

# **FOUR WHEEL WITH THREE MODE STEERING**

## **PROJECT REPORT**

*submitted by*

**ADARSH T**

**Reg. No. REAOEME002**

**ALWIN JOHNSON**

**Reg. No. REAOEME007**

**AMEER M**

**Reg. No. REAOEME010**

**DEEPAK RAJ**

**Reg. No. REAOEME018**

**FIRAS K**

**Reg. No. REAOEME025**

in partial fulfillment for the award of the degree

of

**BACHELOR OF TECHNOLOGY**

in

**MECHANICAL ENGINEERING**

**UNIVERSITY OF CALICUT**



**Department of Mechanical Engineering**

**ROYAL COLLEGE OF ENGINEERING & TECHNOLOGY**

Akkikavu, Thrissur - 680604

[www.royalcet.ac.in](http://www.royalcet.ac.in)



## Bonafide Certificate

This is to certify that the project report entitled “**FOUR WHEEL WITH THREE MODE STEERING**”, is a bonafide record of work carried out by **Adarsh T (REAOEME002)**, **Alwin Johnson (REAOEME007)**, **Ameer M (REAOEME010)**, **Deepak Raj (REAOEME018)**, **Firas K (REAOEME025)** of Eighth Semester Mechanical Engineering (2014 admissions) of Royal College of Engineering and Technology, as a requirement for the award of Degree of Bachelor of Technology in Mechanical Engineering of University of Calicut during the academic year 2017-2018. The project has been approved as it satisfies the academic requirements in respect of project work prescribed for the said degree.

**Project Guide**

Mr. Ranju Joy

Asst. Professor, ME

**Project-Coordinator**

Mr. Dileepan Balakrishnan

Asst. Professor, ME

**Head of Department**

Dr. Biju P. L.

Professor, ME



Date: 25/6/18

Place: AKKIKAVU

# **PERFORMANCE ANALYSIS OF REFRIGERATION USING NANOFLUID**

## **PROJECT REPORT**

*submitted by*

**AFEEF K      REAOEME003**

**AMAL S NAIR   REAOEME009**

**ASHIQUE K J   REAOEME016**

**HASHIL A K    REAOEME031**

**MANU JOY      REAOEME046**

in partial fulfillment for the award of the degree

of

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in

**MECHANICAL ENGINEERING**

**UNIVERSITY OF CALICUT**



**Department of Mechanical Engineering**

**ROYAL COLLEGE OF ENGINEERING &  
TECHNOLOGY**

Akkikavu, Thrissur - 680604

[www.royalcet.ac.in](http://www.royalcet.ac.in)





## Bonafide Certificate

This is to certify that the project report entitled **“PERFORMANCE ANALYSIS OF REFRIGERATION USING NANOFLUID”**, is a bonafide record of work carried out by **AFEEF K (REAOEME003)**, **AMAL S NAIR (REAOEME009)**, **ASHIQUE K J (REAOEME016)**, **HASHIL A K (REAOEME031)**, **MANU JOY (REAOEME046)** of Eighth Semester Mechanical Engineering (2014 admissions) of Royal College of Engineering and Technology, as a requirement for the award of Degree of Bachelor of Technology in mechanical Engineering of University of Calicut during the academic year 2017-2018. The project has been approved as it satisfies the academic requirements in respect of project work prescribed for the said degree.

**Project Guide**

Mr. Maneesh V

Asst. Professor, ME

**Project-Coordinator**

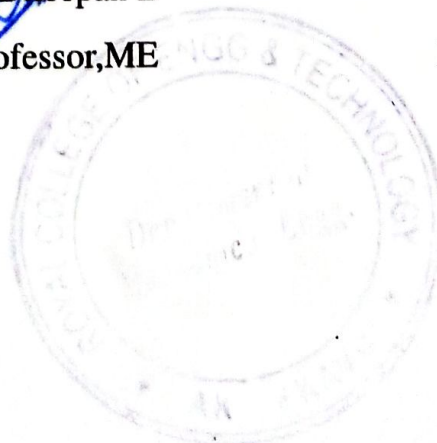
Mr. Dileepan B

Asst. Professor, ME

**Head of Department**

Dr. Biju P.L

Professor, ME



Place: Akkikavu

Date: 25 - 6 - 2018



# **SOLAR WATER HEATER USING THERMAL ENERGY STORAGE WITH PCM**

## **PROJECT REPORT**

*submitted by*

**AKASH K.V                      REAOEME005**

**AMEERUDHEEN              REAOEME011**

**FARIS K.H                    REAOEME023**

**JASIN HAMSA A.V          REAOEME033**

**MOHAMED FAZIL          REAOEME053**

in partial fulfillment for the award of the degree

of

**BACHELOR OF TECHNOLOGY**

in

**MECHANICAL ENGINEERING**

**UNIVERSITY OF CALICUT**



**Department of Mechanical Engineering**

**ROYAL COLLEGE OF ENGINEERING &  
TECHNOLOGY**

Akkikavu, Thrissur - 680604

[www.royalcet.ac.in](http://www.royalcet.ac.in)



## Bonafide Certificate

This is to certify that the project report entitled “**SOLAR WATER HEATER USING THERMAL ENERGY STORAGE WITH PCM**”, is a bonafide record of work carried out by **AKASH K.V (REAOEME005), AMEERUDHEEN (REAOEME011), FARIS K.H (REAOEME023), JASIN HAMSA A.V,(REAOEME033), MOHAMED FAZIL (REAOEME053)** of Eighth Semester Mechanical Engineering (2014 admissions) of Royal College of Engineering and Technology, as a requirement for the award of Degree of Bachelor of Technology in mechanical Engineering of University of Calicut during the academic year 2017-2018. The project has been approved as it satisfies the academic requirements in respect of project work prescribed for the said degree.

