Aditya College of Engineering & Technology

Aditya Nagar, ADB Road, Surampalem – 533437
Department of Mechanical Engineering

Academic Year: 2020-2021

Project Title:	Design Of Portable Electrical Grain Drier	
Guide Name:	Mr. V.Siva Nagi Reddy	
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Abstract	PO's Mapping	PSO's Mapping
The purpose of this project is to Design a Grain Dryer to remove the moisture from the grains. By using this Grain-dryer we can remove the excess moisture content from the crops like Paddy, Wheat, and Corn etc. By removing of moisture from the crops we can store the grains for long time. By accomplishing the aim of the project one can store the grains for longer time also which can be easily acceptable in the market. If the moisture content is present in the grain then it is not suitable for long time storage and it spoils the grains. In the grain dryer, the heated air from the blower is passed through the grain-bed that means it passes through the mesh placed in the dryer and this warm air at limited temperature reduces the moisture from the grain. After 15 to 20 minutes that the dry grain is removed from the dryer. There is a vibrator which will vibrates the mesh for even movement of grains in the dryer. This machine is a portable as we provide wheels so it can be moved from one location to another	PO1, PO2, PO3, PO4, PO5, PO6, PO9, PO11	PSO1, PSO2, PSO3

PO1: Engineering Knowledge	**PO5:** Modern Tool usage	**PO9:** Individual & Team Work
PO2: Problem Analysis	**PO6:** Engineer & Society	**PO10:** Communication Skills
PO3: Design & Development of solutions	**PO7:** Environment & Sustainability	**PO11:** Project Management & Finance
PO4: Investigations on complex problems	**PO8:** Ethics	**PO12:** Life Long Learning
PSO1: Mechanical Engineers must be able to analyze, design and evaluate mechanical components and systems using cutting-edge software tools as required by the industries from time to time.	**PSO2:** The ability to work in manufacturing and other sectors' operations and maintenance plants	**PSO3:** As part of a team or individually, plan and manage activities in micro, small, medium and large enterprises

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Relevance to PO's and PSO's

PO1	Applied the subject knowledge in calculation for design and systems
PO2	Studied and analysed existing designs of Electrical grinding machine
PO3	Structure of the frame is designed under simulation.
PO4	In the Calculation part of frame, different materials are taken into the consideration.
PO5	Solid works and Ansys workbench tools are used for design and simulation.
PO6	Design and development of Electrical grinding machine
PO9	Fabrication of the Electrical grinding machine
PO11	Business plan contains the work flow and cost control
PSO1	Design and development Electrical grinding machine using different material to improve heat rate
PSO2	Maintenance of the Electrical grinding machine
PSO3	Entreprenerd skills attained