



**Shri Ambabai Talim Santha's
SANJAY BHOKARE GROUP OF INSTITUTES,**
Faculty of Engineering, Miraj.
Department Of Mechanical Engineering.
ACADEMIC YEAR - 2019-20

GLIMPSE OF PROJECT

TITLE OF PROJECT: Performance improvement of solar PV panel by fins and PCM.

Name of Project Students (with roll numbers):

Birnale Sammed B.	4010
Chavan Akshay D.	4011
Gujar Chintamani M.	4019
Salunkhe Nilesh A.	4047
Patil Abhijit A.	4058

Project Guide: Prof. A. A. Khandagale

Abstract: The performance of solar panels is very dependent on the absorption of solar radiation. Some of the absorbed energy is converted into electricity, while the rest transformed into heat. However, PV-panels may experience intense heat that causes heat radiation in PV-panels increases. This radiation on the PV panel has a negative impact on the output of electrical energy produced and has the potential to reduce the performance of the solar panel. Therefore, it is necessary to design a PV-Panel cooling system to maintain the temperature of the panel so as not to exceed its effective working temperature. The purpose of this study is to maintain the PV- panel temperature so as not to exceed the effective working temperature using Fins and PCM as a cooling medium. The variables used include the temperature distribution of the top of the panel, the middle panel, and the bottom panel. The results showed that the use of Fin and PC. Maintain the temperature of solar panels below 50 °C, relatively better than the PV-panels that use air as a cooler. This work deals with the design, fabrication and experimental investigation of active cooling system for PV cells. To actively cool the PV cells, where the type of heat Exchanger called fins is to be attached at the back of a panel for the air cooling. An experiment is performed with and without active cooling and performance analysis is presented.

Head of Department

Prof. Mrs. S. N. Hublikar

Director

Dr. A.C. Bhagali



Shri Ambabai Talim Santha's
SANJAY BHOKARE GROUP OF INSTITUTES,
Faculty of Engineering, Miraj.
Department Of Mechanical Engineering.
ACADEMIC YEAR - 2019-20

GLIMPSE OF PROJECT

TITLE OF PROJECT: Key operated automatic hydraulic car parking brake system.

Name of Project Students (with roll numbers):

Gupta Divyanshu R.	4021
Patil Rohit L.	4041
Mulla Saqlain I.	4034
Nivargi Vithhal N. .	4038
Patil Sourabh D.	4057

Project Guide: Prof. S. M. Patil

Abstract: This system is designed to automatically operate the brakes when the ignition system key is made off.

The existing brake systems of the car is the main systems used here, with some additional hydraulic and electrical components, working on DC battery of car .

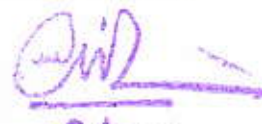
However, the car ignition is made 'off'

The brakes operate there by halting the car at particular positing automatically.

In ordinary HAND OPERATING PARKING BRAKE SYSTEM the driver may sometimes forget the operation of applying brake-up manually their by having mobility of the vehicle when parked on roader having slope which is not desirable.


Head of Department

Prof. Mrs. S. N. Hublikar


Director

Dr. A.C. Bhagali



**Shri Ambabai Talim Santha's
SANJAY BHOKARE GROUP OF INSTITUTES,
Faculty of Engineering, Miraj.
Department Of Mechanical Engineering.
ACADEMIC YEAR - 2019-20**

GLIMPSE OF PROJECT

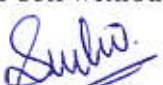
TITLE OF PROJECT: Design and Development of Food Waste Composting Machine.

Name of Project Students (with roll numbers):

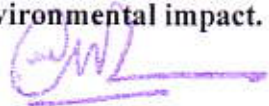
Aravattu Sourabh S.	4006
Awadhut Pratik D.	4007
Dabade Omkar D.	4014
Kasar Kunthinath P	4025
Swami Vishwanath C.	4050

Project Guide: Prof. V. D. Shikalgar

Abstract: Importance Of Industrial Machinery. During the last few decades various automation and rationalization technique has been introduced in the field of manufacturing in order to enhance the quality and living styles. As families and communities search for safe and effective ways to manage kitchen wastes, composting becomes a more attractive management option, this not only restore value to it but also lead to a reduction in the amount of waste that require disposal. Although informal recycling activities of waste materials is wide spread in developing countries, the treatment and use of biodegradable organic fraction, especially for kitchen waste, is still fairly limited. Increasingly, international and municipal authorities now look at new ways to manage their organic solid waste through the introduction of compost plants (in developing countries) which is an excellent way to avoid wasting useful, natural resources and also avoid creating environmental problems. Composting is the biological degradation of organic substrates aerobically or anaerobically under conditions of temperature and moisture suitable for acting micro-organisms to thrive, with a final product stable for storage and application to soil without adverse environment environmental impact.