**Project Guide**

  
Mr. Nidhin A

Asst. Professor, ME

**Project Coordinator**

  
Mr. Dileepan Balakrishnan

Asst. Professor, ME

**Head of Department**

  
Dr. Biju P.L

Professor & HoD, ME

Place: Akkikavu

Date: 25/06/2018





# **VOICE CONTROLLED WHEEL CHAIR CUM BED**

**PROJECT REPORT**

*submitted by*

<b>AKBAR SADAK</b>	<b>(REAOEME006)</b>
<b>FAHAD KAREEM</b>	<b>(REAOEME021)</b>
<b>MOHAMED ANZER</b>	<b>(REAOEME051)</b>
<b>ANAZ.V.AMEER</b>	<b>(REAOEME012)</b>
<b>VIJESH.V</b>	<b>(REAOEME128)</b>

in partial fulfillment for the award of the degree  
of

**BACHELOR OF TECHNOLOGY**

in

**Mechanical Engineering**

**UNIVERSITY OF CALICUT**



**Department of Mechanical Engineering**  
**ROYAL COLLEGE OF ENGINEERING &  
TECHNOLOGY**

**Akkikavu, Thrissur - 680604**

**[www.royalcet.ac.in](http://www.royalcet.ac.in)**



## Bonafide Certificate

This is to certify that the project report entitled "Voice Controlled Wheel Chair Cam Bed", is a bonafide record of work carried out by **AKBAR SADAK (REAOEME006)**, **ANAZ.VAMEER (REAOEME012)**, **FAHAD KAREEM (REAOEME021)**, **MOHAMED ANZER (REAOEME051)** and **VJESH.V (REAOEME128)** of Eighth Semester Mechanical Engineering (2014 admissions) of Royal College of Engineering and Technology, as a requirement for the award of Degree of Bachelor of Technology in Mechanical Engineering of University of Calicut during the academic year 2017-2018. The project has been approved as it satisfies the academic requirements in respect of project work prescribed for the said degree.

Project Guide

Mr. Ibish.T.Sunny

Asst.Professor,ME

Project-Coordinator

Mr. Dileepan Balakrishnan

Asst.Professor,ME

Head of Department

Dr. Bijoy P.L

Professor & HoD, ME

Date:

Place: AKKIKAVU



**OPTIMIZATION OF HEAT TREATMENT PARAMETERS ON  
MECHANICAL PROPERTIES OF AS-CAST AA6061 ALLOY  
USING RESPONSE SURFACE METHODOLOGY**

**PROJECT REPORT**

*submitted by*

**ARSHAD M.                      REAOEME013**

**BINOY P. P.                      REAOEME017**

**JAMSHEED V. K.                      REAOEME032**

**JASIR HUSAIN                      REAOEME034**

**ABHIJITH K. V.                      REAOEME122**

in partial fulfillment for the award of the degree

of

**BACHELOR OF TECHNOLOGY**

in

**MECHANICAL ENGINEERING**

**UNIVERSITY OF CALICUT**

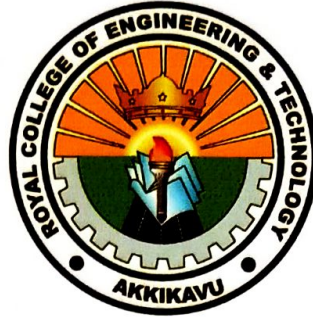


**Department of Mechanical Engineering**

**ROYAL COLLEGE OF ENGINEERING & TECHNOLOGY**

**Akkikavu, Thrissur - 680604**


**[www.royalcet.ac.in](http://www.royalcet.ac.in)**




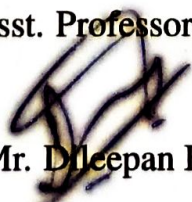
## Bonafide Certificate

This is to certify that the project report entitled “**OPTIMIZATION OF HEAT TREATMENT PARAMETERS ON MECHANICAL PROPERTIES OF AS-CAST AA6061 ALLOY USING RESPONSE SURFACE METHODOLOGY**”, is a bonafide record of work carried out by **ARSHAD M. (REAOEME013), BINOY P. P. ( REAOEME017), JAMSHEED V. K. (REAOEME032), JASIR HUSAIN (REAOEME034), ABHIJITH K. V. (REAOEME122)** of Eighth Semester Mechanical Engineering (2014 admissions) of Royal College of Engineering and Technology, as a requirement for the award of Degree of Bachelor of Technology in Mechanical Engineering of University of Calicut during the academic year 2017-2018. The project has been approved as it satisfies the academic requirements in respect of project prescribed for the said degree.


