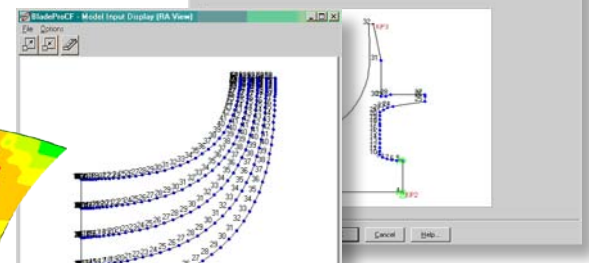
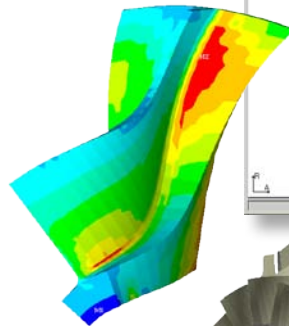
Impact offers **BladePro-AF™** and **BladePro-CF™** software for structural analysis of axial flow blading and centrifugal flow impellers, respectively. Both of these software packages work with the ANSYS® finite element program to make stress, vibration and fatigue analysis easy for complex turbomachinery geometries. These software packages are in use in the U.S. and worldwide.

Impact also offers **non-contacting blade vibration monitoring services** to monitor and isolate the vibration of each blade in a stage and convert displacements into dynamic stresses which lead to a prediction of fatigue life.



Additional Design Services Offered

- Comprehensive design evaluation of rotating machines
- Design automation to fit within OEM design processes
- Applied research and development
- Mechanical Design Services
- Turbomachinery analysis customized training
 - Axial Flow Compressors
 - Axial Flow Turbines
 - Radial Flow Compressors
 - Radial Flow Expander



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Automotive Turbomachinery

- Structural analysis of turbochargers

Axial and Centrifugal Compressors

- Analysis of stress, vibration and fatigue of compressor blading and impellers

Axial And Radial Turbines (Steam and Gas)

- Analysis of stress, vibration and fatigue of turbine blading and impellers
- Analysis at nominal operation and at off-design conditions
- Blade Vibration Monitoring and conversion to dynamic stress and fatigue life
- Multi-stage flow analysis

Centrifugal And Axial Pumps

- Analysis of stress, vibration and fatigue of pump impellers

Wind Turbines

- Design and Analysis of Blades and Rotors including vibration monitoring

