



## 3.1.1 GRANTS FOR RESEARCH PROJECTS SPONSORED BY GOVERNMENT/NON GOVERNMENT SOURCES SUCH AS INDUSTRY , CORPORATE HOUSES, INTERNATIONAL BODIES, ENDOWMENT, CHAIRS IN THE INSTITUTION DURING THE LAST FIVE YEAR

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- 3. Work order**
- 4. Cheque**
- 5. Project overview**
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Principal  
Malla Reddy College of Engineering



Estd :2005

# MALLA REDDY COLLEGE OF ENGINEERING

(Formerly CM Engineering College)

Approved by AICTE - New Delhi, Affiliated to JNTU - Hyderabad, Accredited by NBA & Accredited by NAAC.  
ISO 9001:2015 Certified Institution, Recognition of College under Section 2(f) & 12 (B) of the UGC Act, 1956.

Date: 24/10/2017

To  
The Managing Director  
Eminosoft  
Hyderabad, Telangana – 500 067

Dear Sir,

Subject: Requesting Sponsorship for project — Reg.

Best wishes from Malla Reddy College of Engineering!

Malla Reddy College of Engineering (Formerly CM Engineering College) has been established under the aegis of the Malla Reddy Group of institutions in the year 2005, a majestic empire, founded by chairman Sri. Ch. Malla Reddy. He has been in the field of education for the last 22 years with the intention of spearheading quality education among children from the school level itself. The faculty of various departments are actively pursuing research in their respective technical departments under R&D wing of MRCE.

**Dr. M. Narayanan**, Professor Department of Computer Science and Engineering, is the principal investigator for this proposed work. He is an eminent person in his research area. We request your kind cooperation and financial aid of INR 7,00,000.00 (Rupees seven lakhs only) in the project entitled “**Design and Development of Big Data Integration & Analytics Framework for Cyber Security to Mitigate Cyber Attacks**”. Here with we have enclosed the budget proposal for the project. Our faculty will contact you in person along with this letter and may detail the scope of work.

We expect your positive response.

Thanking you,

Principal Investigator



Principal  
Malla Reddy College of Engineering



## Letter of Acceptance

**Ref:** MI/R&D/2017/567

**Date:** 10/11/2017

**To**

The principal,  
Malla Reddy College of Engineering,  
Maisammaguda, Secunderabad - 500100.

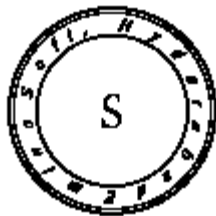
**Dear Sir,**

**Ref :** Sponsorship for Project Dated: 24/10/2017

**Subject :** Acceptance for Financial aid for the project **“Design and Development of Big Data Integration & Analytics Framework for Cyber Security to Mitigate Cyber Attack”**

Best wishes from Emino Soft!!!

This letter is to inform you that our technical team has reviewed your research project titled, **“Design and Development of Big Data Integration & Analytics Framework for Cyber Security to Mitigate Cyber Attacks”**.Based on the report , your proposed project got approval by the managing body. We have planned to extend our support to carry out this research work. In this regard, we are glad to sponsor your project With INR. 7,00,000 (Seven Lakhs Rupees Only).



Director

Work Order

**Ref:** MI/R&D/2017/567

**Date:** 20/11/2017

**To**

The Principal,  
Malla Reddy College of Engineering  
Dhulapally, Secunderabad-500100

**Dear Sir,**

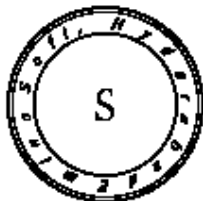
**Ref:**Sponsorship for funded Project Dated: 24/10/2017

**Subject :** Work order for the project “**Design and Development of Big Data Integration & Analytics Framework for Cyber Security to Mitigate Cyber Attack**”

With reference to letter of acceptance (dated: 10/11/2017) ,we are accepting your budget proposal as mentioned below and also we are glad to release the work order for the project “**Design and Development of Big Data Integration & Analytics Framework for Cyber Security to Mitigate Cyber Attack**” from today onwards.

S.No	Particular	Amount
1.	Term -1	INR 2,50,000
2.	Term -2	INR 2,50,000
3.	Term -3	INR 2,00,000
	<b>Total</b>	INR 7,00,000

Best wishes



Director

# MALLAREDDY COLLEGE OF ENGINEERING

## Department of Computer Science and Engineering

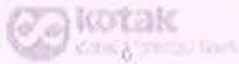
### OVERVIEW OF PROJECT PROPOSAL

Title	Design and Development of Big Data Integration & Analytics Framework for Cyber Security to Mitigate Cyber Attacks
Principal Investigator	Dr. Narayanan
Description	<p>In the current enterprise network environment, multistep targeted cyber-attacks with concealment and advanced characteristics have become the main threat. Multisource security data are the prerequisite of targeted cyber-attacks detection. However, these data have characters of heterogeneity and semantic diversity, and existing attack detection methods do not take comprehensive data sources into account. Identifying and predicting attack intention from heterogeneous noisy data can be meaningful work. In this paper, we first review different data fusion mechanisms of correlating heterogeneous multisource data. On this basis, we propose a big data analytics framework for targeted cyber-attacks detection and give the basic idea of correlation analysis. Our approach will offer the ability to correlate multisource heterogeneous security data and analyze attack intention effectively.</p>

  
Principal Investigator



  
Principal  
Malla Reddy College of Engineering



5, 118 Survey No. 84, 7th Phase Saranagar, Hyderabad.  
Hyderabad - 500081  
Mahindra India  
TSC : KR00007468

Issue Date 10/11/2017

Pay MALLA REDDY COLLEGE OF ENGINEERING या धारक को Or Bearer

रुपये Rupees TWO LAKH FIFTY THOUSAND RUPEES ONLY

अदा करें। ₹ 2,50,000/-

बैंक अ/c  
AC No. 1312217315

For Eminsoft Pvt Ltd

Please sign above

Payable At-par at all branch locations of Kotak Mahindra Bank Ltd.

⑈000003⑈ 500469027⑈ 004244⑈ 36



Estd :2005

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ISO 9001:2015 Certified Institution, Recognition of College under Section 2(f) & 12 (B) of the UGC Act, 1956.

## Utilization Certificate

Title of the Project : Design and Development of Big Data Integration & Analytics Framework for Cyber Security to Mitigate Cyber Attacks

Principal investigator : Dr. Narayanan

Certified that out of Rs.7,00,000 (Total Amount) of Grant-in-aid sanctioned during the financial year 2017-18 in favour of Malla Reddy College of Engineering for research and development activities of EminoSoft as per Sanction Order No MI/R&D/2017/567 Date 20/11/2017. Partially, The sum of Rs.2,50,000/- has been received and appropriately utilized.

Certified that I have satisfied myself that the conditions on which the Grants in Aid was sanctioned/released have been duly fulfilled that money was actually utilized for the purposes for which it was sanctioned.

**Project Investigator**

**Head of Institution  
(with seal)**



For M R K REDDY & Co.  
Chartered Accountants  
FRN - 003265S  
  
(M. RAMAKRISHNA REDDY)  
Proprietor

**Auditor  
(with seal)**





1-118 Sarveswari, Plot No. 45, Narayana Puram, 500081  
 Hyderabad - 500081  
 India  
 TFC: XMR0007456

दिनांक 05/06/2018  
 Date

Pay MALIA REDDY COLLEGE OF ENGINEERING या धारक को Or Bearer

रुपये Rupees TWO LAKH FIFTY THOUSAND RUPEES ONLY

अदा करें। ₹ 2,50,000/-

आकाउंट नं.  
 A/C No. 1312217315

For Eminosoft Pvt Ltd

*Chhili*

Please Sign above

Payable At-par at all branch locations of Kotak Mahindra Bank Ltd

⑈000003⑈ 500485027⑈ 00425⑈ 36





Estd :2005

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## Utilization Certificate

Title of the Project : Design and Development of Big Data Integration & Analytics Framework for Cyber Security to Mitigate Cyber Attacks

Principal investigator : Dr. Narayanan

Certified that out of Rs.7,00,000 (Total Amount) of Grant-in-aid sanctioned during the financial year 2017-18 in favour of Malla Reddy College of Engineering for research and development activities of EminoSoft as per Sanction Order No MI/R&D/2017/567 Date 20/11/2017. Partially, The sum of Rs.2,50,000/- has been received and appropriately utilized.

Certified that I have satisfied myself that the conditions on which the Grants in Aid was sanctioned/released have been duly fulfilled that money was actually utilized for the purposes for which it was sanctioned.

**Project Investigator**

**Head of Institution  
(with seal)**



For M R K REDDY & Co.  
Chartered Accountants  
FRN - 003265S  
  
(M. RAMAKRISHNA REDDY)  
Proprietor

**Auditor  
(with seal)**





Estd :2005

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## Utilization Certificate

Title of the Project : Design and Development of Big Data Integration & Analytics Framework for Cyber Security to Mitigate Cyber Attacks

Principal investigator : Dr. M. Narayanan

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**Principal Investigator**

**Head of Institution  
(with seal)**



For M R K REDDY & Co.  
Chartered Accountants  
FRN : 003265S  
  
(M. RAMAKRISHNA REDDY)  
Proprietor



**Auditor  
(with seal)**





Estd :2005

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ISO 9001:2015 Certified Institution, Recognition of College under Section 2(f) & 12 (B) of the UGC Act, 1956.

Date: 22/11/2017

To

The Managing Director  
Eminosoft

Hyderabad, Telangana – 500 067

Dear Sir,

Subject: Requesting Sponsorship for project — Reg.

Best wishes from Malla Reddy College of Engineering!

