COMPUTATIONAL FLUID DYNAMICS

1.) Flow analysis over Onera M6 Wing.

2.) Computational study on supercritical aerofoil.

3.) Method development for investigation of real effects on flow around vanes.

4.) A CFD Investigation into the flow distribution of a car passing by a truck.

5.) Simulation of missile aerodynamics at high angle of attack.

6.) Analysis of liquid hydrogen turbine inlet manifold.

7.) CFD in Launch Vehicle Propulsion system design.

8.) Air and Fuel flow interaction in combustion chamber for various injector locations.

9.) Nozzle design optimization to reduce noise for turbo jet engine.

10.) Advanced Fin Design for High Speed engines

DESIGNING AND OPTIMIZATION

1. Simulation and modelling of abrasive jet machining. 2. Parameterized active bearing modelling.

3. Optimization mechanism link of single arm robot.

4. Design evaluation and optimization of a nozzle used in diesel engine.

5. Modelling of CAT 40 Tool Holder body.

6. Design and analysis of impeller of a centrifugal pump.

7. Design and analysis of check valve pump.

8. Design and analysis of engine blower.

9. Design and analysis of composite propeller shaft.

10. Study of sheet metal design and manufacturing process.

11. Turbocharger design and analysis.

STRUCTURES

1.) Spur gear tooth stress analysis and stress reduction and limit load application.

2.) Modelling and finite element analysis of heavy vehicle ladder chassis.

3.) Fabrication and buckling, torsional analysis of aircraft rib.

4.) Finite element analysis and design of an air to air missile

5.) Epi-cyclic gear transmission system and limit load analysis.

6.) Finite element analysis of Turbine blade.

7.) Parameterized automated generic model for aircraft wing structural design and mesh generation for finite element analysis.

8.) Dynamic and static analysis of swept back wing of NACA 2412 series

9.) Structural Analysis and design analysis of a missile container.

10.) Buckling analysis of Diesel engine connecting rod for different load conditions.

11.) Design and analysis of bevel gear used in limited slip differential gear box system

12.) Design of torpedo missile propeller blade and structural analysis.

13.) Design and structural analysis of heavy vehicle leaf spring.

THERMAL ANALYSIS

1.) Designing of piston and analysis with different materials subjected to thermal analysis

2.) Thermal analysis of missile nose cone.

3.) Design of a large transportable vacuum insulated cryogenic vessel along with thermal insulation.

4.) Couple structural and thermal analysis of steel link.

5.) Thermal design of memory box in cockpit voice recorder.

6.) Alternate cooling and mounting concepts for transition duct in industrial gas turbines.

7.) Performance of an iced aircraft wing.

8.) Feasibility study of heat driven cooling based thermal energy storage.

1. Design optimization of combustion chamber for turbo engine by using fea

2. Static & modal analysis of composite bracket assembly

3. Design optimization of connecting rod for static loading conditions

4. Fatigue analysis and design optimization of a digger arm

5. Design optimization of disk brake by using finite element analysis

6. Design optimization of hypoid gear by using structural analysis

7. Design and buckling strength evaluation of a lifting beam for 350 tonnes through fea

8. Modeling and analysis of a master cylinder

9. Modeling and analysis of ic engine piston with composite material

10. Design and analysis of a rail wheel assembly of rail mounted storage cum resting fixture 60t capacity

Project Code	Title
EGT-M-001	Automatic Seeding Machine robot
EGT-M-002	Agricultural pesticide spraying robot
EGT-M-003	Dual axis Solar tracking
EGT-M-004	Air leak detector
EGT-M-005	Twin Spindle Drill Holder
EGT-M-006	Auto breaking system for four wheeler
EGT-M-007	Anti dazzling headlight for two wheeler
EGT-M-008	Automatic Break Failure indicator Engine Over Heating Alarm
EGT-M-009	Solar panel cleaning Robot
EGT-M-010	Floor Cleaning Machine
EGT-M-011	Fertilizer Sprayer Machine
EGT-M-012	Design & Fabrication on Mini Lathe Machine
EGT-M-013	Advanced Footstep Power Generation System
EGT-M-014	Long Range Spy Robot With Night Vision
EGT-M-015	Agricultural seeding Robot
EGT-M-016	Fire Extinguisher Robot
EGT-M-017	Alcohol Detection with Ignition Locking Project
EGT-M-018	Pick and Place Arm Gripper
EGT-M-019	Design & Fabrication of Automated Punching Machine
EGT-M-020	Plant Irrigation Water Sprinkler Agriculture Robot
EGT-M-021	Smart Solar Grass Cutter With Lawn Coverage
EGT-M-022	Waste Food Shredder Compost Maker Machine
EGT-M-023	Thermal Vision RC Robotic Tank With Motion Detection
EGT-M-024	Floating Sun Tracker Solar Panel
EGT-M-025	Motorized Vegetable Slicing Machine
EGT-M-026	Mini Bench Saw Machine Project
EGT-M-027	Zero Friction Electromagnetic Braking System Project
EGT-M-028	Design and Fabrication of Multipurpose Agricultural Machine
EGT-M-029	Drill Press
EGT-M-030	Robotic ARM
EGT-M-031	Electricity Generator Tiles Project
EGT-M-032	Vertical Windmill System
EGT-M-033	Rotating Solar Panel Using Arduino
EGT-M-034	Unwanted gas leakage monitoring System
EGT-M-035	Thermo Electric Cooler
EGT-M-036	Automatic Agricultural weeder
EGT-M-037	Vehicle theft locking system