**Project Guide**

  
Mr. Swaroop M. K.  
Asst. Professor, ME

**Project-Coordinator**

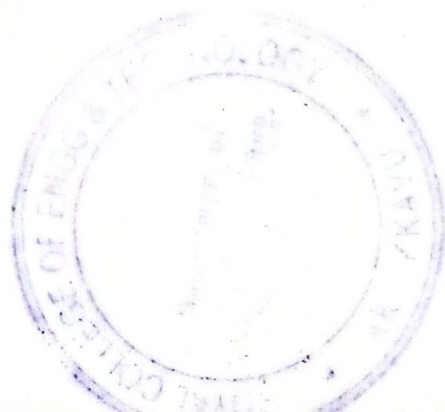
  
Mr. Krishna Das M.  
Asst. Professor, ME  
  
Mr. Dileepan B.  
Asst. Professor, ME

**Head of the Department**

  
Dr. Biju P. L.  
HoD Professor, ME

Date:

Place: Akkikavu





# **PATIENT SHIFTER**

## **PROJECT REPORT**

*submitted by*

**ARUN M**

**REAOEME015**

**JITHIN BABU C**

**REAOEME040**

**JUBITH JAYARAJAN**

**REAOEME042**

**MELBIN JOSE**

**REAOEME047**

**MOHAMED SHAKEEB K K**

**REAOEME055**

in partial fulfillment for the award of the degree

of

**BACHELOR OF TECHNOLOGY**

in

**MECHANICAL ENGINEERING**

**UNIVERSITY OF CALICUT**



**DEPARTMENT OF MECHANICAL ENGINEERING**

**ROYAL COLLEGE OF ENGINEERING &**

**TECHNOLOGY**

Akkikavu, Thrissur - 680604

[www.royalcet.ac.in](http://www.royalcet.ac.in)

DEPARTMENT OF MECHANICAL ENGINEERING  
ROYAL COLLEGE OF ENGINEERING & TECHNOLOGY

Akkikavu, Thrissur - 680604

[www.royalceet.ac.in](http://www.royalceet.ac.in)



## Bonafide Certificate

This is to certify that the project report entitled "PATIENT SHIFTER", is a bonafide record of work carried out by ARUN M (REAOEME015), JITHIN BABU C (REAOEME040), JUBITH JAYARAJAN (REAOEME042), MELBIN JOSE (REAOEME047), MOHAMED SHAKEEB K.K (REAOEME055) of Eighth Semester Mechanical Engineering (2014 admissions) of Royal College of Engineering and Technology, as a requirement for the award of Degree of Bachelor of Technology in Mechanical Engineering of University of Calicut during the academic year 2017-2018. The project has been approved as it satisfies the academic requirements in respect of project work prescribed for the said degree.

Project Guide

Mr. PRASAD K

Asst. Prof, ME

Project Coordinator

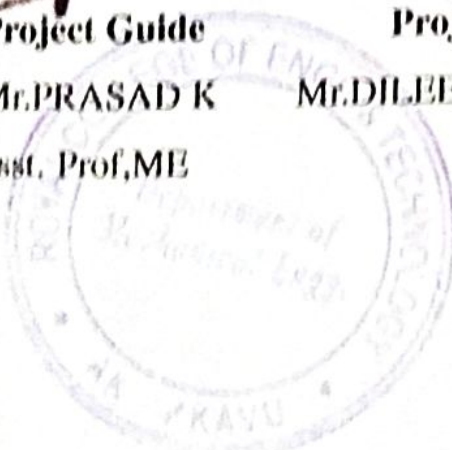
Mr. DILEEPAN BALAKRISHNAN

Asst. Prof, ME

Head of the Department

Mr. BIJU P.L

Prof, ME



Date:

Place: AKKIKAVU



# **COOLER BY USING CLAY BOX**

## **PROJECT REPORT**

*submitted by*

**CHINCHU O.K** (REAOEME124)

**KEERTHANA K.P** (REAOEME043)

**JERRY KURIAN** (REAOEME126)

**JOJO C.T** (REAOEME041)

**DILJITH K** (REAOEME125)

in partial fulfillment for the award of the degree

of

**BACHELOR OF TECHNOLOGY**

in

**Mechanical Engineering**

**UNIVERSITY OF CALICUT**



**Department of Mechanical Engineering**

**ROYAL COLLEGE OF ENGINEERING &**

**TECHNOLOGY**

Akkikavu, Thrissur - 680604

[www.royalcet.ac.in](http://www.royalcet.ac.in)



## Bonafide Certificate

This is to certify that the project report entitled “**Cooler By Using Clay Box**”, is a bonafide record of work carried out by **CHINCHU O.K** (REAOEME124), **KEERTHANA K.P** (REAOEME043), **JERRY KURIAN** (REAOEME126), **JOJO C.T** (REAOEME041) and **DILJITH K** (REAOEME125) of Eighth Semester Mechanical Engineering (2014 admissions) of Royal College of Engineering and Technology, as a requirement for the award of Degree of Bachelor of Technology in Mechanical Engineering of University of Calicut during the academic year 2017-2018. The project has been approved as it satisfies the academic requirements in respect of project work prescribed for the said degree.

