



**WELCOME TO
INNOVATIVE 3D SOLUTIONS**



“ WE DESIGN YOU DESIRE ”



INNOVATIVE 3D SOLUTIONS

Innovative3D is where ingenuity and vision combine . . . to provide solutions & critical project support. Innovative cad/cam is a solution provider, Design, Reverse egg Class A surfacing, all types of complete 2D & 3D inspection & CAE Services, Sheet Metal Progressive Tool Design, Draw & Forming Analysis Company with valuable capabilities. The company has provided solutions & services to companies & organizations in a variety of industries: Automobile, Automotive Lighting, medical device & medical equipment, consumer electronics, manufacturing 3D Bluelightscanning

We focus on profiling our company as a partner with a high quality design perception combined with a strong drive towards innovation. Our expertise is to integrate styling and production activities and providing our clients with a full range of design solutions. These services include creative research, feasibility studies, product/project engineering. 2D/3D design development and prototyping.

Mission of **INNOVATIVE 3D SOLUTIONS** is to provide our clients with the best design solutions possible created within the clients set borders, sprung from our creativity and translated into visual emotion

OUR SERVICES.

INNOVATIVE 3D SOLUTIONS offers a complete design service, ranging from initial market research through to final design specification, renderings and full 3D modelling services.

We create unique solutions for the Automobile, Medical, home appliances, defense, aero space, etc sector with dedicated individuals with a proven capability in making a difference with expertise spanning automotive industrial design.

- **AUTOMOTIVE DESIGN & STYLING**

with end-to-end solutions dedicated to customers. We focus on providing quality designs while fulfilling the design requirements

- **INDUSTRIAL DESIGN**

we provide clients with new concept designs sketches and improve aesthetics so as to enhance the functionality and market demand of a product.

- **3D MODELLING AND VISUALIZATIONS**

For us 3D modeling visualization is the technical art of developing a mathematical wire frame representation of any design or product

- **DESIGN CONSULTANCY**

our consultancy goals focus on helping our clients gain a powerful competitive advantage by launching innovative products that satisfy real customer needs.



We have **STEINBICHLER L3D** Blue light Scanner Germany Based technology



Specification: - In this scanner we have measurement 3 volume

Volume	point spacing	noise	accuracy
1. 70x70	0.07mm	0.003mm	0.005mm
2. 200x200	0.07mm	0.003mm	0.008mm
3. 400x400	0.07mm	0.003mm	0.014mm



Our **COMET SERIES** product line utilizes blue light technology to capture images with high accuracy requirements in half the time it takes a Coordinate Measuring Machine (CMM). Blue light technology provides an organized data set with speeds up to 16 million points in as little as two seconds. With interchangeable field of view lenses you can measure a large variety of part sizes with just one system.



Blue Light Scanning Overview

Innovative 3D has blue light 3D scanners (also known as structured-light 3D scanners) that

capture a digital 3D scan of a physical object in seconds.

White light 3D scanners offer the following advantages over laser scanners:

Faster scan times

Produce dense and accurate data

Higher detail levels

Takes the full view of the object with full field scanning

Safe for people, even to the naked eye

For more information on the differences between a laser scanner and white light scanner, please visit

the blog post: <http://innovative3ds.com>

Geometry Acquisition Post Processing

Step 1

The 3D scanner directs a series of reference patterns onto an object.

The light deflects onto the object's surface. The scanner captures these images to calculate the object's depth and surface information.

Step 2

The 3D scanner's triangulation engine processes the images to acquire the data needed to create a 3D model. Automated 3D capture drastically reduces the time and cost in capturing complex physical measurements.

Step 3

Consider using [Geomagic](#) or [polyworks](#) for advanced 3D scanner data post-processing. These software packages are very helpful for 3D inspection and reverse engineering application.



About Coordinate Measuring Machines (CMM)

What is a CMM?