Head of Department

Prof. Mrs. S. N. Hublikar


Director

Dr. A.C. Bhagali



Shri Ambabai Talim Santha's
SANJAY BHOKARE GROUP OF INSTITUTES,
Faculty of Engineering, Miraj.
Department Of Mechanical Engineering.
ACADEMIC YEAR - 2019-20

GLIMPSE OF PROJECT

TITLE OF PROJECT: Design and Manufacturing of Electrically Operated Waste Collecting Machine From Stagnant Water bodies/ ponds etc.

Name of Project Students (with roll numbers):

Khamkar Milind G.	4026
Munje Rohit R.	4035
Mohite Akshay A.	4059
Ahir Amar G.	4064
Sargar Sandip S.	4066

Project Guide: Prof. A.G.Koparde

Abstract: This project focuses more on "Remote Operated Floating River Cleaning Machine". In India water pollution is increasing day by day so this is becoming serious problem for rivers, ponds etc. This mainly consist of impurities like waste water debris, plastics, garbage on floating water surface. These impurities mainly affect on health of human being and also affect on life of aquatic animals. Normally this project based on renewable energy sources, so there is reduction in use of non-renewable energy sources like oil, petroleum, electricity and all type of mineral sources. So by this non renewable energy sources are saved. So this project helps to reduce the water pollution on floating bodies.

Head of Department

Prof. Mrs. S. N. Hublikar

Director

Dr. A.C. Bhagali



**Shri Ambabai Talim Santha's
SANJAY BHOKARE GROUP OF INSTITUTES,**
Faculty of Engineering, Miraj.
Department Of Mechanical Engineering.
ACADEMIC YEAR - 2019-20

GLIMPSE OF PROJECT

TITLE OF PROJECT: Semi-Automatic Liquid Food Filling Machine

Name of Project Students (with roll numbers):

Ashish Pandurang Korabu	4028
Vishwajeet Sanjay Nikam	4037
Mahavir Sidhu Vante	4052
Dattatraya Sopan Zambre.	4054
Rahul Ramesh Zambre	4055

Project Guide: Prof. V. R. Wale

Abstract: Rapid development of modern mechanization and automation of packaging technology with each passing day, the quantitative packaging of various items should be accurate and this has a direct impact on the survival and economic benefits. Most manufacturers have adopted a highly automated production line. Low Cost Automation (popularly known as LCA), is the introduction of simple pneumatic, hydraulic, mechanical and electrical devices into the existing production machinery, with a view to improving their productivity. This would also enable the operation of this equipment by even semi-skilled and unskilled labor, with a little training. This will involve the use of standardized parts and devices to mechanize or automate machines, processes and systems. Industry automation becomes the global trend in manufacturing, packaging process is one of the most uses in industry; more and more companies are switching to automation.

Head of Department

Prof. Mrs. S. N. Hublikar

Director

Dr. A.C. Bhagali



**Shri Ambabai Talim Santha's
SANJAY BHOKARE GROUP OF INSTITUTES,**
Faculty of Engineering, Miraj.
Department Of Mechanical Engineering.
ACADEMIC YEAR - 2019-20

GLIMPSE OF PROJECT

TITLE OF PROJECT: Design and development of set up for heat treatment arrangement for industrial small components.

Name of Project Students (with roll numbers):

Bhilwade Amar A.	4008
Durgawale Akshay B.	4018
Kumbhar Mayuresh S.	4030
Magdum Sujit A.	4032
Patil Shubham S.	4044

Project Guide: Prof. Mrs. S. N. Hublikar

Abstract: Although there are a number of innovative ways to paint small parts, the options widely used today for high volume, mass finishing with paint and coatings are limited due to practicality and cost considerations. Each of these methods is sound, but none completely addresses all the needs of thin coating small parts in bulk production. As the geometrical shape of the part becomes more complicated, the challenge to control powder coating thickness, especially in corners and crevices, increases tremendously. Recessed and inside corners called Faraday's (Faraday Cage Effect) still present problems with powder coating coverage.