**Project Guide**

Mr. Ajeesh karippath

Asst.Professor,ME

**Project-Coordinator**

Mr. Dileepan Balakrishnan

Asst.Professor,ME

**Head of Department**

Dr. Biju.P.L

Professor&HoD,ME

Date: 25/6/2018

Place:AKKIKAVU







# **DESIGN AND FABRICATION OF SOLAR WATER DISTILLATORY AND HEATER**

**PROJECT REPORT**

*Submitted by*

**FARSIN UMMER C  
SHEBELIN P S  
ANIL SKARIA  
SREEJITH K R**

**REALEME005  
REALEME020  
REALEME023  
REALEME029**

*in partial fulfillment for the award of the degree  
of*

**BACHELOR OF TECHNOLOGY**

**IN**

**MECHANICAL ENGINEERING**

**ROYAL COLLEGE OF ENGINEERING & TECHNOLOGY  
AKKIKKAVU**

**UNIVERSITY OF CALICUT**

**APRIL 2015**

**ROYAL COLLEGE OF ENGINEERING & TECHNOLOGY  
AKKIKKAVU**



**DEPARTMENT OF MECHANICAL ENGINEERING**



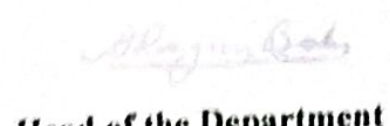
Certified that this project report "DESIGN AND FABRICATION OF SOLAR WATER DISTILLATORY AND HEATER " is the bonafide work of "Mr. FARSIN UMMER C (REALEME005) , Mr. SHEBELIN P S (REALEME020) , Mr. ANIL SKARIA (REALEME023) , Mr. SREEJITH K R (REALEME029) " of Department of Mechanical Engineering in partial fulfillment of the requirements for the award of the degree of Bachelor of Technology in Mechanical Engineering under the University of Calicut during the year 2014-2015.

  
Project Guide

Mr. Raisen Joy  
Asst. Professor, ME

  
Project Coordinator

Mr. ReghuRaj A R  
Asst. Professor, ME

  
Head of the Department  
Prof. A Rajan Babu  
H.O.D, ME

Place: Akkikkavu

Date:



# **MODIFIED AUTOMATIC HANDBRAKE SYSTEM**

## **PROJECT REPORT**

*submitted by*

<b>GEORGE SEBASTIAN</b>	<b>(REAOEME027)</b>
<b>HARIS RAHMAN K V</b>	<b>(REAOEME030)</b>
<b>JERIN JOY</b>	<b>(REAOEME035)</b>
<b>JIJO JAYAN</b>	<b>(REAOEME037)</b>
<b>KHALEEL AHAMED A K</b>	<b>(REAOEME044)</b>

in partial fulfillment for the award of the degree

of

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in

**MECHANICAL ENGINEERING**

**UNIVERSITY OF CALICUT**



**Department of Mechanical Engineering**  
**ROYAL COLLEGE OF ENGINEERING &  
TECHNOLOGY**

Akkikavu, Thrissur - 680604

[www.royalcet.ac.in](http://www.royalcet.ac.in)



## Bonafide Certificate

This is to certify that the project report entitled “**MODIFIED AUTOMATIC HAND-BRAKE SYSTEM**”, is a bonafide record of work carried out by **GEORGE SEBASTIAN** (REAOEME027), **HARIS RAHMAN K V** (REAOEME030), **JERIN JOY** (REAOEME034), **JIJO JAYAN** (REAOEME037), **KHALEEL AHAMED A K** (REAOEME044) of Department of mechanical Engineering in partial fulfillment of the requirements for the award of the Degree of Bachelor of Technology in **MECHANICAL ENGINEERING** under university of calicut during the year 2017-2018.

**Project Guide**

Mr. Sonu T. P.

Asst.professor,ME

**Project Coordinator**

Mr. Dileepan B.

Asst.professor,ME

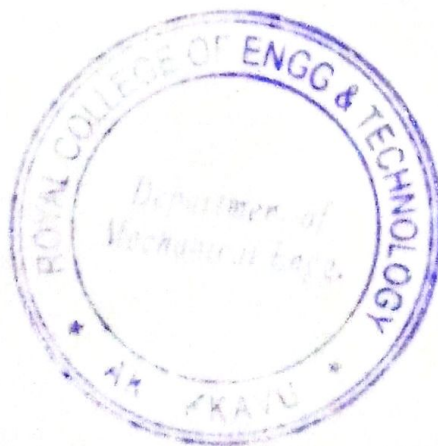
**Head of Department**

Dr. Biju P. L.