Malla Reddy College of Engineering (Formerly CM Engineering College) has been established under the aegis of the Malla Reddy Group of institutions in the year 2005, a majestic empire, founded by chairman Sri. Ch. Malla Reddy. He has been in the field of education for the last 22 years with the intention of spearheading quality education among children from the school level itself. The faculty of various departments are actively pursuing research in their respective technical departments under R&D wing of MRCE.

**Dr. T. Sunil**, Professor Department of Computer Science and engineering, is the principal investigator for this proposed work. He is an eminent person in his research area. We request your kind cooperation and financial aid of INR 6,00,000.00 (Rupees six lakhs only) in the project entitled “**On Verification of State based Internal Behavioral Models of Embedded Systems**” .Here with we have enclosed the budget proposal for the project. Our faculty will contact you in person along with this letter and may detail the scope of work.

We expect your positive response.

Thanking you,

Principal Investigator



  
Principal  
Malla Reddy College of Engineering

## Letter of Acceptance

**Ref:** MI/R&D/2017/451

**Date:** 18/12/2017

**To**

The principal,  
Malla Reddy College of Engineering,  
Maisammaguda, Secunderabad - 500100.

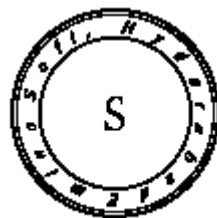
**Dear Sir,**

**Ref :** Sponsorship for Project Dated: 22/11/2017

**Subject :** Acceptance for Financial aid for the project “**On Verification of State based Internal Behavioral Models of Embedded Systems**”

Best wishes from Emino Soft!!!

This letter is to inform you that our technical team has reviewed your research project titled, “**On Verification of State based Internal Behavioral Models of Embedded Systems**” Based on the report , your proposed project got approval by the managing body. We have planned to extend our support to carry out this research work. In this regard, we are glad to sponsor your project With INR. 6,00,000 (Six Lakhs Rupees Only).



Director



## Work Order

**Ref:** MI/R&D/2017/451

**Date:** 28/12/2017

**To**

The Principal,  
Malla Reddy College of Engineering  
Dhulapally, Secunderabad-500100

**Dear Sir,**

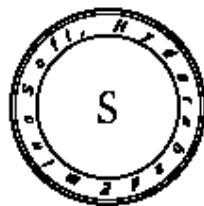
**Ref :** Sponsorship for funded Project Dated: 22/11/2017

**Subject :** Work order for the project "**On Verification of State based Internal Behavioral Models of Embedded Systems**"

With reference to letter of acceptance (dated: 18/12/2017) ,we are accepting your budget proposal as mentioned below and also we are glad to release the work order for the project "**On Verification of State based Internal Behavioral Models of Embedded Systems**" from today onwards.

S.No	Particular	Amount
1.	Term -1	INR 2,00,000
2.	Term -2	INR 2,00,000
3.	Term -3	INR 2,00,000
	<b>Total</b>	INR 6,00,000

Best wishes



Director

# MALLAREDDY COLLEGE OF ENGINEERING

## Department of Computer Science and Engineering

### OVERVIEW OF PROJECT PROPOSAL

Title	On Verification of State based Internal Behavioral Models of Embedded Systems
Principal Investigator	Dr. T. Sunil
Description	<p>Designing and Development of high quality systems require that in process verification and validation of Design models be carried and not leaving the verification and validation till the end of code development. Clean Room Software Engineering (CRSE) methodology advocates that verification and validation be done in process after completion of designing of different models. CRSE has in it the verification and validation process models after completion of designing of Black Box (BB), State Box (SB) and Clear Box (CB). CRSE advocated formal models for carrying the verification and validation. While very recently the authors of this paper have published automated formal models for verifying and validating the Black Box structures, no such automated and formal models existed earlier for validation and verifying the state models which are primarily meant for designing the internal behavior of the embedded systems. In this paper a verification and validation method has been proposed to validate the internal behavior represented by state charts models. The refined CRSE methodology incorporating the proposed verification and validation method has been presented. The model is used for verifying and validating the State model proposed earlier by the authors for verifying and validating the internal behavior of a pilot project called "Temperature Monitoring and Controlling of Nuclear Reactor System (TMCNRS)".</p>



Principal Investigator



Principal  
Malla Reddy College of Engineering





T-718 Gateway No. 04, 20th MIDC Phase, Andheri West, Mumbai  
 Hyderabad - 500031  
 Telangana India  
 FSC - XXXX0037466

दिनांक 18/12/2017  
 Date

Pay **MALLA REDDY COLLEGE OF ENGINEERING**

या धारक को Or Bearer

रुपये Rupees **TWO LAKH RUPEES ONLY**

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2,00,000/-

बैंक अ/c  
 AC No. **1312217315**

For Engineer's Pvt Ltd

*Khali*

Please sign above

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## Utilization Certificate

Title of the Project : On Verification of State based Internal Behavioral Models of Embedded Systems

Principal investigator : Dr. T. Sunil

Certified that out of Rs.6,00,000 (Total Amount) of Grant-in-aid sanctioned during the financial year 2017-18 in favour of Malla Reddy College of Engineering for the research and development activities of EmiNoSoft as per Sanction Order No MI/R&D/2017/451 Date 28/12/2017. Partially, The sum of Rs.2,00,000/- has been received and appropriately utilized.

Certified that I have satisfied myself that the conditions on which the Grants in Aid was sanctioned/released have been duly fulfilled that money was actually utilized for the purposes for which it was sanctioned.

**Principal Investigator**

**Head of Institution  
(with seal)**



For M R K REDDY & Co.  
Chartered Accountants  
FRN - 0032655

(M. RAMAKRISHNA REDDY)  
Proprietor



**Auditor  
(with seal)**





1-11B Survey No. 65, Nat Institute Of Fashion Tech Campus,  
Hyderabad - 500081  
Maharashtra India  
IFSC: KMHK0807466

दिनांक 07/08/2018  
Date

Pay **MALLA REDDY COLLEGE OF ENGINEERING**

या धारक को Or Bearer

रुपये Rupees **TWO LAKH RUPEES ONLY**

अदा करें।

₹

2,00,000/-

ब्रांच का  
AC No. 1312217315

For Eminoseff Pvt Ltd

*Chalil*

Please sign above

Payable At-par at all branch locations of Kotak Mahindra Bank Ltd

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# MALLA REDDY COLLEGE OF ENGINEERING

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## Utilization Certificate

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Principal investigator : Dr. T. Sunil

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**Principal Investigator**

**Head of Institution  
(with seal)**

For M R K REDDY & Co.  
Chartered Accountants  
FRN - 0032655

**Auditor  
(with seal)**









Estd :2005

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Principal investigator : Dr. T. Sunil

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Certified that I have satisfied myself that the conditions on which the Grants in Aid was sanctioned/released have been duly fulfilled that money was actually utilized for the purposes for which it was sanctioned.

**Principal Investigator**

**Head of Institution  
(with seal)**

For M R K REDDY & Co.  
Chartered Accountants  
FRN - 0032655

**Auditor  
(with seal)**





Estd :2005



# MALLA REDDY COLLEGE OF ENGINEERING

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ISO 9001:2015 Certified Institution, Recognition of College under Section 2(f) & 12 (B) of the UGC Act, 1956.

Date: 4/6/2018

To

The Managing Director

Eminosoft

Hyderabad, Telangana – 500 067

Dear Sir,

Subject: Requesting Sponsorship for project — Reg.

Best wishes from Malla Reddy College of Engineering!

Malla Reddy College of Engineering (Formerly CM Engineering College) has been established under the aegis of the Malla Reddy Group of institutions in the year 2005, a majestic empire, founded by chairman Sri. Ch. Malla Reddy. He has been in the field of education for the last 22 years with the intention of spearheading quality education among children from the school level itself. The faculty of various departments are actively pursuing research in their respective technical departments under R&D wing of MRCE.

**Dr. V. Bhoopathy**, Professor Department of Computer Science and engineering, is the principal investigator for this proposed work. He is an eminent person in his research area. We request your kind cooperation and financial aid of INR 6,50,000.00 (Rupees six lakhs fifty thousand only) in the project entitled “**Class Room Automation System developed for Group School Hyderabad**” Here with we have enclosed the budget proposal for the project. Our faculty will contact you in person along with this letter and may detail the scope of work.

We expect your positive response.

Thanking you,

Principal Investigator



Principal  
Malla Reddy College of Engineering

## Letter of Acceptance

**Ref:** MI/R&D/2018/1021

**Date:** 25/6/2018

**To**

The principal,  
Malla Reddy College of Engineering,  
Maisammaguda, Secunderabad - 500100.

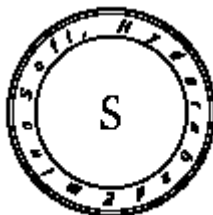
**Dear Sir,**

**Ref :** Sponsorship for Project Dated: 4/6/2018

**Subject :** Acceptance for Financial aid for the project “**Class Room Automation System developed for Group School Hyderabad**”

Best wishes from Emino Soft!!!

This letter is to inform you that our technical team has reviewed your research project titled, “**Class Room Automation System developed for Group School Hyderabad**”. Based on the report , your proposed project got approval by the managing body. We have planned to extend our support to carry out this research work. In this regard, we are glad to sponsor your project With INR. 6,50,000 (Six Lakhs fifty thousand Rupees Only).