- Modern machines used for very accurate and precise measurements
- CMM works on the principle of Coordinate Measuring i.e. measurement based on collection of data points taken in a Cartesian Coordinate System
- “The primary function of a CMM is to measure the actual shape of a work piece, compare it against the desired shape, and evaluate the metrological information such as size, form, location, and orientation.” [Ref: Read ‘Notes’]







The company has provided solutions & services in a variety of industries: Automobile, Automotive Lighting & medical etc.

We provide best precision measurements through **CMM- Model No.- HERA 10.07.07**, having measurement Volume upto:1000mm X 700mmX 700mm at **CMM FACILITY, Sec- 88, phase-II, Noida.**



3D BLUE LIGHT SCANNING



(a)

(b)

(c)

(d)

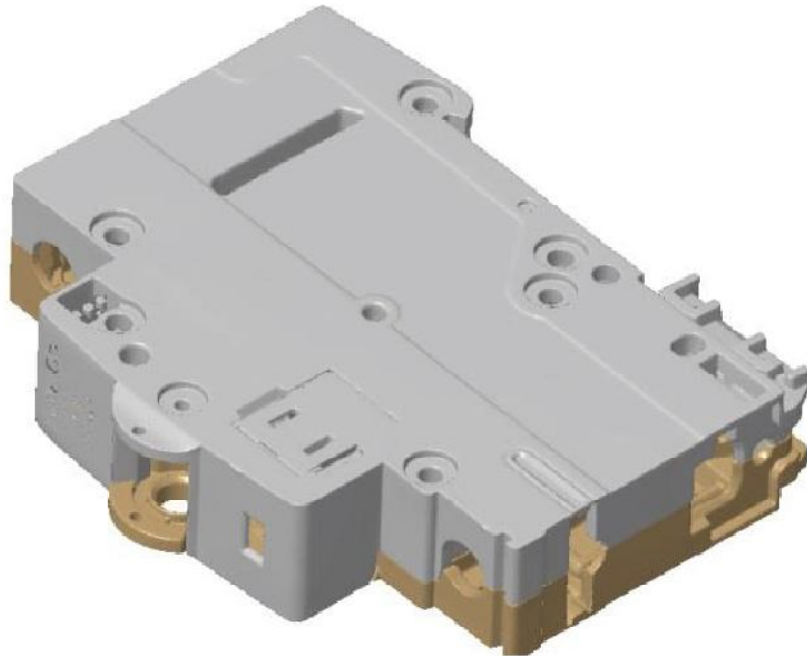
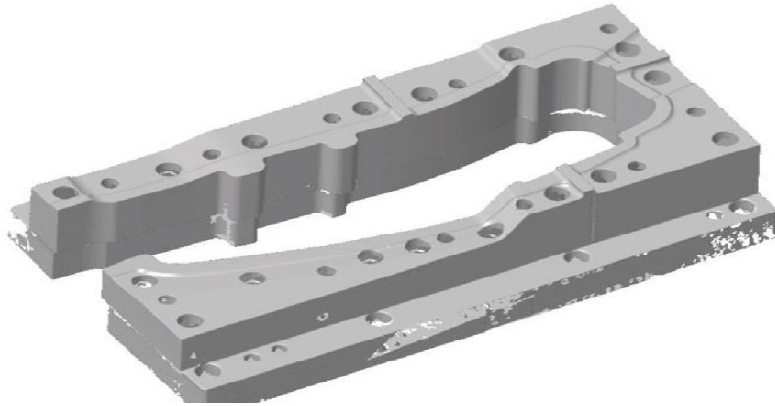


(e)

(f)

(g)

(h)