Professor,ME

Date: **11/06/2018**

Place: **AKKIKAVU**





# **DESIGN AND FABRICATION OF INTERLOCK BRICKS FROM PLASTIC WASTE**

## **PROJECT REPORT**

*submitted by*

<b>EJAZ KUNHIMON</b>	<b>Reg. No. REAOEME020</b>
<b>GOKUL RAGUNATH</b>	<b>Reg. No. REAOEME028</b>
<b>JIJU ANTONY</b>	<b>Reg. No. REAOEME038</b>
<b>MANEESH P S</b>	<b>Reg. No. REAOEME045</b>
<b>MITHUN T</b>	<b>Reg. No. REAOEME050</b>

*in partial fulfillment for the award of the degree  
of*

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in**

**MECHANICAL ENGINEERING  
UNIVERSITY OF CALICUT**



**Department of Mechanical Engineering  
ROYAL COLLEGE OF ENGINEERING & TECHNOLOGY**

**Akkikavu, Thrissur - 680604**

**[www.royalacet.ac.in](http://www.royalacet.ac.in)**



## Bonafide Certificate

This is to certify that the project report entitled “**Design And Fabrication Of Interlock Bricks From Plastic Waste**”, is a bonafide record of work carried out by **Ejaz Kunhimon**(REAOEME020), **Gokul Ragunath**(REAOEME028), **Jiju Antony**(REAOEME038), **Maneesh P. S.** (REAOEME045), **Mithun T.** (REAOEME050) of Eighth Semester Mechanical Engineering (2014 admissions) of Royal College of Engineering and Technology, as a requirement for the award of Degree of Bachelor of Technology in Mechanical Engineering of University of Calicut during the academic year 2017-2018. The project has been approved as it satisfies the academic requirements in respect of project work prescribed for the said degree.

**Project Guide**

Mr. SANDEEP K.

Asst. Professor, ME

**Project-Coordinator**

Mr. DILEEPAN BALAKRISHNAN

Asst. Professor, ME

**for Head of Department**

Dr. BIJU P. L.

Professor, ME

Date:

Place: Akkikavu





# **DESIGN AND FABRICATION OF ADVANCED FRICTIONLESS BRAKING SYSTEM**

## **PROJECT REPORT**

*submitted by*

**MUHAMED ANAS P                      REAOEME064**

**MUHAMED FAROOQ K V   REAOEME066**

**NABEEL K                               REAOEME073**

**RAHEES                                   REAOEME080**

**NIYAS K                                 REAOEME131**

in partial fulfillment for the award of the degree

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in

**MECHANICAL ENGINEERING**

**UNIVERSITY OF CALICUT**



**Department of Mechanical Engineering**

**ROYAL COLLEGE OF ENGINEERING &  
TECHNOLOGY**

Akkikavu, Thrissur - 680604

[www.royalcet.ac.in](http://www.royalcet.ac.in)



## Bonafide Certificate

This is to certify that the project report entitled “**DESIGN AND FABRICATION OF ADVANCED FRICTIONLESS BRAKING SYSTEM**”, is a bonafide record of work carried out by **MUHAMMED ANAS P (REAOEME064)** , **MUHAMMED FAROOQ KV (REAOEME066)**, **NABEEL K(REAOEME073)**, **RAHEES (REAOEME080)**, **NIYAS K (REAOEME130)** of Eighth Semester Mechanical Engineering (2014 admissions) of Royal College of Engineering and Technology, as a requirement for the award of Degree of Bachelor of Technology in mechanical Engineering of University of Calicut during the academic year 2017-2018. The project has been approved as it satisfies the academic requirements in respect of project work prescribed for the said degree.

**Project Guide**

Mr. Prasad K

Asst. Professor,ME

**Project-Coordinator**

Mr. Krishna Das M

Asst. Professor,ME

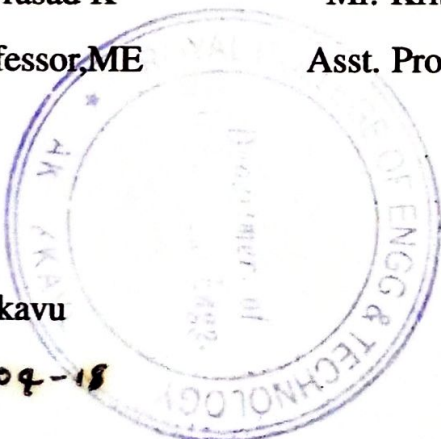
**Head of Department**

Dr. Biju P.L

Head of Department,ME

Place: Akkikavu

Date: 20-09-18





**FABRICATION AND PROPERTY EVALUATION OF  
SUGARCANE-COIR -SYNTHETIC FIBRE  
PROJECT REPORT**

*submitted by*

<b>MUHAMMED BILAL K S</b>	<b>(REAOEME065)</b>
<b>RAGIL THALAPULLY RAJAN</b>	<b>(REAOEME079)</b>
<b>RAMEES K</b>	<b>(REAOEME082)</b>
<b>SHABAB T S</b>	<b>(REAOEME092)</b>
<b>SHAROOF V</b>	<b>(REAOEME097)</b>

in partial fulfillment for the award of the degree

of

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in

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**UNIVERSITY OF CALICUT**



**Department of Mechanical Engineering  
ROYAL COLLEGE OF ENGINEERING &  
TECHNOLOGY**

Akkikavu, Thrissur - 680604

[www.royalcet.ac.in](http://www.royalcet.ac.in)