Director

## Work Order

**Ref:** MI/R&D/2018/1021

**Date:** 29/6/2018

**To**

The Principal,  
Malla Reddy College of Engineering  
Dhulapally, Secunderabad-500100

**Dear Sir,**

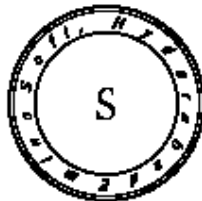
**Ref :** Sponsorship for funded Project Dated: 4/6/2018

**Subject :** Work order for the project **"Class Room Automation System developed for Group School Hyderabad"**

With reference to letter of acceptance (dated: 25/6/2018) ,we are accepting your budget proposal as mentioned below and also we are glad to release the work order for the project **"Class Room Automation System developed for Group School Hyderabad"** from today onwards.

S.No	Particular	Amount
1.	Term -1	INR 2,50,000
2.	Term -2	INR 2,00,000
3.	Term -3	INR 2,00,000
	<b>Total</b>	INR 6,50,000

Best wishes



Director

# MALLAREDDY COLLEGE OF ENGINEERING

## Department of Computer Science and Engineering

### OVERVIEW OF PROJECT PROPOSAL

Title	Class Room Automation System developed for Group School Hyderabad
Principal Investigator	Dr. V. Bhoopathy
Description	<p>Classrooms are social settings; teaching and learning occur through social interaction between teachers and students. As teaching and learning take place, they are complicated processes and are affected by peer-group relationships. The interactions and relationships between teachers and students, and among students, as they work side by side, constitute the group processes of the classroom. Group processes are especially significant in twenty-first century schools. Group projects and cooperative teamwork are the foundations of effective teaching, creative curriculum, and positive classroom climate. Interpersonal skills, group work, and empathy are important ingredients of modern business, where employees must communicate well for their business to be productive and profitable. Group processes are also significant in modern global communities, where citizens must work together for a safe and secure world. Thus, along with teaching academic curriculum, teachers are expected to help students develop the attitudes, skills, and procedures of democratic community.</p>

Principal Investigator





1-118 Survey No. 69, Kat Institute LT Phase, Tech Campus,  
Hyderabad - 500081  
Telangana India  
IFSC : KMHK0007466

दिनांक 25/06/2018  
Date

Pay MALLA REDDY COLLEGE OF ENGINEERING

या धारक को Or Bearer

रुपये Rupees TWO LAKH FIFTY THOUSAND RUPEES ONLY

अदा करें। ₹ 2,50,000/-

खात नं.  
A/C No. 1312217315

For Eminsoft Pvt Ltd

*Chelil*

Please sign above

Payable At-par at all branch locations of Kotak Mahindra Bank Ltd

⑈000003⑈ 500485027⑈ 004245⑈ 33



Estd :2005

# MALLA REDDY COLLEGE OF ENGINEERING

(Formerly CM Engineering College)

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ISO 9001:2015 Certified Institution, Recognition of College under Section 2(f) & 12 (B) of the UGC Act, 1956.

## Utilization Certificate

Title of the Project : Class Room Automation System developed for Group School Hyderabad

Principal investigator : Dr. V. Bhoopathy

Certified that out of Rs.6,50,000 (Total Amount) of Grant-in-aid sanctioned during the financial year 2018-19 in favour of Malla Reddy College of Engineering for the research and development activities of EminoSoft as per Sanction Order No MI/R&D/2018/1021 Date 29/6/2018. Partially, The sum of Rs.2,50,000/- has been received and appropriately utilized.

Certified that I have satisfied myself that the conditions on which the Grants in Aid was sanctioned/released have been duly fulfilled that money was actually utilized for the purposes for which it was sanctioned.

**Principal Investigator**

**Head of Institution  
(with seal)**

For M R K REDDY & Co.  
Chartered Accountants  
FRN - 0032655

**Auditor  
(with seal)**







1-11B Survey No. 84, Nat Institute Chitranam, Hyderabad  
 Hyderabad - 500081  
 Telangana India  
 FSC - K03K0007466

दिनांक 03/12/2018  
 Date

Pay **MALLA REDDY COLLEGE OF ENGINEERING**

या धारक को Or Bearer

रुपये Rupees **TWO LAKH RUPEES ONLY**

अदा करें। ₹ 2,00,000/-

खाता सं  
 A/C No. **1312217315**

For Emnosoft Pvt.Ltd

03/12/2018

Payable At-par at all branch locations of Kotak Mahindra Bank Ltd

Please sign above

⑈000003⑈ 500485027⑈ 004245⑈ 33

Section (B)/CS2018



Estd :2005

# MALLA REDDY COLLEGE OF ENGINEERING

(Formerly CM Engineering College)

Approved by AICTE - New Delhi, Affiliated to JNTU - Hyderabad, Accredited by NBA & Accredited by NAAC.  
ISO 9001:2015 Certified Institution, Recognition of College under Section 2(f) & 12 (B) of the UGC Act, 1956.

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Title of the Project : Class Room Automation System developed for Group School Hyderabad

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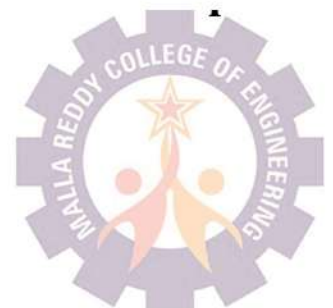
Certified that I have satisfied myself that the conditions on which the Grants in Aid was sanctioned/released have been duly fulfilled that money was actually utilized for the purposes for which it was sanctioned.

**Principal Investigator**

**Head of Institution  
(with seal)**

For M R K REDDY & Co.  
Chartered Accountants  
FRN - 0032655

**Auditor  
(with seal)**





# MALLA REDDY COLLEGE OF ENGINEERING

(Formerly CM Engineering College)

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ISO 9001:2015 Certified Institution, Recognition of College under Section 2(f) & 12 (B) of the UGC Act, 1956.

Date: 3/1/2018

To

The Managing Director

Eminosoft

Hyderabad, Telangana – 500 067

Dear Sir,

Subject: Requesting Sponsorship for project — Reg.

Best wishes from Malla Reddy College of Engineering!

Malla Reddy College of Engineering (Formerly CM Engineering College) has been established under the aegis of the Malla Reddy Group of institutions in the year 2005, a majestic empire, founded by chairman Sri. Ch. Malla Reddy. He has been in the field of education for the last 22 years with the intention of spearheading quality education among children from the school level itself. The faculty of various departments are actively pursuing research in their respective technical departments under R&D wing of MRCE.

**Dr. Gladson Maria Britto**, Professor Department of Computer Science and engineering, is the principal investigator for this proposed work. He is an eminent person in his research area. We request your kind cooperation and financial aid of INR 6,50,000.00 (Rupees six lakhs fifty thousand only) in the project entitled “**Design and Development of Brain Computer Interface for visualization and Reconstruction of Images from Brain Data**” Here with we have enclosed the budget proposal for the project. Our faculty will contact you in person along with this letter and may detail the scope of work.

We expect your positive response.

Thanking you

principal

Principal Investigator



Principal  
Malla Reddy College of Engineering

## Letter of Acceptance

**Ref:** MI/R&D/2018/289

**Date:** 24/1/2018

**To**

The principal,  
Malla Reddy College of Engineering,  
Maisammaguda,  
Secunderabad-500100

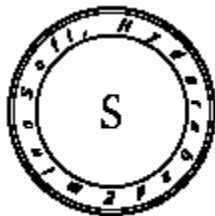
**Dear Sir,**

**Ref :** Sponsorship for Project Dated: 3/1/2018

**Subject :** Acceptance for Financial aid for the project “**Design and Development of Brain Computer Interface for visualization and Reconstruction of Images from Brain Data**”

Best wishes from Emino Soft!!!

This letter is to inform you that our technical team has reviewed your research project titled, “**Design and Development of Brain Computer Interface for visualization and Reconstruction of Images from Brain Data**”. Based on the report , your proposed project got approval by the managing body. We have planned to extend our support to carry out this research work. In this regard, we are glad to sponsor your project With INR. 6,50,000 (Six Lakhs fifty thousand Rupees Only).



Director

Work Order

**Ref:** MI/R&D/2018/289

**Date:** 30/1/2018

**To**

The Principal,  
Malla Reddy College of Engineering  
Dhulapally, Secunderabad-500100

**Dear Sir,**

**Ref :** Sponsorship for funded Project Dated: 3/1/2018

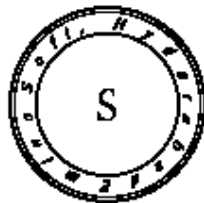
**Subject :** Work order for the project "**Design and Development of Brain**

**Computer Interface for visualization and Reconstruction of Images from Brain Data"**

With reference to letter of acceptance (dated: 24/1/2018) ,we are accepting your budget proposal as mentioned below and also we are glad to release the work order for the project "**Design and Development of Brain Computer Interface for visualization and Reconstruction of Images from Brain Data"** from today onwards.

S.No	Particular	Amount
1.	Term -1	INR 2,00,000
2.	Term -2	INR 2,00,000
3.	Term -3	INR 2,50,000
	<b>Total</b>	INR 6,50,000

Best wishes



Director



# MALLAREDDY COLLEGE OF ENGINEERING

## Department of Computer Science and Engineering

### OVERVIEW OF PROJECT PROPOSAL

Title	Design and Development of Brain Computer Interface for visualization and Reconstruction of Images from Brain Data
Principal Investigator	Dr. Gladson Maria Britto
Description	Brain-Computer Interface (BCI) bridges the human's neural world and the outer physical world by decoding individuals' brain signals into commands recognizable by computer devices. Deep learning has lifted the performance of brain-computer interface systems significantly in recent years. In this article, we systematically investigate brain signal types for BCI and related deep learning concepts for brain signal analysis. We then present a comprehensive survey of deep learning techniques used for BCI, by summarizing over 230 contributions most published in the past five years. Finally, we discuss the applied areas, opening challenges, and future directions for deep learning-based BCI.