MEDICAL PART DESIGN



Example: Rods, Plates and Screws

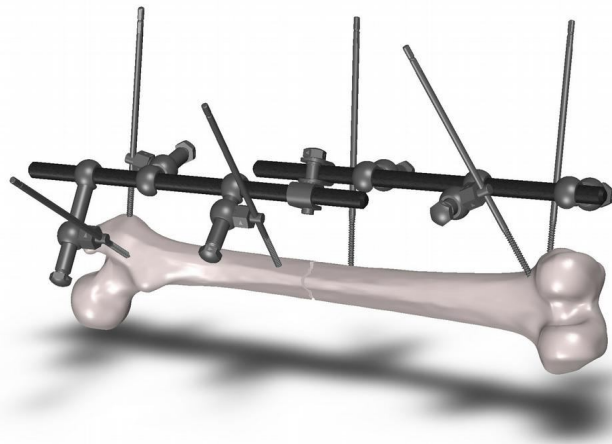
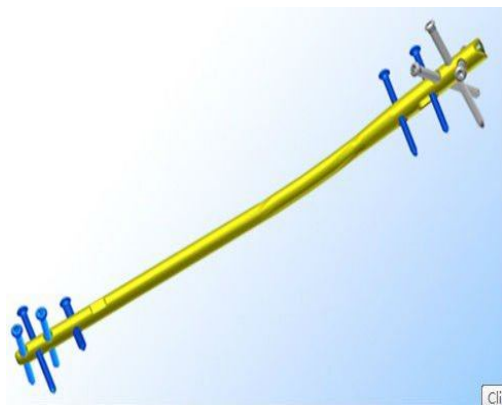
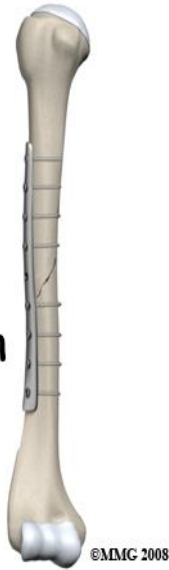
- **Rods** are used for alignment and support of long and large bones
- **Plates** hold together loose pieces of bone and support smaller bones
- **Screws** hold plates and rods in place

To stabilize a long bone fracture, a plate and screws outside the bone or a rod inside the bone may be used





Plate
and
screw
fixation





AUTO PARTS DESIGNING





3D DESIGNING & REVERSE ENGINEERING

Multiple systems Design Engineer with significant Experience in Automotive Interior-Exterior product Design and data management.

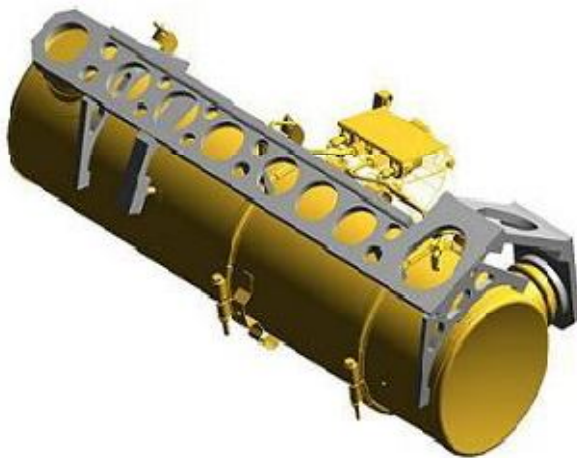
Experienced as well on plastic component design.

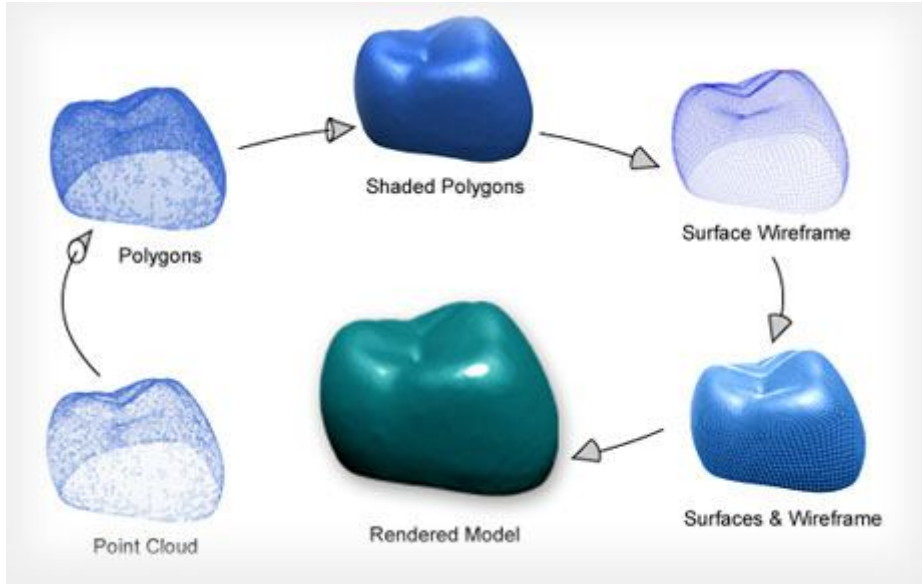
Extensive experience on NX & IMAGEWARE solid & surface modelling. Also utilizing **STEINBICHLER SCANNER** to support Reverse engineering & surface design

