

in association with



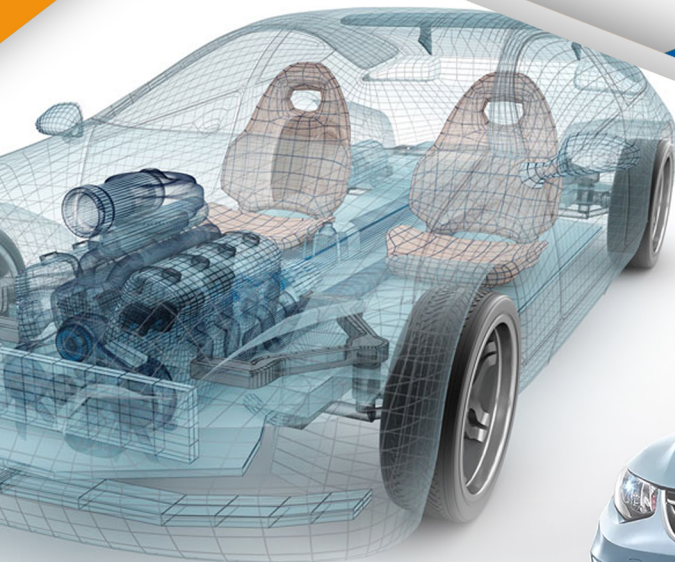
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SONASTAR 3D X

Concept to Digital Manufacturing

Manufacturing Engineering Services catering to sector specific industries namely
Aerospace, Defence, Automotive & EV



Your product needs to stand out if you want to surpass competition.

Get the right tools and solutions from Sona STAR - TANCAM Manufacturing Engineering Services.

MANUFACTURING ENGINEERING

Sona Star Innovation Pvt Ltd in association with Tamil Nadu Centre of Excellence for Advanced Manufacturing (TANCAM), provides manufacturing engineering services that align with industry needs and trends.

Our solutions and services for plant engineering, product development, sustenance processes, asset management, and product enhancement help clients successfully tackle current industry challenges such as reducing workspace logistics, improve operator safety, and optimize throughput. These put companies on a concrete footing to overcome disruptive Original Equipment Manufacturers (OEMs), margin pressures, and volatile markets.

Our Strength

- Quickly mobilize the resources you require to begin working on your assembly or production line.
- Avail project management support or technical assistance.
- Effective guidance and solutions for streamlining assembly process plans and fixing assembly issues.
- We help manufacturers complete their projects on time and within budget.
- We provide comprehensive assistance with sourcing, major system integrations processes and vendor management, we help our clients to develop products efficiently and on time.

Who will benefit?

- Manufacturers across all the product lifecycle phases (Production, industrialization of different parts & equipment)
- Any manufacturing facility requiring support for designing and manufacturing of jigs for components that enhance operational efficiency.

With rise in demand for increased efficiency and performance has led to the need for improved or revamped machinery. At SonaStar 3Dx COE, we support our clients as a strategic partner and a strong associate, with our reliable jigs and fixture design services.

JIGS & FIXTURE DESIGN

How we can help?

- We assist with simple and complex jigs and fixture designs that assure quality, attention to detail, enhanced production speed, machine error eradication and cost savings.
- 2D/3D visualization of mechanical parts
- Welding and machining fixtures
- Billing of materials and estimating costs

Assembly Fixtures

- Boring Jig, Drilling Jig
- Verification of data sheet specifications
- Compliance with industry/company specific standards
- Checking fixtures and check gauges
- Creation of 2D drawings
- Woodworking jigs and framing jigs
- Process sheet preparation
- Hydraulic and pneumatic fixtures
- Open or closed jig
- Testing fixtures
- Quality check

Our Strength

- Expertise to provide support from conceptualization to design.
- Experts to systematize and validate your tool and fixture designs, then quickly authenticate the designs.
- Simulated prototyping to ensure a superior design process.



TOOL & DIE DESIGN

Sona Star & Tamil Nadu Centre of Excellence for Advanced Manufacturing (TANCAM) is a specialist in tool design, offering error-free tool drafting services. We have successful track record serving businesses across various industry sectors including automotive, defence, commercial and aerospace. We specialise in large assembly fixtures and small intricate tools.