Principal Investigator



Principal

Malla Reddy College of Engineering



1-118 Survey No. 46, 1st Milestone on Hyderabad - Bangalore  
 Hyderabad - 500081  
 Telephone India  
 TSC: 8000007466

दिनांक 24/01/2018  
 Date

Pay MALLA REDDY COLLEGE OF ENGINEERING

वा धारक को Or Bearer

रुपये Rupees TWO LAKH RUPEES ONLY

अदा करें। ₹ 2,00,000/-

खाता नं  
 A/C No. 1342217315

For Emiteosoft Pvt Ltd

Payable At-par at all Branch locations of Kotak Mahindra Bank Ltd

  
 प्रमाणित किया गया

⑆000003⑆ 500485027⑆ 005699⑆ 13



Estd :2005

# MALLA REDDY COLLEGE OF ENGINEERING

(Formerly CM Engineering College)

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ISO 9001:2015 Certified Institution, Recognition of College under Section 2(f) & 12 (B) of the UGC Act, 1956.

## Utilization Certificate

Title of the Project : Design and Development of Brain Computer Interface for visualization and Reconstruction of Images from Brain Data

Principal investigator : Dr. Gladson Maria Britto

Certified that out of Rs.6,50,000/- (Total Amount) of Grant-in-aid sanctioned during the financial year 2017-18 in favour of Malla Reddy College of Engineering for the research and development activities of EminoSoft as per Sanction Order No MI/R&D/2018/289 Date 30/1/2018. Partially, The sum of Rs.2,00,000/- has been received and appropriately utilized.

Certified that I have satisfied myself that the conditions on which the Grants in Aid was sanctioned/released have been duly fulfilled that money was actually utilized for the purposes for which it was sanctioned.

**Principal Investigator**

**Head of Institution  
(with seal)**



For M R K REDDY & Co.  
Chartered Accountants  
FRN - 0032655

**Auditor  
(with seal)**





1-118 Survey No. 64, Not Invited U/F EPIP, (MCA 2008) Ltd.,  
 Hyderabad - 500081  
 Telangana India  
 FSC : KMHK0007466

दिनांक: 30/09/2018  
 Date: \_\_\_\_\_

Pay **MALLA REDDY COLLEGE OF ENGINEERING**

या धारक को **Or Bearer**

रुपये **Rupees** **TWO LAKH RUPEES ONLY**

अदा करें।	₹	2,00,000/-
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खाता सं A/C No.	1312217315
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For Eminsoft Pvt.Ltd

Payable At-par at all branch locations of Kotak Mahindra Bank Ltd.

⑈000003⑈ 500485027⑈ 005702⑈ 19



Estd :2005

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ISO 9001:2015 Certified Institution, Recognition of College under Section 2(f) & 12 (B) of the UGC Act, 1956.

## Utilization Certificate

Title of the Project : Design and Development of Brain Computer Interface for visualization and Reconstruction of Images from Brain Data

Principal investigator : Dr. Gladson Maria Britto

Certified that out of Rs.6,50,000/- (Total Amount) of Grant-in-aid sanctioned during the financial year 2017-18 in favour of Malla Reddy College of Engineering for the research and development activities of EmiNoSoft as per Sanction Order No MI/R&D/2018/289 Date 30/1/2018. Partially, The sum of Rs.2,00,000/- has been received and appropriately utilized.

Certified that I have satisfied myself that the conditions on which the Grants in Aid was sanctioned/released have been duly fulfilled that money was actually utilized for the purposes for which it was sanctioned.

**Principal Investigator**

**Head of Institution  
(with seal)**



For M R K REDDY & Co.  
Chartered Accountants  
FRN - 0032655

**Auditor  
(with seal)**







Estd :2005

# MALLA REDDY COLLEGE OF ENGINEERING

(Formerly CM Engineering College)

Approved by AICTE - New Delhi, Affiliated to JNTU - Hyderabad, Accredited by NBA & Accredited by NAAC.  
ISO 9001:2015 Certified Institution, Recognition of College under Section 2(f) & 12 (B) of the UGC Act, 1956.

Date: 2/2/2018

To  
The Managing Director  
Eminosoft  
.Hyderabad, Telangana – 500 067

Dear Sir,

Subject: Requesting Sponsorship for project — Reg.

Best wishes from Malla Reddy College of Engineering!

Malla Reddy College of Engineering (Formerly CM Engineering College) has been established under the aegis of the Malla Reddy Group of institutions in the year 2005, a majestic empire, founded by chairman Sri. Ch. Malla Reddy. He has been in the field of education for the last 22 years with the intention of spearheading quality education among children from the school level itself. The faculty of various departments are actively pursuing research in their respective technical departments under R&D wing of MRCE.

**Dr. A. Kannagi**, Professor Department of Computer Science and engineering, is the principal investigator for this proposed work. He is an eminent person in his research area. We request your kind cooperation and financial aid of INR 6,00,000.00 (Rupees six lakhs only) in the project entitled “**An android-based monitoring and alarm system for patients with chronic Obtrusive Disease**”. Here with we have enclosed the budget proposal for the project. Our faculty will contact you in person along with this letter and may detail the scope of work.

We expect your positive response.

Thanking you,

Principal Investigator



Principal  
Malla Reddy College of Engineering

## Letter of Acceptance

**Ref:** MI/R&D/2017/721

**Date:** 20/2/2018

**To**

The principal,  
Malla Reddy College of Engineering,  
Maisammaguda,  
Secunderabad-500100

**Dear Sir,**

**Ref :** Sponsorship for Project Dated: 2/2/2018

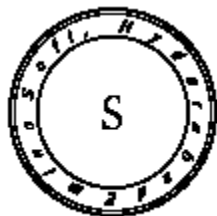
**Subject :** Acceptance for Financial aid for the project “**An android-based monitoring and alarm system for patients with chronic Obtrusive Disease**”

Best wishes from Emino Soft!!!

This letter is to inform you that our technical team has reviewed your research project titled, “**An android-based monitoring and alarm system for patients with chronic Obtrusive Disease**”. Based on the report , your proposed project got approval by the managing body. We have planned to extend our support to carry out this research work. In this regard, we are glad to sponsor your project With INR. 6,50,000 (Six Lakhs fifty thousand Rupees Only).



Director



## Work Order

**Ref:** MI/R&D/2017/721

**Date:** 27/2/2018

**To**

The Principal,  
Malla Reddy College of Engineering  
Dhulapally, Secunderabad-500100

**Dear Sir,**

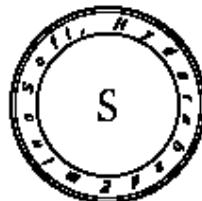
Ref : Sponsorship for funded Project Dated: 2/2/2018

Subject : Work order for the project "**An android-based monitoring and alarm system for patients with chronic Obtrusive Disease**"

With reference to letter of acceptance (dated: 20/2/2018) ,we are accepting your budget proposal as mentioned below and also we are glad to release the work order for the project "**An android-based monitoring and alarm system for patients with chronic Obtrusive Disease**" from today onwards.

S.No	Particular	Amount
1.	Term -1	INR 2,00,000
2.	Term -2	INR 2,00,000
3.	Term -3	INR 2,00,000
	<b>Total</b>	INR 6,00,000

Best wishes

  
Director

# MALLAREDDY COLLEGE OF ENGINEERING

## Department of Computer Science and Engineering

### OVERVIEW OF PROJECT PROPOSAL

Title	An android-based monitoring and alarm system for patients with chronic Obtrusive Disease
Principal Investigator	Dr. A. Kannagi
Description	Consistent monitoring of vital health parameters is an important issue in the medical industry. With recent technologies we are able to carry out remote monitoring of physiological parameters in patients. This allows communication between a patient and medical personnel using a smart-phone, which will collect, analyze and transfer heart rate and oxygen saturation data for subsequent review by a medical professional. Before any on-line analysis is performed on the phone it is necessary to clarify the nature of the correlation between these medical parameters. In the current thesis we establish connection between a patient wearing a pulse-oxymeter and a smart-phone running Android and perform continuous data collection. All measurements were done in consultation with medical facility and involved real patients. This data is subsequently analyzed using change point detection and anomaly detection algorithms in off-line mode. Both techniques are complementary to each other and showed reliable results which could be useful for a medical review



Principal Investigator



Principal

Malla Reddy College of Engineering



1-116 Survey No. 84, Nat Institute U.P. - 201301, Tech. Campus,  
 Hyderabad - 500081  
 Telangana India  
 FSC : KMBK0007466

दिनांक 20/02/2018  
 Date \_\_\_\_\_

Pay **MALLA REDDY COLLEGE OF ENGINEERING** या धारक को Or Bearer

रुपये Rupees **TWO LAKH RUPEES ONLY**

अदा करें।	₹	2,00,000/-
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खाता नं A/C No.	1312217315
--------------------	------------

For Eminosoft Pvt.Ltd

Payable At-par at all branch locations of Kotak Mahindra Bank Ltd.

*[Signature]*  
 Please sign above

⑈000003⑈ 500485027⑈ 004356⑈ 12





# MALLA REDDY COLLEGE OF ENGINEERING

(Formerly CM Engineering College)

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ISO 9001:2015 Certified Institution, Recognition of College under Section 2(f) & 12 (B) of the UGC Act, 1956.

## Utilization Certificate

Title of the Project : An android based monitoring and alarm system for patients with chronic obtrusive disease

Principal Investigator : Dr. A. Kannagi

Certified that out of Rs.6,00,000/- (Total Amount) of Grant-in-aid sanctioned during the financial year 2017-18 in favour of Malla Reddy College of Engineering for research and development activities of Eminsoft as per Sanction Order No MI/R&D/2018/721 Date 27/2/2018. Partially, The sum of Rs.2,00,000/- has been received and appropriately utilized.