All the communications with the client for the new development project.

We managed all the designs and data for the customer and was responsible for all data transfers and progress report to management

Responsibility: Using Designer directions & sketches for the trim development according to Customer







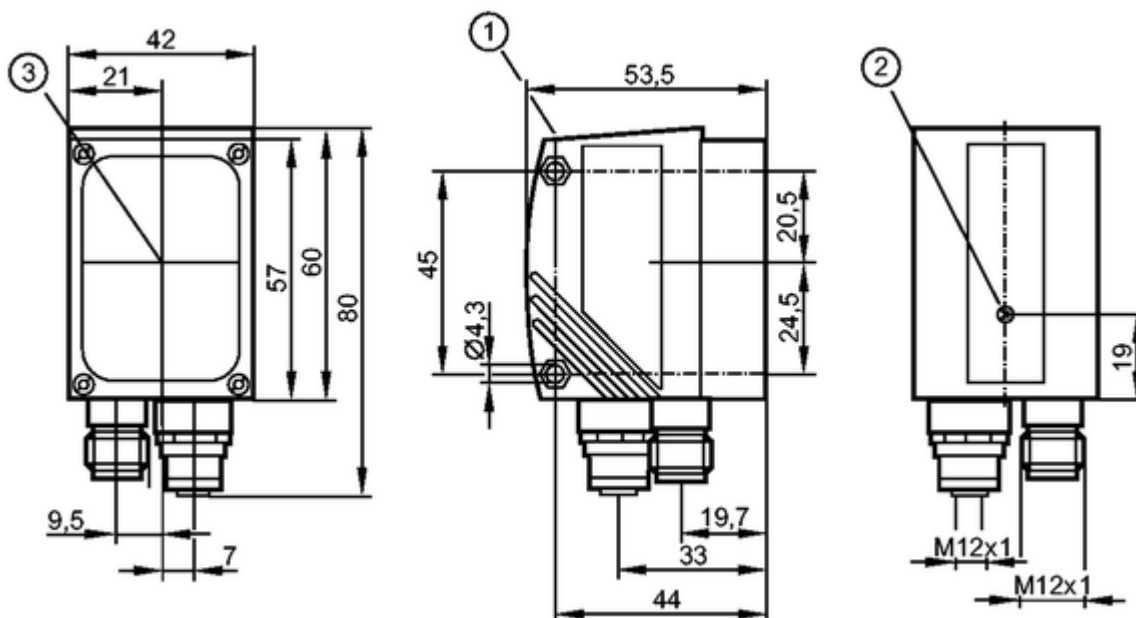
2D INSPECTION

Geomagic is powerful, easy first article inspection software for both contact and non-contact 3D measurement devices. It lets you measure and compare parts to CAD models to find and fix manufacturing defects before they become major problems.