## Bonafide Certificate

This is to certify that the project report entitled “**FABRICATION AND PROPERTY EVALUATION OF SUGARCANE-COIR-SYNTHETIC FIBRE**”, is a bonafide record of work carried out by **MUHAMMED BILAL K S (REAOEME065), RAGIL THALAPULLY RAJAN(REAOEME079), RAMEES K(REAOEME082),SHABAB T S (REAOEME092), SHAROOF V (REAOEME097)** of Department of mechanical Engineering in partial fulfillment of the requirements for the award of the Degree of Bachelor of Technology in **MECHANICAL ENGINEERING** under university of calicut during the year 2017-2018.


  
**Project Guide**

 Mr.Krishnadas M  
Asst.professor,ME

  
**Project-Coordinator**

 Mr.Krishnadas M  
Asst.professor,ME

  
**Head of Department**

 Dr.Biju P L  
H.O.D,ME

Date: 13/6/2018

Place: AKKIKAVU





# **AUTOMATIC WHEEL ALIGNMENT SYSTEM**

## **PROJECT REPORT**

*Submitted by*

<b>MOHAMMED FAZL</b>	<b>REAOEME054</b>
<b>MOHAMMED SHIBILI P V</b>	<b>REAOEME056</b>
<b>MOHAMED UNAIS P V</b>	<b>REAOEME057</b>
<b>MOHAMMED NASEEH ABDUL SALAM C A</b>	<b>REAOEME059</b>
<b>MOHAMMED SHAFI C T</b>	<b>REAOEME060</b>

in partial fulfillment for the award of the degree

of

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**MECHANICAL ENGINEERING**

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**Department of Mechanical Engineering**  
**ROYAL COLLEGE OF ENGINEERING &**  
**TECHNOLOGY**

Akkikavu, Thrissur - 680604

[www.royalcet.ac.in](http://www.royalcet.ac.in)

Department of Mechanical Engineering  
**ROYAL COLLEGE OF ENGINEERING & TECHNOLOGY,**  
Akkikavu, Thrissur – 680604  
www.royalcet.ac.in



## Bonafide Certificate

This is to certify that the project report entitled "AUTOMATIC WHEEL ALIGNMENT SYSTEM", is a bonafide record of work carried out by MOHAMMEI FAZL (REAOEME054) , MOHAMME SHIBILI P V (REAOEME056), MOHAMEI UNAIS P V (REAOEME057), MOHAMMED NASEEH ABDUL SALAM C A (REAOEME059), MOHAMMED SHAFI C T (REAOEME060) of Eighth Semeste Mechanical Engineering (2014 admissions) of Royal College of Engineering and Technology, as a requirement for the award of Degree of Bachelor of Technology in mechanical Engineering of University of Calicut during the academic year 2017 2018. The project has been approved as it satisfies the academic requirements in respect of project work prescribed for the said degree