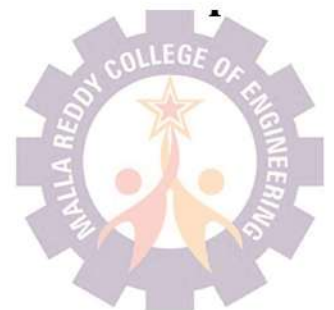
Certified that I have satisfied myself that the conditions on which the Grants in Aid was sanctioned/released have been duly fulfilled that money was actually utilized for the purposes for which it was sanctioned.

**Principal Investigator**

**Head of Institution  
(with seal)**

For M R K REDDY & Co.  
Chartered Accountants  
FRN - 0032655

**Auditor  
(with seal)**





1/118 Survey No. 84, Nal Induru LA Project, near Guntur  
 Hyderabad - 500081  
 Karnataka India  
 FSC : KKBKBE07468

दिनांक 15/08/2018  
 Date

Pay MALLA REDDY COLLEGE OF ENGINEERING

या धारक को Or Bearer

रुपये Rupees TWO LAKH RUPEES ONLY

अदा करें। ₹ 2,00,000/-

For Eminosee Pvt Ltd

बैंक अ/c नं. A/C No. 1312217315

Payable At-par at all branch locations of Kotak Mahindra Bank Ltd

Please sign above

⑈000003⑈ 500485027⑈ 004559⑈ 15



Estd :2005

# MALLA REDDY COLLEGE OF ENGINEERING

(Formerly CM Engineering College)

Approved by AICTE - New Delhi, Affiliated to JNTU - Hyderabad, Accredited by NBA & Accredited by NAAC. ISO 9001:2015 Certified Institution, Recognition of College under Section 2(f) & 12 (B) of the UGC Act, 1956.

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Title of the Project : An android based monitoring and alarm system for patients with chronic obtrusive diseade

Principal Investigator : Dr. A. Kannagi

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Certified that I have satisfied myself that the conditions on which the Grants in Aid was sanctioned/released have been duly fulfilled that money was actually utilized for the purposes for which it was sanctioned.

**Principal Investigator**

**Head of Institution  
(with seal)**

For M R K REDDY & Co.  
Chartered Accountants  
FRN - 0032655

**Auditor  
(with seal)**





Estd :2005

# MALLA REDDY COLLEGE OF ENGINEERING

(Formerly CM Engineering College)

Approved by AICTE - New Delhi, Affiliated to JNTU - Hyderabad, Accredited by NBA & Accredited by NAAC.  
ISO 9001:2015 Certified Institution, Recognition of College under Section 2(f) & 12 (B) of the UGC Act, 1956.

Date: 03.05.2018

To  
The Managing Director,  
MECH Engineers,  
Valsad, Gujarat – 396 035.

Dear Sir,

Subject: Requesting Sponsorship for project — Reg.

Best wishes from Malla Reddy College of Engineering!

Malla Reddy College of Engineering (Formerly CM Engineering College) has been established under the aegis of the Malla Reddy Group of institutions in the year 2005, a majestic empire, founded by chairman Sri. Ch. Malla Reddy. He has been in the field of education for the last 22 years with the intention of spearheading quality education among children from the school level itself. The faculty of various departments are actively pursuing research in their respective technical departments under R&D wing of MRCE.

**Dr. A. Karthikeyan** Department of Mechanical Engineering, is the principal investigator for this proposed work. He is an eminent person in his research area. We request your kind cooperation and financial aid of INR 5,20,000.00 (Five lakhs and twenty thousands only) in the project entitled **“Design and Development of energy efficient freeze dryer with multiport mini-channel shelf heat exchanger”** Here with we have enclosed the budget proposal for the project. Our faculty will contact you in person along with this letter and may detail the scope of work.

We expect your positive response.

Thanking you,

Principal Investigator,



Principal  
Malla Reddy College of Engineering





# MECH Engineers

Plot No. 803/1, 2,3 & 1003, New GIDC, Gundlay, N.H. No-48, Valsad, Gujarat,  
396035, India

## Letter of Acceptance

**Ref:** ME/PROJECT/2018/101

**Date:** 26.05.2018

**To**

The principal,  
Malla Reddy College of Engineering,  
Maisammaguda, Secunderabad - 500100.

**Dear Sir,**

**Ref.:** Sponsorship requisition for Project dated: 03.05.2018

**Subject:** Acceptance for Financial support for the project “**Design and Development of Energy Efficient Freeze Dryer with Multiport Mini-Channel Shelf Heat Exchanger**”

Best wishes from MECH Engineers!!!!

This letter is to inform you that our technical team has reviewed your research project titled, “**Design and Development of Energy Efficient Freeze Dryer with Multiport Mini-Channel Shelf Heat Exchanger**” Based on the report, your proposed project got approval by the managing body. We have planned to extend our support to carry out this research work. In this regard, we are glad to sponsor your project with INR.5, 20,000.00 (Rupees five lakhs twenty thousand only).



  
Managing Director





# MECH Engineers

Plot No. 803/1, 2,3 & 1003, New GIDC, Gundlay, N.H. No-48,Valsad, Gujarat,  
396035, India

## Work Order

**Ref:** ME/PROJECT/WO/2018/101

**Date:** 30.05.2018

**To**

The Principal,  
Malla Reddy College of Engineering,  
Maisammaguda, Secunderabad - 500100.

**Dear Sir,**

**Subject:** Work order for the project “**Design and Development of Energy Efficient Freeze Dryer with Multiport Mini-Channel Shelf Heat Exchanger**”

**Ref.:** Sponsorship for funded Project Dated: 03.07.2018

With reference to letter of acceptance (dated: 26.05.2018) ,we are accepting your budget proposal as mentioned below and also we are glad to release the work order for the project “**Design and Development of energy efficient freeze dryer with multiport mini-channel shelf heat exchanger**” from today onwards.

S. No.	Particular	Amount
1.	Term -1	INR 2,00,000
2.	Term -2	INR 2,00,000
3.	Term -3	INR 1,20,000
	<b>Total</b>	INR 5,20,000.00

Best Wishes!!!



  
Managing Director

**MALLA REDDY COLLEGE OF ENGINEERING**  
**DEPARTMENT OF MECHANICAL ENGINEERING**  
**OVERVIEW OF PROJECT PROPOSAL**

<b>Title</b>	<b>Design and Development of energy efficient freeze dryer with multiport mini-channel shelf heat exchanger</b>
<b>Principal Investigator</b>	<b>Dr. A. Karthikeyan</b>
<b>Description</b>	<p>vacuum freeze-drying technology is applicable to the process of high heat-sensitive products. Due to the long drying period and extremely low processing temperature and pressure, the uniform and efficiency of heat transfer fluid temperature in shelf are critical for product quality. Therefore, in this study, the commercial computer fluid dynamics (CFD) software, FLUENT, was utilized for three-dimension numerical simulation of the shelf vacuum freeze-drying process. The influences of different inlet and outlet positions for shelves on the uniformity of the flow rate and temperature were discussed. Moreover, it explored the impacts on the temperature gradient of shelves after heat exchange of different flow rates and low temperature materials. In order to reduce the developing time and optimize the design, the various secondary refrigerants in different plies of shelves were investigated. According to the effect of heat exchange between different flow rates and low temperature layer material shelves on the temperature gradient of shelves surface, the minimum temperature gradient was 20 L/min, and the maximum was 2.5 L/min.</p>

Principal Investigator



Principal





Estd :2005

# MALLA REDDY COLLEGE OF ENGINEERING

(Formerly CM Engineering College)

Approved by AICTE - New Delhi, Affiliated to JNTU - Hyderabad, Accredited by NBA & Accredited by NAAC. ISO 9001:2015 Certified Institution, Recognition of College under Section 2(f) & 12 (B) of the UGC Act, 1956.

## Utilization Certificate

Title of the Project : Design and Development of energy efficient freeze dryer with multiport mini-channel shelf heat exchanger

Principal investigator : Dr. A. Karthikeyan

Certified that out of Rs.5,20,000/- (Total Amount) of Grant-in-aid sanctioned during the financial year 2017-18 in favour of Malla Reddy College of Engineering for the research and development activities of MECH Engineers as per Sanction Order No ME/PROJECT/WO/2018/101 Date 30.05.2018 . Partially, The sum of Rs.2,00,000/- has been received and appropriately utilized.

Certified that I have satisfied myself that the conditions on which the Grants in Aid was sanctioned/released have been duly fulfilled that money was actually utilized for the purposes for which it was sanctioned.

**Principal Investigator**

**Head of Institution  
(with seal)**

For M R K REDDY & Co.  
Chartered Accountants  
FRN - 003265S

**Auditor  
(with seal)**





Plot 2, URBAN/INDUSTRIAL ESTATE, ROOM HOUSE, ROAD NO. 12,  
 BANARIAS PILES, HYDRABAD 500148, RAJESHW  
 RTGS / NEFT IFSC : HDFC0001895

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**2,00,000/-**

A/c No.  
 अकाउंट नंबर

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SEI A/C

**MECH ENGINEERS**

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⑈049108⑈ 500240048⑈ 003476⑈ 33





Estd :2005

# MALLA REDDY COLLEGE OF ENGINEERING

(Formerly CM Engineering College)

Approved by AICTE - New Delhi, Affiliated to JNTU - Hyderabad, Accredited by NBA & Accredited by NAAC. ISO 9001:2015 Certified Institution, Recognition of College under Section 2(f) & 12 (B) of the UGC Act, 1956.