Keep a Detailed History of Every Inspection

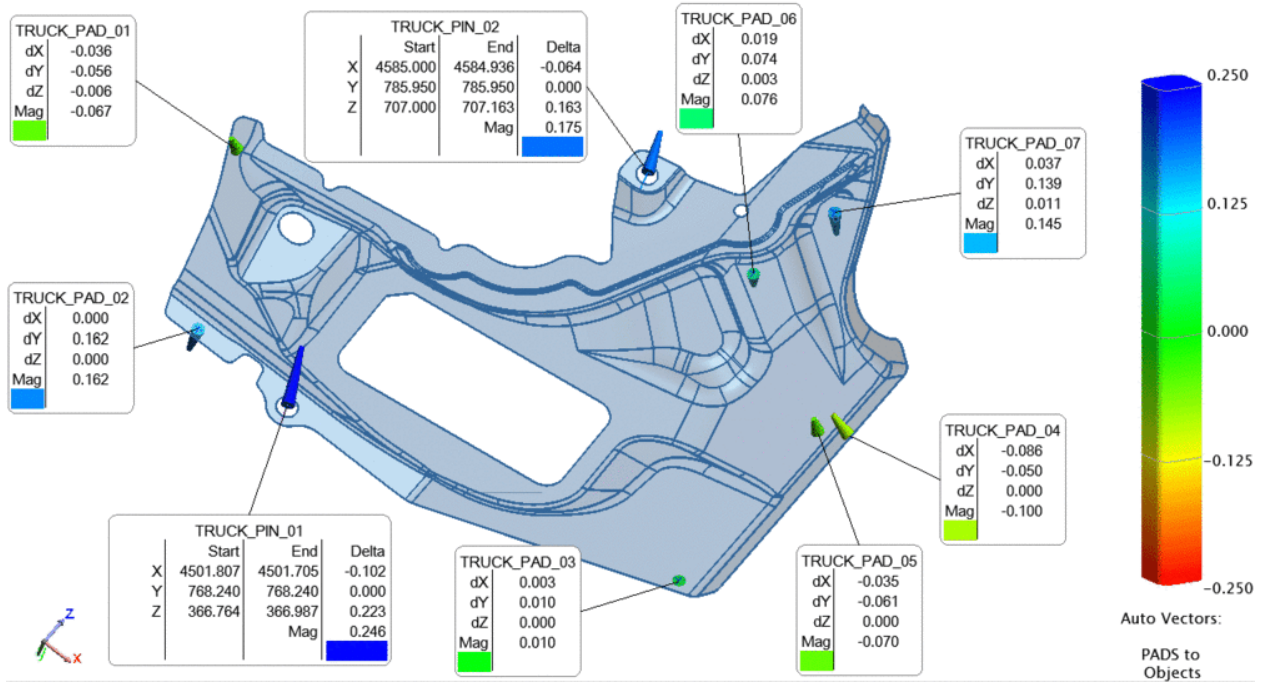
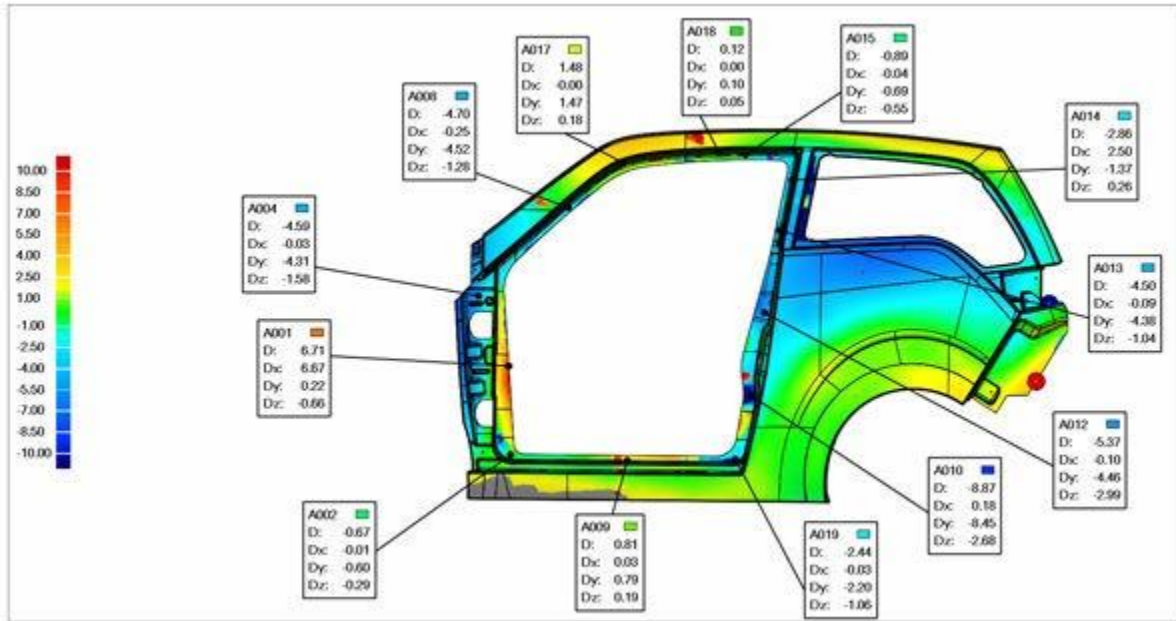
You don't have to guess why a part passed or failed, because every inspection is recorded by Geomagic Verify. Via a detailed history tree, you can see the date of measurement, reason for pass/fail, conditions of measurement and more.

