

### MANUFACTURING PROJECT LIST

1. Manufacturing of disc brake plate by using metal matrix composites.
2. Modeling and manufacturing of connecting rod die with EN 31 tool steel
3. Silicon carbide, graphite and aluminum metal matrix composites for automobile applications.
4. Mechanical characterization of aluminum – boron carbide composites.
5. Modeling and fabrication of harvesting robot.
6. Fabrication of friction less electromagnetic braking system.
7. Fabrication of sensor based fire fighting robot.
8. Fabrication of pedal operated water purifier.
9. Fabrication mini belt grinding system.
10. Design and development of wind operated water pump.
11. Fabrication of box transport conveyor system for automobile industries.
12. Modeling and manufacturing of asymmetric spur gears.
13. Fabrication of mini scissor lift.
14. Design and Fabrication of Catalytic Converter for Emission Reduction.
15. Fabrication of Automatic Pneumatic Paper Cutting Machine.
16. Fabrication of Automated Portable Hammering Machine.
17. Evaluation of mechanical properties of natural fiber composites.
18. Fabrication of Pick and Place Mechanism.
19. Experimental investigation to determine influence of process parameters on surface quality and MRR in Wire Cut EDM.
20. Experimental investigation to optimize process parameters in drilling operation for composite materials.
21. Optimization of process parameters to minimize surface roughness in turned parts by experimentation and analytical.
22. Optimization of MIG welding parameters for improving strength of welded joints.
23. Effect of welding speed and groove angle on strength of butt weld joint using TIG welding.



24. Optimization of machining parameters for face milling operation in a vertical CNC milling machine using genetic algorithm.
25. Effect of Varying Surface Grinding Parameters on the Surface Roughness of mild Steel.
26. Review of Analysis & Optimization of Cylindrical Grinding Process Parameters on Material Removal Rate of EN21AMSteel.
27. Experimental investigation on different materials with CNC machining process by using TAGUCHI method.



## DESIGN AND VALIDATION PROJECT LIST

1. Design and analysis of spindle in milling machine.
2. Design and analysis of radial arm used in drilling machine.
3. Design and analysis of multilayered pressure vessel.
4. Design and evaluation of a camshaft used in multi cylinder engine.
5. A Numerical and analytical investigations of Cylindrical Panels Subjected to different Loads.
6. Optimization of MIG welding parameters for improving strength of welded joints.
7. Experimental investigations and finite element analysis of Friction Stir Welding of various Aluminium Alloys.
8. Riveting Process Modeling and Simulating for Deformation Analysis of Aircraft's Thin-walled Sheet-metal Parts.
9. Numerical and fluid solid interaction (FSI) analysis of fluid film journal bearing at different eccentricity ratios.
10. Fracture, fatigue growth rate and vibration Analysis of Camshaft in railways.
11. Design of an Aircraft Wing Structure for Static Analysis and Fatigue Life Prediction.
12. Studying the Effect of Cooling Rate on the Linear & Non Linear Deflection and Elastic Properties of Stainless Steel (grade 410) Beams.
13. Crash Analysis Of Bumper Assembly With Solver To Improve The Design For Impact Tests.
14. Deflection and Stress Analysis of a Cantilever and its Validation Using ANSYS
15. Cantilever beams on vibration.
16. Design and analysis of cantilever beam at uniform disturbance load conditions.
17. FE Analysis of knuckle joint pin used in tractor trailer.
18. Simulation of a parallel mechanical elbow with 3 DOF
19. Strain Investigation of Bolt Torque Effect in Mechanically Fastened Joints
20. Computation Method in Failure Analysis of Mechanically Fastened Joints at Layered Composites.
21. Design and analysis of orifice plate at different velocity ratios.
22. Design and analysis functionally graded disc under mechanical loads.



23. Design and Finite Element Analysis of Aircraft Wing Using Ribs and Spars.
24. Design, Load Analysis and Optimization of Compound Epicyclic Gear Trains.
25. Analysis of Composite Journal Bearing.
26. Modeling and Analysis of an Automotive Bumper Used for a Low Passenger Vehicle.
27. Performance Analysis of Winglets Using CFD Simulation.
28. Modeling and CFD analysis of an RC aircraft wing.
29. Design and Analysis on Scramjet Engine Inlet.
30. CFD Analysis of a Rocket Nozzle with Four Inlets at Mach numbers.
31. Comparative study of monocoque and semi-monocoque flight vehicle structures under structural and thermo-structural loads.
32. Analysis of Stiffeners in a Semi Monocoque System of an Air Craft.
33. Design and analysis of composite propeller blade for Aircraft.
34. Design and analysis of fin blades of cargo aero plane.
35. CFD Analysis of Aerodynamic Drag Reduction.
36. Design and analysis of a typical wing rib for passenger aircraft.
37. FE Analysis of Dynamic Response of Aircraft Windshield against Bird Impact.
38. Design and Analysis of Gas Turbine Combustion Chamber.
39. Design and Optimization of Aerodynamics Nozzle for maximum thrust using Multidisciplinary Design Optimization (MDO).
40. Modeling and Analysis of a Rocket Based Combined Cycle Rocket Nozzle.
41. Design and Analysis of Stator, Rotor and Blades of the Axial flow Compressor .
42. Design and Analysis of Air craft Engine Cooling Fan.
43. Design, development, simulation and realization of expansion joints in ecs engine bleed system for a typical light transport aircraft.
44. Design and Analysis on Scramjet Engine Inlet.





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## FABRICATION PROJECT LIST

1. Fabrication of multipurpose operation hacksaw cutting, drilling and grinding machining.
2. Fabrication of sand filter machine.
3. Fabrication of solar grass cutter.
4. Fabrication of rocker bogie suspension system.
5. Fabrication of hacksaw cutting machine using peddles principle.
6. Power generation by using railway track.
7. Fabrication of multipurpose agriculture equipment.
8. Fabrication of bicycle operated pump.
9. Fabrication of automatic rain operated wiper.
10. Fabrication of ELBOW power transmission.
11. Power generation for mobile charging by using flywheel.
12. Manufacturing process of spur gear.
13. Fabrication of mini vacuum cleaner.
14. Manufacturing of disc brake.
15. Power generation by using salt water.
16. Fabrication of Drill jig.
17. Fabrication of mini scissor lift.
18. Hydraulic power generation.
19. Automatic retrieve side stands system.
20. Power generation for mobile charging by using bleaching powder.
21. Fabrication of hydraulic arm.
22. Manufacturing of pet bottle die.
23. Manufacturing of two wheeler connecting rod die.
24. Natural Convective Heat Transfer from Interrupted Rectangular Fins.
25. Fabrication of mini air conditioning system.
26. Fabrication of shaft driven cycle.
27. Fabrication of automatic cutting and feed mechanism.
28. Design and Fabrication of pedal operated pump.





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29. Fabrication of electricity generating foot path.

30. Fabrication of box transport conveyor system.



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