## Utilization Certificate

Title of the Project : Design and Development of energy efficient freeze dryer with multiport mini-channel shelf heat exchanger

Principal investigator : Dr. A. Karthikeyan

Certified that out of Rs.5,20,000/- (Total Amount) of Grant-in-aid sanctioned during the financial year 2017-18 in favour of Malla Reddy College of Engineering for the research and development activities of MECH Engineers as per Sanction Order No ME/PROJECT/WO/2018/101 Date 30.05.2018 . Partially, The sum of Rs.2,00,000/- has been received and appropriately utilized.

Certified that I have satisfied myself that the conditions on which the Grants in Aid was sanctioned/released have been duly fulfilled that money was actually utilized for the purposes for which it was sanctioned.

**Principal Investigator**

**Head of Institution  
(with seal)**

For M R K REDDY & Co.  
Chartered Accountants  
FRN - 003265S

**Auditor  
(with seal)**





Estd :2005



# MALLA REDDY COLLEGE OF ENGINEERING

(Formerly CM Engineering College)

Approved by AICTE - New Delhi, Affiliated to JNTU - Hyderabad, Accredited by NBA & Accredited by NAAC.  
ISO 9001:2015 Certified Institution, Recognition of College under Section 2(f) & 12 (B) of the UGC Act,1956.

Date: 04.04.2018

To  
The Managing Director,  
MECH Engineers,  
Valsad, Gujarat — 396035.

Dear Sir,

Subject: Requesting Sponsorship for project — Reg.

Best wishes from Malla Reddy College of Engineering!

Malla Reddy College of Engineering (Formerly CM Engineering College) has been established under the aegis of the Malla Reddy Group of institutions in the year 2005, a majestic empire, founded by chairman Sri. Ch. Malla Reddy. He has been in the field of education for the last 22 years with the intention of spearheading quality education among children from the school level itself. The faculty of various departments are actively pursuing research in their respective technical departments under R&D wing of MRCE.

**Dr. P. Velmurugan** Department of Mechanical Engineering, is the principal investigator for this proposed work. He is an eminent person in his research area. We request your kind cooperation and financial aid of INR 4, 05,000.00 (Rupees Four lakhs five thousand only) in the project entitled “**Design, development and performance evaluation of enhanced air-cooling in electronic systems**” Here with we have enclosed the budget proposal for the project. Our faculty will contact you in person along with this letter and may detail the scope of work.

We expect your positive response.

Thanking you,

Principal Investigator



Principal  
Malla Reddy College of Engineering



# MECH Engineers

Plot No. 803/1, 2,3 & 1003, New GIDC, Gundlav, N.H. No-48, Valsad, Gujarat,  
396035, India

## Letter of Acceptance

**Ref:** ME/PROJECT/2018/510

**Date:** 25.04.2018

**To**

The principal,  
Malla Reddy College of Engineering,  
Maisammaguda, Secunderabad - 500100.

**Dear Sir,**

**Ref.:** Sponsorship requisition for Project dated: 04.04.2018

**Subject:** Acceptance for Financial support for the project “**Design, Development and Performance Evaluation of Enhanced Air-Cooling in Electronic Systems**”

Best wishes from MECH Engineers!!!!

This letter is to inform you that our technical team has reviewed your research project titled, “**Design, Development and Performance Evaluation of Enhanced Air-Cooling in Electronic Systems**” Based on the report, your proposed project got approval by the managing body. We have planned to extend our support to carry out this research work. In this regard, we are glad to sponsor your project with INR. 4, 50,000.00 (Rupees Four lakhs fifty thousand only).



  
Managing Director



# MECH Engineers

Plot No. 803/1, 2,3 & 1003, New GIDC, Gundlav, N.H. No-48, Valsad, Gujarat,  
396035, India

## Work Order

**Ref:** ME/PROJECT/WO/2018/510

**Date:** 28.04.2018

**To**

The Principal,  
Malla Reddy College of Engineering,  
Maisammaguda, Secunderabad - 500100.

**Dear Sir,**

**Subject:** Work order for the project “**Design, Development and Performance Evaluation of Enhanced Air-Cooling in Electronic Systems**”

**Ref.:** Sponsorship for funded Project Dated: 04.04.2018

With reference to letter of acceptance (dated: 25.04.2018) ,we are accepting your budget proposal as mentioned below and also we are glad to release the work order for the project “**Design, Development and Performance Evaluation of Enhanced Air-Cooling in Electronic Systems**” from today onwards.

S. No.	Particular	Amount
1.	Term -1	INR 2,00,000
2.	Term -2	INR 1,25,000
3.	Term -3	INR 1,25,000
	<b>Total</b>	INR 4,50,000.00

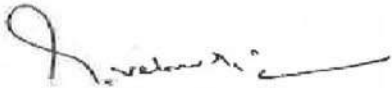
Best Wishes!!!



  
Managing Director

**MALLA REDDY COLLEGE OF ENGINEERING**  
**DEPARTMENT OF MECHANICAL ENGINEERING**  
**OVERVIEW OF PROJECT PROPOSAL**

<b>Title</b>	<b>Design, development and performance evaluation of enhanced air-cooling in electronic systems</b>
<b>Principal Investigator</b>	<b>Dr. P. Velmurugan</b>
<b>Description</b>	<p>In all cooling applications, heat from the device heat sources, must first travel via thermal conduction to the surfaces exposed to the cooling fluid before it can be rejected to the coolant. For example, as shown in Figure 2, heat must be conducted from the chip to the lid to the heat sink before it can be rejected to the flowing air. As can be seen thermal interface materials (TIMs) may be used to facilitate thermal conduction from the chip to the lid and from the lid to the heat sink. In many cases heat spreaders in the form of a flat plate with good thermal conductivity may be placed between the chip and lid to facilitate spreading of the heat from the chip to the lid or heat sink. Vapor chambers are also used to spread heat from a concentrated chip or module heat source to a larger heat sink.</p>



Principal Investigator

  
Principal  
Malla Reddy College of Engineering

Principal



NO 6-3 GANAVATHACHANDRAN FLOOR, PUNJIM HOUSE, ROAD NO.12,  
BANLAWA HILLS, HYDERABAD 50004, ANDHRA PRADESH  
RTGS / NEFT IFSC : HDFC0001299

Weekly Holiday on WEDDAY

2	8	0	4	2	0	1	8
D	D	MM	YY	YY	YY	YY	YY

Valid for 3 months only

Pay **MALLAREDDY COLLEGE OF ENGINEERING**

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Rupees रुपये **TWO LAKHS RUPEES ONLY**

अथवा करें

₹ **2,00,000/-**

A/c No.  
खाता नं.

**19951050012313**

SB A/C

**MECH ENGINEERS**

Payable at par through clearing/transfer at all branches of HDFC BANK LTD

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Estd :2005

# MALLA REDDY COLLEGE OF ENGINEERING

(Formerly CM Engineering College)

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ISO 9001:2015 Certified Institution, Recognition of College under Section 2(f) & 12 (B) of the UGC Act, 1956.

## Utilization Certificate

Title of the Project : Design, development and performance evaluation of enhanced air-cooling in electronic systems

Principal investigator : Dr. P. Velmurugan

Certified that out of Rs.4,50,000/- (Total Amount) of Grant-in-aid sanctioned during the financial year 2018-19 in favour of Malla Reddy College of Engineering for the research and development activities of MECH Engineers as per Sanction Order No ME/PROJECT/WO/2018/510 Date 28.04.2018. Partially, The sum of Rs.2,00,000/- has been received and appropriately utilized.

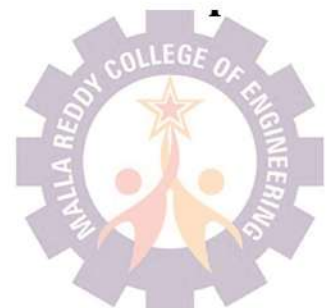
Certified that I have satisfied myself that the conditions on which the Grants in Aid was sanctioned/released have been duly fulfilled that money was actually utilized for the purposes for which it was sanctioned.

Principal Investigator

Head of Institution  
(with seal)

For M R K REDDY & Co.  
Chartered Accountants  
FRN : 0032655

Auditor  
(with seal)







NO. 2, ORISSA GROUND FLOOR, 2X3M HOUSE, ROAD NO. 12,  
 PULINATHA HILL, HYDRABAD-500088, ANDHRA PRADESH  
 RTGS / NEFT ID NO. HDFC0001999

Weekly Holiday on MONDAY

1	2	1	1	2	0	1	8
D	D	M	M	Y	Y	Y	Y

Valid for 3 months only

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Or Bearer  
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Rupees रुपये **ONE LAKH TWENTY FIVE THOUSAND RUPEES ONLY**

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**1,25,000 /-**

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**19951050012333**

SB A/C

**MECH ENGINEERS**

Payable at JCB through clearing transfer at all branches of HDFC BANK LTD.

*[Handwritten Signature]*  
 Please Sign Across Payee and amount only

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Estd :2005

# MALLA REDDY COLLEGE OF ENGINEERING

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## Utilization Certificate

Title of the Project : Design, development and performance evaluation of enhanced air-cooling in electronic systems

Principal investigator : Dr. P. Velmurugan

Certified that out of Rs.4,50,000/- (Total Amount) of Grant-in-aid sanctioned during the financial year 2018-19 in favour of Malla Reddy College of Engineering for the research and development activities of MECH Engineers as per Sanction Order No ME/PROJECT/WO/2018/510 Date 28.04.2018. Partially, The sum of Rs.1,25,000/- has been received and appropriately utilized.

Certified that I have satisfied myself that the conditions on which the Grants in Aid was sanctioned/released have been duly fulfilled that money was actually utilized for the purposes for which it was sanctioned.