**Project Guide**

Mr. Krishna Das M  
Asst. Professor, ME

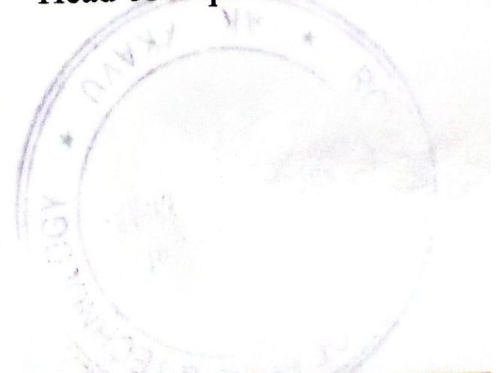
**Project-Coordinator**

Mr. Dileepan Balakrishnan  
Asst. Professor, ME

**Head of Department**

M Dr Biju P L  
Head of Department, ME

Date: 25/6/18  
Place : Akkikavu





# **INVESTIGATION ON DISSIMILAR METAL WELD OF SS 306 AND MS 1040**

## **PROJECT REPORT**

*submitted by*

**Mohammed Shafi KB (REAOEME061)**

**Monish Mohandas (REAOEME062)**

**Mohammed Salmanul faris (REAOEME071)**

**Rahul VV (REAOEME081)**

in partial fulfillment for the award of the degree

of

**BACHELOR OF TECHNOLOGY**

in

**Mechanical Engineering**

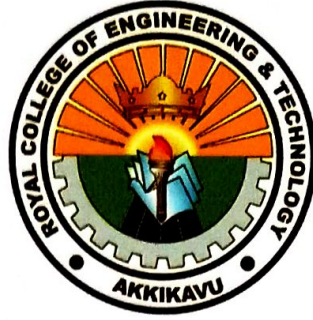
**UNIVERSITY OF CALICUT**



**Department of Mechanical Engineering**  
**ROYAL COLLEGE OF ENGINEERING & TECHNOLOGY**

Akkikavu, Thrissur - 680604

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## Bonafide Certificate

This is to certify that the project report entitled **INVESTIGATION ON DISSIMILAR METAL WELD OF SS 306 AND MS 1040**, is a bonafide record of work carried out by **Mohammed Shafi KB** (REAOEME061), **Monish Mohandas** (REAOEME062), **Mohammed Salmanul faris** (REAOEME071), **Rahul VV** (REAOEME081) of Eighth Semester Mechanical Engineering (2014 admissions) of Royal College of Engineering and Technology, as a requirement for the award of Degree of Bachelor of Technology in Mechanical Engineering of University of Calicut during the academic year 2017-2018. The project has been approved as it satisfies the academic requirements in respect of project work prescribed for the said degree.

**Project Guide**

Mr. SANDEEP K

Asst. Prof. Dept of ME

**Project-Coordinator**

Mr. KRISHNADAS

Asst. Prof. Dept of ME

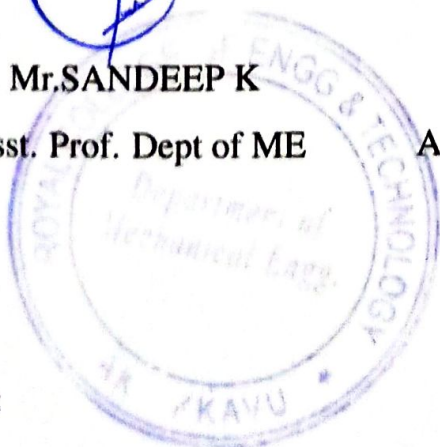
**Head of Department**

Dr. BIJU P.L

Head of Dept. ME

Date:

Place:





# AUTOMATIC SPEED CONTROL OF VEHICLES IN SPEED RESTRICTED AREAS

# PROJECT REPORT

*submitted by*

**MUHAMMED FAYIS K REAOEME067**

**NIKHIL B** **REAOEME076**

SHABAS C REAOEME093

**SIVAPRASAD T**                      **REAOEME102**

NAVEED ANJUM K REAOEME130

in partial fulfillment for the award of the degree

of

## BACHELOR OF TECHNOLOGY

in

## Mechanical Engineering

UNIVERSITY OF CALICUT



## Department of Mechanical Engineering

**ROYAL COLLEGE OF ENGINEERING &  
TECHNOLOGY**

Akkikavu, Thrissur - 680604

**www.royalcet.ac.in**



## Bonafide Certificate

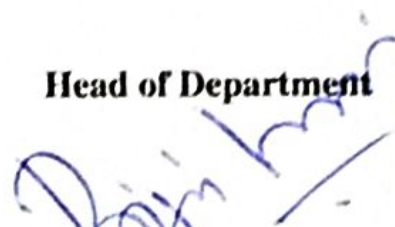
This is to certify that the project report entitled "AUTOMATIC SPEED CONTROL OF VEHICLES IN SPEED RESTRICTED AREAS", is a bonafide record of work carried out by MUHAMMED FAYIS K (REAOEME067), NIKHIL B (REAOEME076), SHABAS C (REAOEME093), SIVAPRASAD T (REAOEME102), NAVEED ANJUM K (REAOEME130) of Eighth Semester Mechanical requirement for the award of Degree of Bachelor of Technology in Mechanical Engineering of University of Calicut during the academic year 2017-2018. The project has been approved as it satisfies the academic requirements in respect of project work prescribed for the said degree.

  
**Project Guide**

Mr. Raisen Joy  
Asst. Professor, ME

  
**Project-Coordinator**

Mr. Krishna Das M.  
Asst. Professor, ME

  
**Head of Department**  
Dr. Biju P. L.  
Professor, ME

Date: 12/6/18  
Place: Akkikavu





# **FABRICATION OF LPG REFRIGERATION SYSTEM**

## **PROJECT REPORT**

*submitted by*

MRIDUL M REAOEME063

MUHAMED INSHAD P V REAOEME068

SHAROON PRABHA REAOEME098

SHEHEEN E A REAOEME099

VASEEM AHAMED REAOEME114

in partial fulfillment for the award of the degree

of

**BACHELOR OF TECHNOLOGY**

in

**Mechanical Engineering**

**UNIVERSITY OF CALICUT**



**Department of Mechanical Engineering**  
**ROYAL COLLEGE OF ENGINEERING &**  
**TECHNOLOGY**

Akkikavu, Thrissur - 680604


[www.royalcet.ac.in](http://www.royalcet.ac.in)



## Bonafide Certificate

This is to certify that the project report entitled "**FABRICATION OF LPG REFRIGERATION SYSTEM**", is a bonafide record of work carried out by Mridul M (REAOEME063), Muhammed Inshad P V.(REAOEME068) , Sharoon Prabha (REAOEME098),Sheheen E A (REAOEME099), Vaseem Ahamed P V (REAOEME114) of Eighth Semester mechanical Engineering (2014-2018 admissions) of Royal College of Engineering and Technology, as a requirement for the award of Degree of Bachelor of Technology in mechanical Engineering of University of Calicut during the academic year 2017-2018. The project has been approved as it satisfies the academic requirements in respect of project work prescribed for the said degree.