Head of Department
Prof. Mrs. S. N. Hublikar

Director
Dr. A.C. Bhagali



**Shri Ambabai Talim Santha's
SANJAY BHOKARE GROUP OF INSTITUTES,**
Faculty of Engineering, Miraj.
Department Of Mechanical Engineering.
ACADEMIC YEAR - 2019-20

GLIMPSE OF PROJECT

TITLE OF PROJECT: Pneumatic Air Brake Testing Machine

Name of Project Students (with roll numbers):

Rushikesh Laxman Gurav	4022
Kaushik Deepak Pachore	4039
Krishna Appaso Pawar	4046
Prathamesh Kiran Sutar	4049
Suraj Sanjeev Jadhav	4067

Project Guide: Prof. V. R. Wale

Abstract: In this project, we are trying to avoid break failure in vehicles, due to break failures lots of accidents takes place. Around 5% accidents takes place due to break failures. Hence we are designing the testing of Pneumatic Air Brake System. We are working under the project of —Pneumatic Air Brake Testing Machine in which we are testing all the components of brake system of heavy vehicles.

Head of Department
Prof. Mrs. S. N. Hublikar

Director
Dr. A.C. Bhagali



**Shri Ambabai Talim Santha's
SANJAY BHOKARE GROUP OF INSTITUTES,**
Faculty of Engineering, Miraj.
Department Of Mechanical Engineering.
ACADEMIC YEAR - 2019-20

GLIMPSE OF PROJECT

TITLE OF PROJECT-Design and Manufacturing Of Electric Cloth Drying Machine.

Name of Project Students (with roll numbers):

Damale Dhairyashil R.	4015
Kulkarni Gaurav M.	4029
Patil Vaibhav D.	4045
Bhoi Aniket A.	4009
Vhanmane Vijay M.	4053

Project Guide: Prof. V. D. Shikalgar

Abstract: The final configuration has been demonstrated to achieve the significant energy savings and fabric care along with significant reductions in total dry cycle times. This dramatic improvement in performance is achieved, by maximizing the output capacity, the blower was able to deliver 30-50% energy savings and dramatically lower cloth temperatures in total dry times for varying types of clothing loads that were similar or faster times than the market-best standard electric dryers.

The cloth dryer found to be:

- Simple in design and easy to fabricate.
- Easy to handle the equipment.
- Economical.
- No need of skilled labour.
- Equipment is portable.

Head of Department
Prof. Mrs. S. N. Hublikar

Director
Dr. A.C. Bhagali



**Shri Ambabai Talim Santha's
SANJAY BHOKARE GROUP OF INSTITUTES,**
Faculty of Engineering, Miraj.
Department Of Mechanical Engineering.
ACADEMIC YEAR - 2019-20

GLIMPSE OF PROJECT

TITLE OF PROJECT: "Design And Fabrication Of Constant Load Applying Machine For Analyzing Mechanical Behaviour Of Metal"

Name of Project Students (with roll numbers):

Sudhir Annaso Roje.	4143
Shreyas Rajendra Patil.	4133
Vaibhav V Chavan	4171
Ajaykumar Kalgonda Patil	4128
Vinay Rajendra Chougule	4110

Project Guide: Mr.A.G.Koparde

Abstract:

The objective of the project is to determine the threshold stress level of stress corrosion cracking (SCC) in AA7075-T651 aluminium design and fabrication of constant load applying machine. The test was carried out using a circumferential notch specimen in a horizontal-type constant load SCC setup in a 3.5 wt.% NaCl solution. The time to failure by SCC was determined at various loading conditions. The threshold stress of AA7075-T651 alloy was found to be 242 MPa in a 3.5 wt.% NaCl solution. The various regions of the fractured surface specimen such as machined notch, SCC region and final overload fracture area were examined using microscopic analysis in order to identify the SCC mechanism.