**Principal Investigator**

**Head of Institution  
(with seal)**

**Auditor  
(with seal)**





Estd :2005

# MALLA REDDY COLLEGE OF ENGINEERING

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ISO 9001:2015 Certified Institution, Recognition of College under Section 2(f) & 12 (B) of the UGC Act, 1956.

Date: 07.07.2017

To  
The Managing Director,  
MECH Engineers,  
Valsad, Gujarat – 396035.

Dear Sir,

Subject: Requesting Sponsorship for project — Reg.

Best wishes from Malla Reddy College of Engineering!

Malla Reddy College of Engineering (Formerly CM Engineering College) has been established under the aegis of the Malla Reddy Group of institutions in the year 2005, a majestic empire, founded by chairman Sri. Ch. Malla Reddy. He has been in the field of education for the last 22 years with the intention of spearheading quality education among children from the school level itself. The faculty of various departments are actively pursuing research in their respective technical departments under R&D wing of MRCE.

**Dr. S. Ananth** Department of Mechanical Engineering, is the principal investigator for this proposed work. He is an eminent person in his research area. We request your kind cooperation and financial aid of INR 6,50,000.00 (Rupees Six lakhs and fifty thousand only) in the project entitled **“Development of a Nano fluid Coolant for high heat flux devices with Mini-channel heat Exchanger”** Here with we have enclosed the budget proposal for the project. Our faculty will contact you in person along with this letter and may detail the scope of work.

We expect your positive response.

Thanking you,

Principal Investigator



Principal  
Malla Reddy College of Engineering



# MECH Engineers

Plot No. 803/1, 2,3 & 1003, New GIDC, Gundlav, N.H. No-48, Valsad, Gujarat,  
396035, India

## Letter of Acceptance

**Ref:** ME/PROJECT/2017/121

**Date:** 21.07.2017

**To**

The principal,  
Malla Reddy College of Engineering,  
Maisammaguda, Secunderabad - 500100.

**Dear Sir,**

**Ref.:** Sponsorship requisition for Project dated: 07.07.2017

**Subject:** Acceptance for Financial support for the project “**Development of a Nano Fluid Coolant for High Heat Flux Devices with Mini-Channel Heat Exchanger**”

Best wishes from MECH Engineers!!!!

This letter is to inform you that our technical team has reviewed your research project titled, “**Development of a Nano Fluid Coolant for High Heat Flux Devices with Mini-Channel Heat Exchanger**” Based on the report, your proposed project got approval by the managing body. We have planned to extend our support to carry out this research work. In this regard, we are glad to sponsor your project With INR. 6,50,000.00 (Rupees Six lakhs and fifty thousand only).



  
Managing Director



# MECH Engineers

Plot No. 803/1, 2,3 & 1003, New GIDC, Gundlav, N.H. No-48, Valsad, Gujarat,  
396035, India

## Work Order

**Ref:** ME/PROJECT/WO/2017/121

**Date:** 31.07.2017

**To**

The Principal,  
Malla Reddy College of Engineering,  
Maisammaguda, Secunderabad - 500100.

**Dear Sir,**

**Subject:** Work order for the project “Development of a Nano Fluid Coolant for High Heat Flux Devices with Mini-Channel Heat Exchanger”.

**Ref.:** Sponsorship for funded Project dated: 07.07.2017.

With reference to letter of acceptance (dated: 21.07.2017) ,we are accepting your budget proposal as mentioned below and also we are glad to release the work order for the project “Development of a Nano Fluid Coolant for High Heat Flux Devices with Mini-Channel Heat Exchanger” from today onwards.

S.No	Particular	Amount
1.	Term -1	INR 3,10,000
2.	Term -2	INR 2,20,000
3.	Term -3	INR 1,10,000
	<b>Total</b>	INR 6,50,000.00

Best Wishes!!!



  
Managing Director



**MALLA REDDY COLLEGE OF ENGINEERING**  
**DEPARTMENT OF MECHANICAL ENGINEERING**  
**OVERVIEW OF PROJECT PROPOSAL**

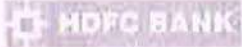
<b>Title</b>	<b>Development of a Nano fluid Coolant for high heat flux devices with Mini-channel heat Exchanger</b>
<b>Principal Investigator</b>	<b>Dr. S. Ananth</b>
<b>Description</b>	<p>Nanofluids are the suspension of ultrafine solid nanoparticles in a base fluid. Nanofluids are expected to be a promising coolant candidate for thermal management system of next generation high heat dissipation electronic systems. Nanofluids are used with different volume fractions. A minichannel heat sink with a 20 x 20 cm bottom is analyzed for SiC-water nanofluid and TiO(2)-water nanofluid turbulent flow as coolants through hydraulic diameters. The results showed that enhancement in thermal conductivity by dispersed SiC in water at 4% volume fraction was 12.44% and by dispersed TiO(2) in water was 9.99% for the same volume fraction. It was found that by using SiC-water nanofluid as a coolant instead of water, an improvement of approximately 7.25%-12.43% could be achieved and by using TiO(2)-water 7.63%-12.77%. The maximum pumping power by using SiC-water nanofluid at 2 m/s and 4% vol. was 0.28 W and at 6 m/S and 4% volume equal to 5.39 W. By using TiO(2)-water nanofluid at 2 m/s and 4% vol. it was found to be 0.29 W and 5.64 W at 6 m/s with the same volume of 4%.</p>



Principal Investigator




Principal



NO 8 2 GROUND/FIRST FLOOR, ZION HOUSE, ROAD NO 12,  
BANAGATA HILLS HYDRABAD 500084 ANDHRA PRADESH  
RTGS / NEFT / IFSC : HDFC0001989

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A/c No.  
खाता नं

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SB / AC

**MECH ENGINEERS**

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Estd :2005

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## Utilization Certificate

Title of the Project : Development of a Nano fluid Coolant for high heat flux devices with Mini-channel heat Exchanger

Principal Investigator : Dr. S. Ananth

Certified that out of Rs.6,50,000/- (Total Amount) of Grant-in-aid sanctioned during the financial year 2017-18 in favour of Malla Reddy College of Engineering On the subject project for the research and development activities of MECH Engineers as per Sanction Order No ME/PROJECT/WO/2017/121 Date 31.07.2017. Partially, The sum of Rs.3,10,000/- has been received and appropriately utilized.

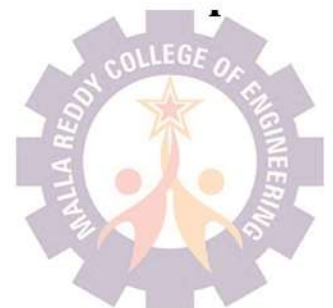
Certified that I have satisfied myself that the conditions on which the Grants in Aid was sanctioned/released have been duly fulfilled that money was actually utilized for the purposes for which it was sanctioned.

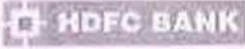
**Principal Investigator**

**Head of Institution  
(with seal)**

For M R K REDDY & Co.  
Chartered Accountants  
FRN - 003265S

**Auditor  
(with seal)**





NO. 8 P. 601/ANANT CRDUMBI ELOOR, ZION HOUSE, ROAD NO. 12,  
JANAKIA HILLS, HYDRABAD 500034, ANDHRA PRADESH  
RTGS / NEFT IFSC : HDFC0001999

Weekly Holiday on SUNDAY

2 0 0 2 2 0 1 8  
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Valid for 3 months only

Pay **MALLAREDDY COLLEGE OF ENGINEERING**

Or Bearer  
या धारक को

Rupees रुपये **TWO LAKHS TWENTY THOUSAND RUPEES ONLY**

अदा करें

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2,20,000/-

A/c No.  
खाता नं.

19951050012280

SB A/C

**MECH ENGINEERS**

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Estd :2005

# MALLA REDDY COLLEGE OF ENGINEERING

(Formerly CM Engineering College)

Approved by AICTE - New Delhi, Affiliated to JNTU - Hyderabad, Accredited by NBA & Accredited by NAAC.  
ISO 9001:2015 Certified Institution, Recognition of College under Section 2(f) & 12 (B) of the UGC Act, 1956.

## Utilization Certificate

Title of the Project : Development of a Nano fluid Coolant for high heat flux devices with Mini-channel heat Exchanger

Principal Investigator : Dr. S. Ananth

Certified that out of Rs.6,50,000/- (Total Amount) of Grant-in-aid sanctioned during the financial year 2017-18 in favour of Malla Reddy College of Engineering On the subject project for the research and development activities of MECH Engineers as per Sanction Order No ME/PROJECT/WO/2017/121 Date 31.07.2017. Partially, The sum of Rs.2,20,000/- has been received and appropriately utilized.

Certified that I have satisfied myself that the conditions on which the Grants in Aid was sanctioned/released have been duly fulfilled that money was actually utilized for the purposes for which it was sanctioned.

**Principal Investigator**

**Head of Institution  
(with seal)**

For M R K REDDY & Co.  
Chartered Accountants  
FRN - 0032655

**Auditor  
(with seal)**





**HDFC BANK**

101 2/2 MIDC UNIT 101, GROUND FLOOR, KOKIYA HOUSE, ROAD NO. 12,  
MULLIBABA HILL, 571002 BANGALORE, KARNATAKA PRADESH  
RTGS / NEFT IFS : HDFC0001693

Weekly holiday on SUNDAY

1 7 0 9 | 2 0 1 8  
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Pay **MALLA REDDY COLLEGE OF ENGINEERING**

Or Bearer  
या धारक को

Rupees रुपये **ONE LAKH TEN THOUSAND RUPEES ONLY**

अदा करें

₹

1,10,000/-

A/c No.  
19951050012299

19951050012299

SB A/C

**MECH ENGINEERS**

Payable at par through clearing/transfer at all branches of HDFC BANK LTD

Please sign in blue / black ink

⑈049108⑈ 500240048⑈ 004670⑈ 25



Estd :2005

# MALLA REDDY COLLEGE OF ENGINEERING

(Formerly CM Engineering College)

Approved by AICTE - New Delhi, Affiliated to JNTU - Hyderabad, Accredited by NBA & Accredited by NAAC.  
ISO 9001:2015 Certified Institution, Recognition of College under Section 2(f) & 12 (B) of the UGC Act, 1956.