Our Services

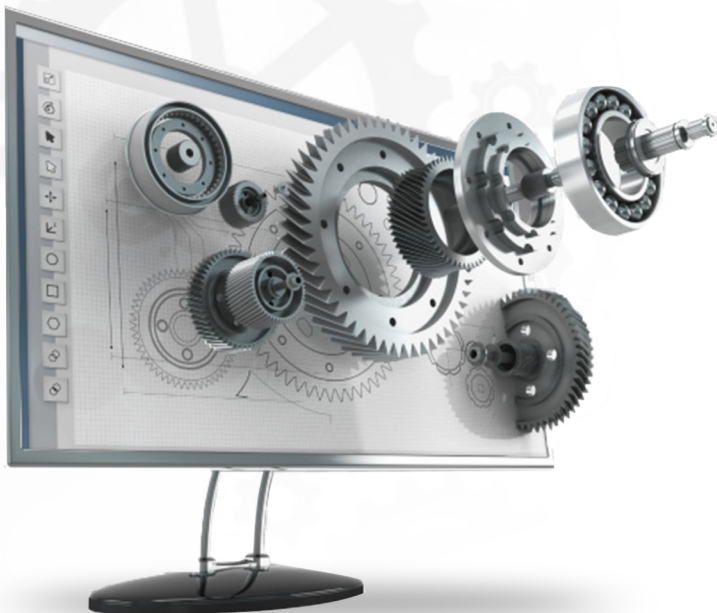
- We provide comprehensive tool design services that include cutting tools, lifting aids, gauges, transportation aids, test equipment and moulds.
- Consultation and selection of the best tools suitable to meet specific operations.

Our Strength

- Backed by our own technical research institutions,
- Expertise in leveraging cutting-edge trends and technologies that aid in tool design. Guided by highly experienced and adept design engineers.
- Solutions tailored to your specific tool design requirements.
- Operating in a culture of cooperation and clear communication. Project on time and within budgeted costs.

We provide tool design services for:

- Inspection gauges
- Testing fixtures
- Specialty machines
- Check fixtures
- Welders
- Jigs and fixtures
- Mould press simulation
- Designing sheet metal forming products
- Designing of die casting products



PLANT LAYOUT / AS-BUILT DRAWINGS

Sona Star & Tamil Nadu Centre of Excellence for Advanced Manufacturing (TANCAM) provides discipline-specific plant layout and as-built drawings by accurately plotting all the locations and dimensions. Our drawing and documentation markups updated 3D models, as well as drawings and documentations present industries with engineering drawings and drafts that are completely in sync with the actual structures and assembly.

Businesses that use finished products can build a legacy of what was built from our range of services. Backed by extensive industry experience, we have catered to businesses across numerous sectors including mechanical, electrical, fire and security, hydraulic, civil, architectural, mining and machinery.

Types of plant design and as-built drawings we offer include:

- Plan drawings
- Section drawings
- Exterior drawings
- Fully surfaced CAD models
- Line schematics
- Block plans
- Penetration layouts, Security layouts
- Shop drawings
- Power and lighting layouts
- Electrical schematics, Zoning layouts
- Schematic drawings
- Line markups



Why Sona Star?

- Team of highly experienced engineers with blended skill sets of traditional techniques and adept knowledge in the latest technology.
- A leading plant design and as-built drawings provider
- We help plant owners, equipment suppliers, consulting firms, as well as Engineering, Procurement, and Construction (EPC) contractors to minimize design risks, improve collaboration, and accelerate project delivery.



3-D PRINTING AND RAPID PROTOTYPING

3D printing is an essential tool for accelerating the prototyping process. However, its applications stretch well beyond prototyping to other facets of the product lifecycle.

Manufacturing — Design freedom and economically viable low-to-mid-volume production enable new possibilities for product design and operational improvement. Applied in combination, these two capabilities have the potential to transform decades old supply chains and business models.

Tooling — 3D printed tooling advantages include on-demand production, customization, digitization of designs and unrestrained design flexibility. This cuts out costly suppliers, compresses lead times, enables digital warehousing, and accelerates manufacturing floor productivity.

Sales and Retail — 3D printing gives retailers the ability to innovate, delivering highly customized, on-demand products and new experiences such as "co-designed" items developed in conjunction with the customers.

Aftermarket Supply — Businesses that embrace 3D printing for spare and replacement parts can replace warehouses of spare parts with 3D printers or a contract 3D printing service bureau to produce parts on a just-in-time basis.

PRODUCT DEVELOPMENT SUPPORT SERVICES:

- Drawing & Legacy Data Conversion
- 2D drafting of Mechanical parts / assemblies
- DFMA
- 3D Modelling & 3D Mechanical Drafting
- Reverse Engineering
- Manufacturing Support & Process Planning
- Finite Elements Analysis (FEA)
- Computational fluid dynamics (CFD)
- Mould Flow Analysis
- Metal casting simulations
- Static Analysis
- Modal Analysis
- Harmonic Analysis
- Random Vibrational
- Seismic Analysis
- Thermal Analysis
- Nonlinear Analysis



3DEXPERIENCE®

INTERIOR & EXTERIOR TRIM

We can produce plastic parts of many types including painting, chroming, IMD, High Gloss etc. as to be able to cover most of our customer needs.

- | | |
|-----------------------|------------------------|
| • Arm Rest | • Trim Parts, Emblems |
| • Storage Compartment | • Rear-view Mirrors |
| • Central Console | • Crossbeams |
| • Ashtray | • Front covers |
| • Glove Compartment | • Front & Rear Bumper |
| • In Mould Decoration | • Automobile Dashboard |

Address for Communication

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