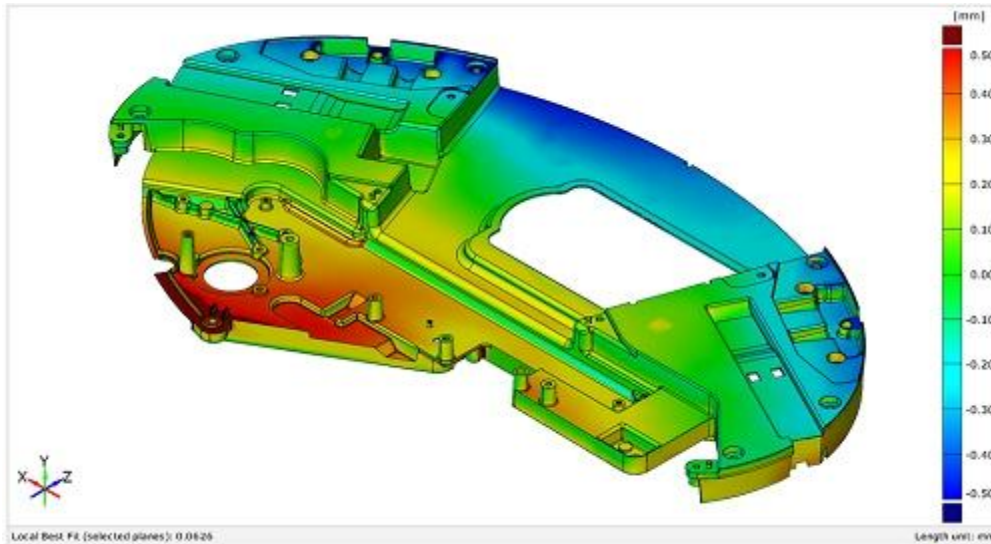
2D inspection with all GD&T Parameters





3D INSPECTION

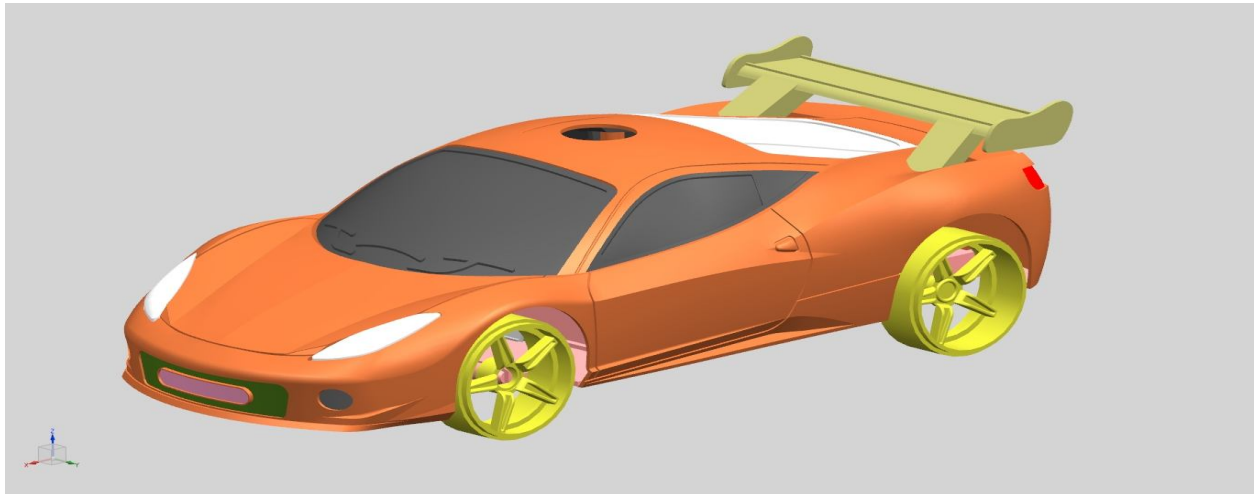




A completely new way of thinking is needed for the Inspection and functional analysis of small injection-Molded components and assemblies. Today, non-Conventional hardware and software tools are used in a unique combination, yielding better and easier to understand results when dimensional inspection is done on small and complex geometric forms. **3D** inspection with all **GD&T** Parameters and full Six degree of freedom locks alignment as per customer requirement