**Project guide**

  
for Mr. Abilash K J  
Asst.Professor, ME

  
**Project-Coordinator**

Mr. KRISHNA DAS .M  
Asst.Professor, ME

  
**Head of Department**

Dr. BIJU P.L  
HoD & Professor, ME



Date:

Place: Akkikavu



# **DESIGN AND FABRICATION OF STAIR CLIMBING WHEELCHAIR**

## **PROJECT REPORT**

*submitted by*

**RINU SIMON      REAOEME084**

**SAJITH K S      REAOEME088**

**SURAJ KIRAN P K      REAOEME109**

**VISHNU K R      REAOEME115**

**VYSAKH O R      REAOEME119**

in partial fulfillment for the award of the degree

of

**BACHELOR OF TECHNOLOGY**

in

**MECHANICAL ENGINEERING**

**UNIVERSITY OF CALICUT**



**Department of Mechanical Engineering**  
**ROYAL COLLEGE OF ENGINEERING &  
TECHNOLOGY**

Akkikavu, Thrissur - 680604

[www.royalcet.ac.in](http://www.royalcet.ac.in)

Department of Mechanical Engineering  
**ROYAL COLLEGE OF ENGINEERING & TECHNOLOGY**  
Akkikavu, Thrissur - 680604  
www.royalcet.ac.in



## Bonafide Certificate

This is to certify that the project report entitled "**DESIGN AND FABRICATION OF STAIR CLIMBING WHEELCHAIR**", is a bonafide record of work carried out by **RINU SIMON**(REAOEME084), **VISHNU K R**(REAOEME115), **SAJITH K S**(REAOEME088), **VYSAKH O R** (REAOEME119), **SURAJ KIRAN P K** (REAOEME109) of Eighth Semester Mechanical Engineering (2014 admissions) of Royal College of Engineering and Technology, as a requirement for the award of Degree of Bachelor of Technology in Mechanical Engineering of University of Calicut during the academic year 2017-2018. The project has been approved as it satisfies the academic requirements in respect of project work prescribed for the said degree.

**Project Guide**

Mr. Maneesh. V

Asst. Professor, ME

**Project-Coordinator**

Mr. Krishnadas. M

Asst. Professor, ME

**Head of Department**

Dr. Biju. P. L

Head of Dept, ME

Date:

Place: Akkikavu





# **FABRICATION AND COMPARISON OF NATURAL COMPOSITE MATERIALS**

## **PROJECT REPORT**

*submitted by*

**YADUKRISHNA KU      REG NO:REAOEME121**

**REJIN AS                REG NO:REAOEME083**

**PARTHASARADHI      REG NO:REAOEME078**

**NIHAL M                REG NO:REAOEME075**

**SHAMIL PA             REG NO:REAOEME096**

in partial fulfillment for the award of the degree  
of

**BACHELOR OF TECHNOLOGY**

in

**Mechanical Engineering**

**UNIVERSITY OF CALICUT**



**Department of Mechanical Engineering**

**ROYAL COLLEGE OF ENGINEERING & TECHNOLOGY**

Akkikavu, Thrissur - 680604

[www.royalcet.ac.in](http://www.royalcet.ac.in)



## Bonafide Certificate

This is to certify that the project report entitled "**FABRICATION AND COMPARISON OF NATURAL COMPOSITE MATERIALS**", is a bonafide record of work carried out by **REJIN AS(REAOME083), NIHAL M (REAOME075), YADUKRISHNA KU (REAOME121), PARTHASARADHI(REAOME078), SHAMIL PA(REAOME096)** of Eighth Semester Mechanical Engineering (2014 admissions) of Royal College of Engineering and Technology, as a requirement for the award of Degree of Bachelor of Technology in Mechanical Engineering of University of Calicut during the academic year 2017-2018. The project has been approved as it satisfies the academic requirements in respect of project work prescribed for the said degree.

**Project Guide**

Mr. SONU TP

Asst. Professor, ME

**Project-Coordinator**

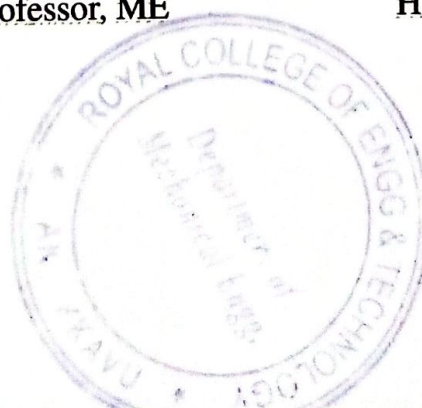
Mr. KRISHNADAS M

Asst. Professor, ME

**For Head of Department**

Dr. BIJU POULOSE

H.O.D, ME



Date:

Place: Akkikavu