Head of Department

Prof. Mrs. S. N. Hublikar

Director

Dr. A.C. Bhagali



**Shri Ambabai Talim Santha's
SANJAY BHOKARE GROUP OF INSTITUTES,**
Faculty of Engineering, Miraj.
Department Of Mechanical Engineering.
ACADEMIC YEAR - 2019-20

GLIMPSE OF PROJECT

TITLE OF PROJECT: Experimental Analysis of Trapezoidal Corrugated Web Beam for Its Strength

Name of Project Students (with roll numbers):

Vinayak Satishrao Dubal	4114
Rushikesh Rajendra Patil	4132
Shriraj Shrivardhan Patil	4134
Viraj Vilas Patil	4140
Harshal Suresh Vasagade	4151

Project Guide: Prof. U.C. Rajmane

Abstract: The project deals with experimentation and analysis of trapezoidal corrugated web beam and I-section beam so number of papers are available which describes the limitations of using I section beams, benefits of built up section, accordion effect, various shapes that can be used as web, design consideration in trapezoidal corrugated web and also effect of corrugation angle into strength of beam.

Head of Department
Prof. Mrs. S. N. Hublikar

Director
Dr. A.C. Bhagali



**Shri Ambabai Talim Santha's
SANJAY BHOKARE GROUP OF INSTITUTES,**
Faculty of Engineering, Miraj.
Department Of Mechanical Engineering.
ACADEMIC YEAR - 2019-20

GLIMPSE OF PROJECT

TITLE OF PROJECT: Agricultural Multipurpose Thresher

Name of Project Students (with roll numbers):

Aswale Pranav N	4159
Dongare Ajinkya S	4160
Kumbhar Rohit R	4162
Kolap Chetan R	4163

Project Guide: Prof. A. A. Khandagle

Abstract: Importance of Industrial Machinery. In this modern world, machines play a crucial role in different industries and they have replaced the need for labor work. With the tremendous development in technology dependence on manual work is decreased significantly. Some of the leading manufacturers of material handling equipment, industrial machinery from India are recognized for their high quality products. In today's industrial world man's innovative ideas has taken him towards all directions concerning about the production and safety in industrial establishments. Some instruments are of sheer excellence where as others are the result of long research and persistent work, but it is not the amount of time and money spend in the invention of device or the sophistication of it operation is important, but its convenience, utility and operational efficiency that are important in considering the device.

Head of Department
Prof. Mrs. S. N. Hublikar

Director
Dr. A.C. Bhagali



**Shri Ambabai Talim Santha's
SANJAY BHOKARE GROUP OF INSTITUTES,**
Faculty of Engineering, Miraj.
Department Of Mechanical Engineering.
ACADEMIC YEAR - 2019-20

GLIMPSE OF PROJECT

TITLE OF PROJECT: Design and Fabrication Of Pipe Inspection Robot

Name of Project Students (with roll numbers):

Jangam Sudhir Dilip	4115
Patil Keshav Dattatray	4129
Patil Suraj Rajgonda	4136
Patil Vijay Parshuram	4139
Patil Vrushabh Sanjay	4141

Project Guide: Prof. S. M. Patil

Abstract: A pipe inspection robot is device that is inserted into pipes to check for obstruction or damage. These robots are traditionally manufactured offshore, are extremely expensive, and are often not adequately supported in the event or malfunction. This had resulted in associated environmental services limited. Recently many plants' pipes and drains became old and many robots to inspect these pipes were developed in the past. Wired robots were put to practical use, but they had a heavy power supply and a signal wire. Therefore, new inspection robots using wireless signals communication system are considered useful for long complex pipes and long distance pipes including straight, vertical and bend line. But sending wireless signals isn't practical because the properties of the signals wave are affected by the shape and material of the pipes. For these reasons, we measured the properties of wireless signal with steel pipes and ceramic pipes and we developed a practical wireless signals communication system. In this experiment, we confirmed that, we could drive the robot by wireless signals communication system in the inside test pipe and collect the data.

Head of Department
Prof. Mrs. S. N. Hublikar

Director
Dr. A.C. Bhagali



**Shri Ambabai Talim Santha's
SANJAY BHOKARE GROUP OF INSTITUTES,**

**Faculty of Engineering, Miraj.
Department Of Mechanical Engineering.
ACADEMIC YEAR - 2019-20**

GLIMPSE OF PROJECT

TITLE OF PROJECT: Design And Development Of Casting By using
Simulation Technique For Yield Improvement.