CONCEPT DESIGNING

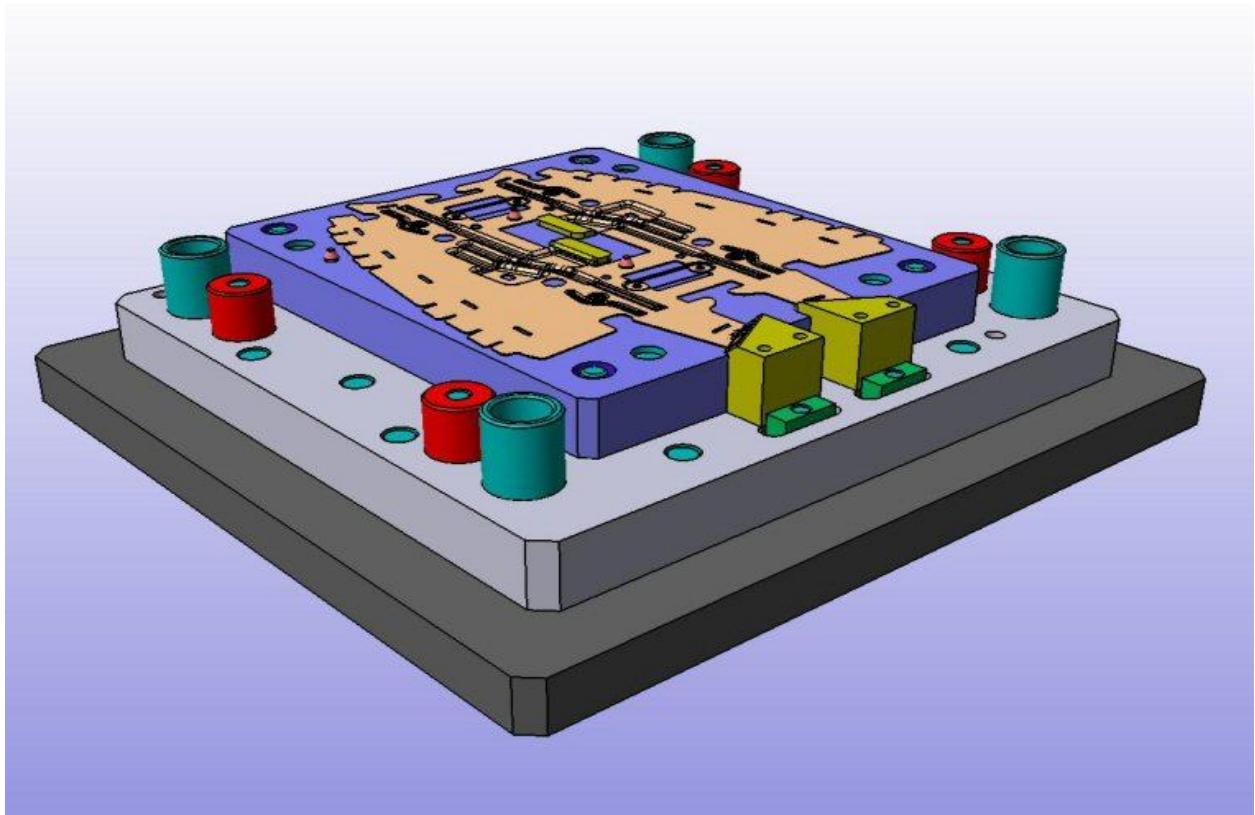


Scope in the Industry:

NX.7.5 is widely used in engineering design industries. Scope of the project is to get the practical knowledge of how to design industrial part in NX.7.5



TOOL DESIGNING



Generally, injection molds are used for processing

- Thermoplastics
- Thermosets
- Elastomers

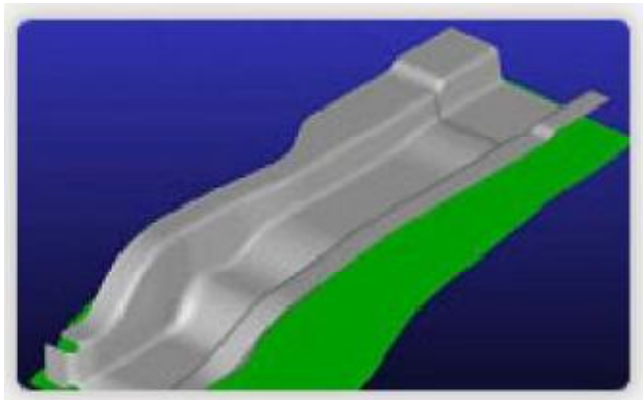


Sheet Metal Progressive Tool Design, Draw & Forming Analysis

FTI is the world's leading developer of computer aided engineering software for design and simulation of sheet metal forming. FTI has developed a suite of products to analyze product formability, die design, and process feasibility. These solutions have resulted in millions of dollars of savings for our customers. The speed and ease-of-use of the software provides an excellent method of identifying potential engineering changes and cost improvements before completing the part or tooling design.

FASTBLANK

Fast and accurate blank development from 3D geometry
