



PANDIAN SARASWATHI YADAV ENGINEERING COLLEGE

(Approved by AICTE & Affiliated to Anna University, Chennai)

Madurai - Sivagangai Highway, Arasanoor, Thirumansolai Post, Sivagangai Dt. - 630 561, Tamilnadu
Mobile : 9842102628, 7373002628 Email: info@psyec.edu.in Website : www.psyec.edu.in

City Office : 10, Pandian Saraswathi St, Sivagami Nagar, Narayanapuram, Madurai - 625 014. Telefax- 0452 2682338, Mobile : 98423-02628

Academic year 2021-2022

3.1 grants received from Government and non-government agencies for research projects/endowments in the institution during the academic year 2021-2022 (INR in Lakhs) are listed below

S.No	Name of the research project/ endowment	Name of the Principal Investigator/Co-investigator	Name of the Funding Agency	Amount Sanctioned
1.	Design and Development of Automatic Brick Machines Project	Dr.C.Murugan	Madura Machines, Madurai	5,00,000
	Total amount received from Grants			5,00,000 (Five Lakhs only)



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26.09.2021

To

Thiru.M.Saravanan
Madura Machines
2/932, Mahalakshmi Nagar,
Sarkudi,, Madurai – 625107.

Dear Sir / Madam

Sub: **Request for approval and support for funded project-reg**

We are in Mechanical Engineering Department of Pandian Saraswathi Yadav Engineering College is being functioned effectively from the year 2000. We are ready to do the funded project on " Design and Development of Automatic Brick Machines Project " in association with your Industry. This project is to work out by our faculty investigator Dr.C.Murugan, Associate Professor, Mechanical Engineering Department. This project seems to be an innovative to our faculty and this would be a better bonding between Industry and Institute. Kindly Accept the same.

Thanking you



PRINCIPAL
Dr. R. RAJA M.E., Ph.D.,
PRINCIPAL
PANDIAN SARASWATHI YADAV
ENGINEERING COLLEGE
Arasanoor, Thirumansolai P.O-630 561
Sivagangai Dist, Tamil Nadu



M. Saravanan
81108 34592

MADURA MACHINES

Mfrs : Box Feeder, Bricks Wire Cut Machine & Spares

2/932, Mahalakshmi Nagar, Sarkudi, Madurai - 20.

E-mail : royalsaravanan@gmail.com

GSTIN : 33BRBPS2540G2Z1

Date : 26.09.2021

To

Dr.C.Murugan,M.E, Ph.D
Associate Professor
Department of Mechanical Engineering,
Pandian Saraswathi Yadav Engineering College,
Arasanoor, Sivagangai.

Dear Sir / Madam

Sub: Acceptance and Provision of Financial Assistance for funded project – Reg.

I am happy to inform that the proposal submitted by the Department of Mechanical Engineering under the work titled. "Design and Development of Automatic Brick Machines Project" has selected and approved by our organization and sanctioned Rs 5,00,000/- (Five Lakhs only) as the project seems to be innovative and would be high social relevance. In this regard the principal investigation is requested to complete the work and submit the monthly report of the completion status along with the presentation file to the company address without fail.

Project Title	Principal Investigator	Project Duration	Possible Fund Rs.
Design and Development of Automatic Brick Machines Project	Dr.C.Murugan, Associate Professor / Mechanical	2 Years	5,00,000/-

Thanking You

For Madura Machines

Partner

M.Saravanan
Madura Machines

**DEPARTMENT OF MECHANICAL ENGINEERING PROJECT
PROPOSAL FOR POSSIBLE FUND**

S.No	Items	Details
1.	Project Title	Design and Development of Automatic Brick Machines Project
2.	Project Type	To automation the conventional type brick machine in order to improve efficiency and quality of brick, and sustainability in brick production.
3.	Objectives	It would be able to understand the different type of materials for fabricating the brick machine and various kinds of structural mechanism which are employed in the Machine. To understand the design and fabrication method of brick machine, and also, we get knowledge about C A D / C A M modelling software. It provides technical knowledge for improving efficiency, quality, and sustainability in brick production.
4.	Summary	The automation of conventional brick machines aims to modernize the production process, enhance product quality, ensure worker safety, and optimize resource usage, all while providing the flexibility to adapt to changing demands and integrating modern technological advancements. From this proposal we can be able to get design experience in different types of fabrication of steel structures and more confident to make a CAD modelling for mechanical and other mechanisms. In addition, it reduces manual labor by automating the brick production process, leading to higher output rates. And ensures uniformity in size, shape, and quality of bricks, which is challenging to maintain with manual processes. It reduces the cost of brick thereby,

		reduce the labour cost , waste , costs associated with raw materials.
5.	Methodology	<p>Fabricating an automated brick-making machine involves several steps, from design and material selection to assembly and testing.</p> <p>At the first stage: Conceptual Design of automated brick-making machine is developed a conceptual design defining the specifications, dimensions, and functionality required, consequently detailed engineering drawings and schematics are created. This involves CAD modelling and simulations to ensure the design meets performance required.</p> <p>In stage 2: Automation Components like appropriate sensors, actuators, control systems, and other automation components necessary are chosen for the machine. Structural steel materials for the machine's frame and moving parts are selected to ensure rigid structure. Then, Component Materials such as gears, belts, and other moving components are selected so as to reduce wear and maintenance needs.</p> <p>In stage 3: Procurement of components required such as sensors, Plc, Interfaces, motors, and actuators, Acquire all mechanical parts such as gears, shafts, bearings.</p> <p>In stage 4; Fabrication of Machine Parts like Cutting, Shaping; Machining, Welding and Assembly and sub assembly of components, Conveying System: Install conveyors to move raw materials and finished bricks through different stages of production are employed followed by connecting all electrical components for ensuring safe and efficient power distribution throughout the machine.</p> <p>In stage 5: Testing, Calibration and Full System Testing are involving the following: Conduct initial tests to check the functionality of individual components and subsystems. Calibrate sensors and actuators to ensure accurate readings and movements. Run the machine under</p>

		<p>different conditions to ensure it operates smoothly and meets production requirements. Make adjustments as necessary.</p> <p>In stage 6: In the final stage: Installation and Commissioning are done to run the machine in the actual production environment, making final adjustments to ensure it operates correctly and efficiently.</p>		
6.	Total Cost Required	Rs 5,00,000 / -		
7	Proposed cost	Serial No.	Items	Amount
		1	Raw material- steel, spare parts, accessories	3,70,000
		2	Man power	1,00,000
		3	Consumables	15,000
		4	Miscellaneous	15,000
		Total costs		5,00,000


Principal Investigator


HoD/Mech.


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Sivagangai Dist, Tamil Nadu



MADURA MACHINES, SARKUDI,, MADURAI – 625107.

UTILISATION CERTIFICATE

Name of the Principal Investigator : Dr.C.Murugan


Title of the project : Design and Development of Automatic Brick
Machines Project

Sanctioned Date : 26.09.2021

It is certified that a sum of Rs.5,00,000/- (Rupees Five Lakhs only) sanctioned by your Industry for doing the student project mentioned above, has been utilized for the purpose for which it was sanctioned and sum of Rs.0(Nil) remaining unutilized is refunded.


Principal Investigator




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