

GENESIS STRUCTURAL OPTIMIZATION FOR ANSYS®



GENESIS

Structural Design Optimization Software

GENESIS® is a fully integrated structural finite element analysis and design optimization software package from Omniquest Inc.

APSG Engineering Pvt Ltd is a Bangalore, INDIA based organization focused on Engineering solutions, consulting and distribution. Founded in 2016, APSG has participated in several product engineering programs and have delivered solutions and value to its customers constantly.

The core goal of APSG is to focus on the advanced engineering and innovation and help itself and it's customers to generate revolutionary products and services. The team at APSG is lead by professionals with decades of experience in various industry verticals such as Automotive, Oil and Gas, Bio Medical, Heavy Engineering including Farm Equipments, Energy etc.

APSG Engineering is Authorized Distributor & engineering partner for Omniquest Inc's products and Solutions. Omniquest Inc is based out of Colorado & Michigan, USA & it's mission is to provide the best technology leadership, software tools, domain expertise and support to client globally in virtual validation and optimization. The company was founded by Dr. Garret Vanderplaats, one of the best-known experts in the optimization world. Omniquest Inc has a track record for consistently delivering competitive advantage to customers across broad range of industry verticals.

**AUTO OEM
AND
SUPPLIERS**

**ENGINEERING
SERVICE/
SOLUTION
PROVIDERS
(ESP'S)**

**DEFENCE
AND SPACE**

AEROSPACE

**HEAVY
ENGINEERING**

**FARM AND
CONSTRUCTION
EQUIPMENTS**

Why GSAM?

GENESIS Structural Optimization for ANSYS Mechanical (GSAM) is an integrated extension that adds topology, topography, freeform, sizing and topometry optimization to the ANSYS environment.

Designers benefit by automatically generating innovative designs in a reliable, robust and easy-to-use interface.

ANSYS ANALYSIS PROCEDURES SUPPORTED BY GSAM

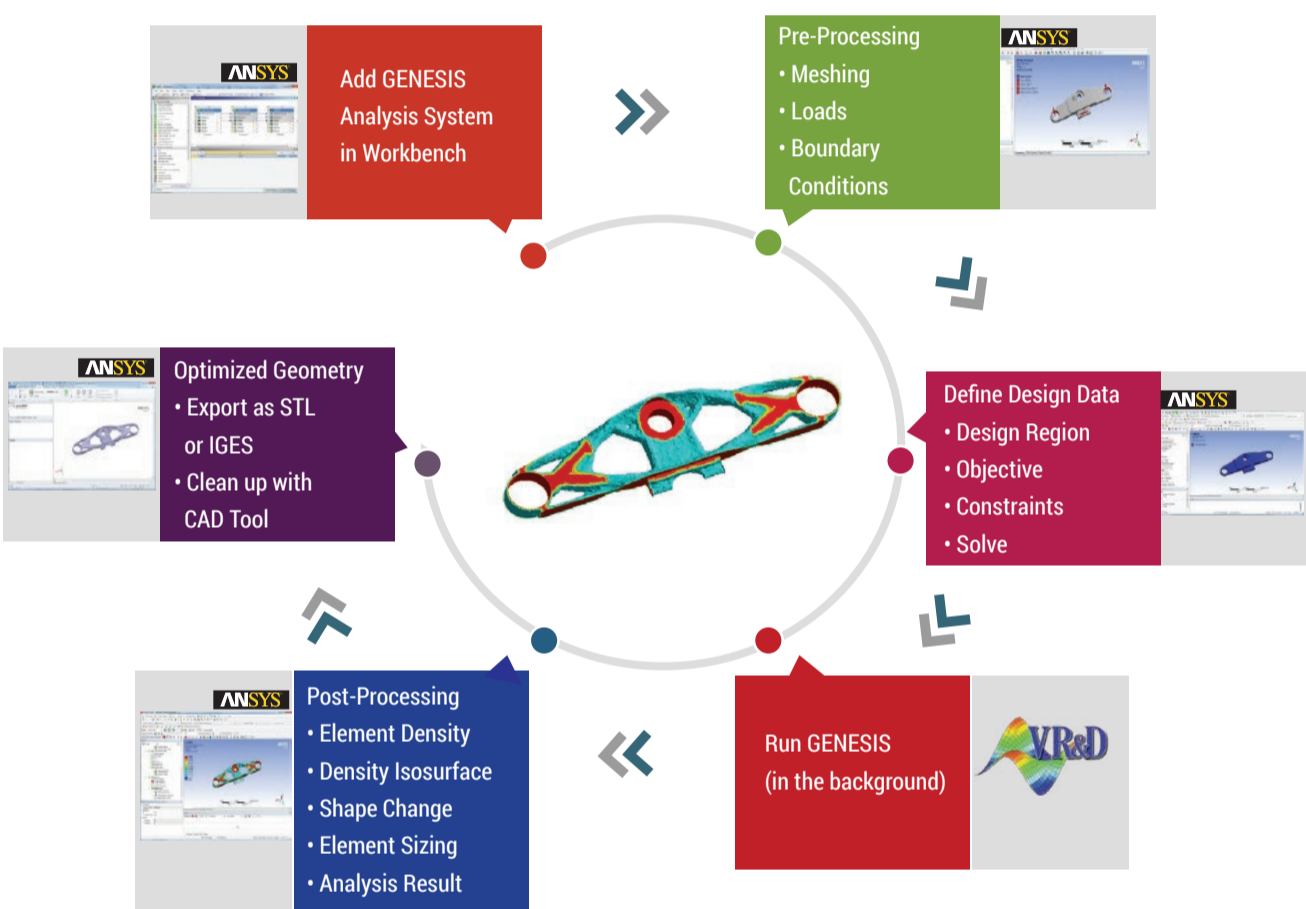
- Static structural (Linear and Nonlinear)
- Modal
- Linear buckling
- Harmonic
- Random
- Transient structural
- Multiple analysis systems simultaneously

SUPPORTED DESIGN RESPONSE TYPES

- Strain energy
- Displacement
- Relative displacement
- Frequency
- Buckling load factors
- Modal/direct/random displacement, velocities, and accelerations
- Moment of inertia
- Mass/Volume and Topology mass fraction
- Stresses
- Contact pressure & Contact clearance
- Equivalent radiated power
- Temperature and Others

MATERIAL MODELS AND NONLINEARITY SUPPORTED BY GSAM

- Isotropic
- Orthotropic
- Anisotropic
- Geometric Nonlinearity
- Material Nonlinearity
- Contact Nonlinearity



BENEFITS FROM GSAM

- Generative Innovative Designs
- Reduce cost and Improve performance
- Easily add structural optimization to existing ANSYS Workbench workflow.
- Fast and reliable structural optimization.

STRUCTURAL OPTIMIZATION CAPABILITIES

- Topology
- Topography
- Freeform
- Shape Optimization
- Sizing
- Topometry
- Mix of any of the above

* ANSYS is a registered trademark of ANSYS, Inc.

Call for inquiry

Niju Nair @ +91-7306209304, Karthik @ +91-9916132105

madhavan.nair@apsgengineering.com, karthik.shankaran@apsgengineering.in

APSG Engineering Private Limited, Regus Supreme Building (Jayanagar), 44/1, 1st & 2nd Floor, 16th cross, Jayanagar 7th block (west), KR Road, Bangalore – 560070. INDIA