Identify material thinning and gathering condition
Reduce material cost and trials in prove out stage
Solve parts with undercuts / negative drafts

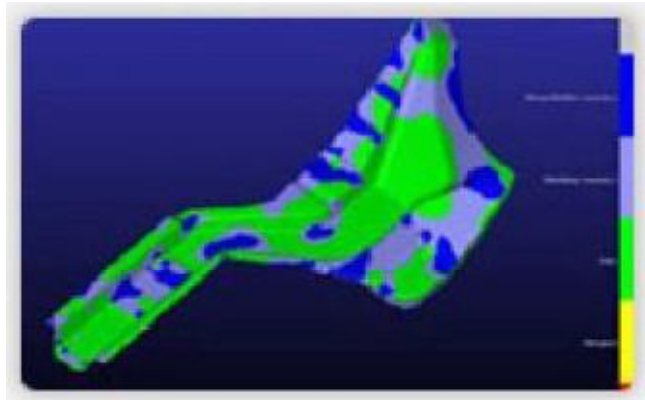


BLANKNEST

Automatically nest for best material utilization layouts.
Quickly and accurately estimate material req. and cost



Evaluate multiple nesting scenarios.
Determine total cost per blank like cost, material etc.
Nest two different parts together



FASTFORM

Forming analysis
Identify splitting, wrinkling, thinning with part / dieface
Apply manufacturing process conditions
Fast, easy to use
Automatic meshing
Automatic and manual tipping
Predict springback with or without trimming
Solve tailor welded parts

COSTOPTIMIZER

Identify product design changes that can save 10 to 15% in material cost
Evaluate and compare multiple costing scenarios

FASTINCREMENTAL

Simulate the forming process
No need for FEM skills
Automated tool extraction from form geometry



THANK YOU

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THANK YOU FOR YOUR BUSINESS