Name of Project Students (with roll numbers):

Bhosale Shubham Sanjay	4063
Dubule Sourabh Dhondiram	4060
Basariwale Aditya Gajanan	4167
Bhosale Avinash Balasaheb	4169
Chavan Suraj Pruthviraj	4108

Project Guide: Mr.A.G.Koparde

Abstract: The main purpose of the casting simulation is to increase the yield and to increase the productivity and also to reduce the shop floor trials. Casting simulations techniques are widely used now a days in foundries and metal casting industries. Casting simulations simulates real casting phenomenon and gives virtual casting process as molten metal flow in mould cavity with respect to time and direction. It shows virtual process like mould filling, solidification and cooling and also predicts the location of internal defects like blow holes, shrinkage porosity etc. Casting simulation is used in the production of reliable, economical and high accuracy cast component. Although casting simulation becomes important tool, simulation cannot correct itself existing casting process or design. So for the application of casting simulation experienced and knowledge person is required. Reliability of casting component can be improved with the help of casting simulation software. In this project, the casting simulation, its importance, types of casting simulation software, application of yield improvement is carried out.

Head of Department
Prof. Mrs. S. N. Hublikar

Director
Dr. A.C. Bhagali



**Shri Ambabai Talim Santha's
SANJAY BHOKARE GROUP OF INSTITUTES,**
Faculty of Engineering, Miraj.
Department Of Mechanical Engineering.
ACADEMIC YEAR - 2019-20

GLIMPSE OF PROJECT

TITLE OF PROJECT: Analysis And Fabrication Of Go-Kart With Economical, Light Weight Design.

Name of Project Students (with roll numbers):

Alase Vrushabh Vijay	4103
Danole Ashish Sanjay	4111
Dasalkar Pranav Sunil	4112
Patil Shubham Jangonda	4135
Patil Sudarshan Bhausahab	4161

Project Guide: Prof. C. M. Kothale.

Abstract: This report contains all information about designing and manufacturing of go-kart by students from Sanjay Bhokare Group of Institutes (SBGI), miraj, Dist. Sangli, Maharashtra.

This report concentrates on explaining the design and engineering aspects of making a go kart. This report explains objectives, assumptions and calculations made in designing a go kart, FEA analysis of go kart, considerations while designing of kart, comparison of actual parameters with calculated parameters after manufacturing and so on. The team's primary objective is to design a safe and functional vehicle based on rigid and torsion free frame. The design is chosen such that the kart is easy to fabricate in every possible aspect. This report documents the process and methodology to produce a low cost go-kart which is comfortable, vulnerable, durable and complete in all aspects by modelling it with cad software the feasibility of the go-kart design was examined through FMEA, cost report. The team focuses on a technically sound vehicle which is backed by a profound design and good manufacturing practices.


Head of Department

Prof. Mrs. S. N. Hublikar


Director

Dr. A.C. Bhagali



**Shri Ambabai Talim Santha's
SANJAY BHOKARE GROUP OF INSTITUTES,**
Faculty of Engineering, Miraj.
Department Of Mechanical Engineering.
ACADEMIC YEAR - 2019-20

GLIMPSE OF PROJECT

TITLE OF PROJECT: Automatic Hammering Machine.

Name of Project Students (with roll numbers):

Vitekat Mahesh Mallesh	4152
Pawar Anil Kundlik	4142
Kamble Rohan Ramesh	4156
Shikalgar Irfan Aslam	4168
Joshi Prathamesh Mahesh	4116

Project Guide: Prof. Y. B. Shirset

Abstract: This is about cad modeling, design and analysis of automatic hammering machine. Our goal is to design and Fabricate an automatic hammering machine. And for this, we have calculated the maximum torque, impact velocity for hammering, torque force and also shear failure in bolt joint. In our project we are using torque force to perform various manufacturing operation in industries like riveting, upset forging, punching etc. Also time required for operation is less so it is useful in mass production.

In many industries various types of machines and equipment have been used for various operations such as forging, hammering, cutting etc. But different problems such as low power supply, less man power and also heavy laborious work force, safety etc.

This projects relates to operation performed by this can be achieved by either using electric motor power or by manually by means of simply rotating a hand lever attached to the shaft and hammering action can be provided. If there is good power supply it can be run automatically. For automatic operation D.C motor is provided. Chain drive, belt drive, governor are also provided for speed control purposes so that the suitable speed can be achieved. When no electric power supply is there the advance cam operated hammer can be used manually by simply rotating the hand lever. Also the handling is simple and maintenance is easy of the project.

Head of Department

Prof. Mrs. S. N. Hublikar

Director

Dr. A.C. Bhagali