



DESIGNCAE

We offer expert consulting and execution for projects on Machinery, Automotive and Aerospace components design.

**WE ARE A BLEND OF
CLASSICAL AND
TECHNOLOGY
PROFESSIONALS.**

OUR SERVICES

PRODUCT DESIGN AND DEVELOPMENT

Product design and development services
Design Optimization, Strength and Durability of
Components involving Structural, Thermal, Vibration,
Composite Materials, CFD Flow, impact/ Crash
Calculations

Material Design and Testing
Mechanical Testing, Microstructural Characterization,
Non-Destructive Testing, Corrosion Testing,
and Failure Analysis

OUR TEAM

The best people within the industry, who are self
driven and passionate, that makes our team trust
worthy and reliable for the customers.

OUR APPROACH

Our approach to the problems are unique, quality
conscious and problem solving.

DESIGNCAE.COM

OUR PROJECTS

What we executed so far ?

With CAE : FEA

Design optimization of chassis frames on trucks.
Conversion of welded to casting parts.
Housing design for structural strength and vibrations.
Wind tunnel components design.
Modal and Harmonic analysis of feeders.
Thermal stress analysis of engine parts.
Transit case design for lift, bump and drop test.
Crash analysis of automotive plastic parts.

With CAE : CFD

Optimization of Heat exchangers.
Ceiling fan blade angle optimization for maximum air delivery.
Modelling of chargers air coolers.
Combustion modelling for Hydrocarbon fuels and LNG.
DPM - CFD modelling of mixing tank and fluidized bed reactors.
CFD modelling of complex flows in industrial applications like multiphase flows, rotating and reacting flows.

We look forward to work with you!



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PROJECT EXECUTION

Material Design and Testing

Mechanical Testing:

Tensile, Compression, Hardness (Macro, Micro and Nano), Impact Toughness (Charpy, Izod), Bending, Creep and Fatigue, Fracture toughness testing.

Microstructural Characterization:

Optical microscopy, Scanning Electron Microscopy, Electron Backscattered Diffraction, Transmission Electron microscopy

Chemical Characterization:

Atomic Emission Spectroscopy, Electron Probe Micro Analysis, X-Ray Diffraction, X-Ray Fluorescence

Corrosion testing:

Stress corrosion testing, Hydrogen Induced Cracking

Non Destructive Testing:

Ultrasonic testing, Magnetic particle testing, Eddy current testing, Dye penetrant testing, Radiography.

Failure analysis:

Identifying root cause failure analysis in metallic materials and recommendations for improvements and preventive actions.

We look forward to work with you!