## Utilization Certificate

Title of the Project : Development of a Nano fluid Coolant for high heat flux devices with Mini-channel heat Exchanger

Principal Investigator : Dr. S. Ananth

Certified that out of Rs.6,50,000/- (Total Amount) of Grant-in-aid sanctioned during the financial year 2017-18 in favour of Malla Reddy College of Engineering On the subject project for the research and development activities of MECH Engineers as per Sanction Order No ME/PROJECT/WO/2017/121 Date 31.07.2017. Partially, The sum of Rs.1,10,000/- has been received and appropriately utilized.

Certified that I have satisfied myself that the conditions on which the Grants in Aid was sanctioned/released have been duly fulfilled that money was actually utilized for the purposes for which it was sanctioned.

**Principal Investigator**

**Head of Institution  
(with seal)**

For M R K REDDY & Co.  
Chartered Accountants  
FRN - 0032655

**Auditor  
(with seal)**





Estd :2005

# MALLA REDDY COLLEGE OF ENGINEERING

(Formerly CM Engineering College)

Approved by AICTE - New Delhi, Affiliated to JNTU - Hyderabad, Accredited by NBA & Accredited by NAAC.  
ISO 9001:2015 Certified Institution, Recognition of College under Section 2(f) & 12 (B) of the UGC Act, 1956.

Date: 08.08.2018

To  
The Managing Director,  
MECH Engineers,  
Valsad, Gujarat – 396035.

Dear Sir,

Subject: Requesting Sponsorship for project — Reg.

Best wishes from Malla Reddy College of Engineering!

Malla Reddy College of Engineering (Formerly CM Engineering College) has been established under the aegis of the Malla Reddy Group of institutions in the year 2005, a majestic empire, founded by chairman Sri. Ch. Malla Reddy. He has been in the field of education for the last 22 years with the intention of spearheading quality education among children from the school level itself. The faculty of various departments are actively pursuing research in their respective technical departments under R&D wing of MRCE.

**Dr.M.Selvam** Department of Mechanical Engineering, is the principal investigator for this proposed work. He is an eminent person in his research area. We request your kind cooperation and financial aid of INR 5,30,000.00 (Rupees Five lakhs and thirty thousand only) in the project entitled **“3D finite element simulations of fatigue crack growth in gas turbine disk”** Here with we have enclosed the budget proposal for the project. Our faculty will contact you in person along with this letter and may detail the scope of work.

We expect your positive response.

Thanking you,

Principal Investigator



  
Principal  
Malla Reddy College of Engineering



# MECH Engineers

Plot No. 803/1, 2,3 & 1003, New GIDC, Gundlav, N.H. No-48, Valsad, Gujarat,  
396035, India

## Letter of Acceptance

**Ref:** ME/PROJECT/2018/160

**Date:** 23.08.2018

**To**

The principal,  
Malla Reddy College of Engineering,  
Maisammaguda, Secunderabad - 500100.

**Dear Sir,**

**Ref.:** Sponsorship acquisition for Project dated: 08.08.2018

**Subject:** Acceptance for Financial support for the project “**3d Finite Element Simulations of Fatigue Crack Growth in Gas Turbine Disk**”

Best wishes from MECH Engineers!!!!

This letter is to inform you that our technical team has reviewed your research project titled, “**3d Finite Element Simulations of Fatigue Crack Growth in Gas Turbine Disk**” Based on the report, your proposed project got approval by the managing body. We have planned to extend our support to carry out this research work. In this regard, we are glad to sponsor your project with INR. 5, 30,000.00 (Rupees Five lakhs and thirty thousand only).



Managing Director



# MECH Engineers

Plot No. 803/1, 2,3 & 1003, New GIDC, Gundlav, N.H. No-48, Valsad, Gujarat,  
396035, India

## Work Order

**Ref:** ME/PROJECT/WO/2018/160

**Date:** 30.08.2018

**To**

The principal,  
Malla Reddy College of Engineering,  
Maisammaguda, Secunderabad - 500100.

**Dear Sir,**

**Subject:** Work order for the project “3d Finite Element Simulations of Fatigue Crack Growth in Gas Turbine Disk”

**Ref.:** Sponsorship for funded Project dated: 08.08.2018

With reference to letter of acceptance (dated: 23.08.2018) ,we are accepting your budget proposal as mentioned below and also we are glad to release the work order for the project “3d Finite Element Simulations of Fatigue Crack Growth in Gas Turbine Disk” from today onwards.

S.No	Particular	Amount
1.	Term -1	INR 2,20,000
2.	Term -2	INR 2,00,000
3.	Term -3	INR 1,10,000
	<b>Total</b>	INR 5,30,000.00

Best Wishes!!!



  
Managing Director



**MALLA REDDY COLLEGE OF ENGINEERING**  
**DEPARTMENT OF MECHANICAL ENGINEERING**  
**OVERVIEW OF PROJECT PROPOSAL**

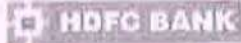
<b>Title</b>	<b>3D finite element simulations of fatigue crack growth in gas turbine disk</b>
<b>Principal Investigator</b>	<b>Dr.M.Selvam</b>
<b>Description</b>	<p>an FE detailed study of a gas turbine test disc, subjected to similar conditions as in the rim-spinning test, is presented. Finite element analysis were derived from a plain disc (without cracks) and for a geometry with two types of cracks, both at the notch root of the blade insert and located in the corner and in the centre (central crack). A crack aspect ratio of <math>(a/c)=1</math> was assumed. Fracture mechanics parameters, J integral and K were used in the assessment, and these were computed with the linear elastic and elastic plastic finite element method. Using a crack propagation program with appropriate fatigue creep crack growth rate data, previously obtained in specimens for the nickel base superalloy IN718 at 600°C, fatigue life predictions were made. The predicted life results were checked against experimental data obtained in real test discs, and very good agreement was found. The FE method, based on experimental fatigue data obtained in small laboratory specimens, have shown a great potential for development, and may be able to reduce the enormous costs involved in the testing of real size components and replace tests made in test components.</p>



Principal Investigator



Principal



NO. 57, BILWAL/GIRIDHAR FLOOR, 2XKM HOUSE, ROAD NO. 12,  
WALLAFAHILL S.V.V. DIST. ANAPARTI ANDHRA PRADESH  
RTGS / NEFT IFSC : HDFC0001995

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Rupees रुपये **TWO LAKHS TWENTY THOUSAND RUPEES ONLY**

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**MECH ENGINEERS**

Payable at par through clearing transfer at all branches of HDFC BANK LTD.

Please Sign and Stamp of account holder

\*049108\* 5002400480 005678\* 19



# MALLA REDDY COLLEGE OF ENGINEERING

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Approved by AICTE - New Delhi, Affiliated to JNTU - Hyderabad, Accredited by NBA & Accredited by NAAC. ISO 9001:2015 Certified Institution, Recognition of College under Section 2(f) & 12 (B) of the UGC Act, 1956.

## Utilization Certificate

Title of the Project : 3D finite element simulations of fatigue crack growth in gas turbine disk

Principal investigator : Dr.M.Selvam

Certified that out of Rs.5,30,000/- (Total Amount) of Grant-in-aid sanctioned during the financial year 2018-19 in favour of Malla Reddy College of Engineering for the research and development activities of MECH Engineers as per Sanction Order No ME/PROJECT/WO/2018/160 Date 30.08.2018. Partially, The sum of Rs.2,20,000/- has been received and appropriately utilized.

Certified that I have satisfied myself that the conditions on which the Grants in Aid was sanctioned/released have been duly fulfilled that money was actually utilized for the purposes for which it was sanctioned.

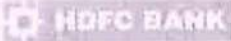
**Principal Investigator**

**Head of Institution  
(with seal)**

For M R K REDDY & Co.  
Chartered Accountants  
FRN - 0032655

**Auditor  
(with seal)**





NRI P 689A/1A/ST/09/15 L 19/4, KEM HOUSE, ROAD NO. 12,  
 PUNE MARKET LLS, HYDRABAD 500003 ANDHRA PRADESH  
 RTGS / NEFT IFSC : HDFC0001009

Weekly Holiday on SUNDAY  
 1 5 0 2 2 0 1 9  
 D D M Y Y Y Y  
 Valid for 3 months only

Pay **MALLAREDDY COLLEGE OF ENGINEERING**

Or Bearer  
 या धारक को

Rupees रुपये **TWO LAKH RUPEES ONLY**

अथवा करें

₹

**2,00,000 /-**

A/c No.  
 खाते नं.

**19951050012417**

SB A/C

**MECH ENGINEERS**

Payment of pay through clearing/transfer at all branches of HDFC BANK LTD.

Please sign above / उपर लिखें

\*049106\* 500240048: 005680 11





Estd :2005

# MALLA REDDY COLLEGE OF ENGINEERING

(Formerly CM Engineering College)

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ISO 9001:2015 Certified Institution, Recognition of College under Section 2(f) & 12 (B) of the UGC Act, 1956.

## Utilization Certificate

Title of the Project : 3D finite element simulations of fatigue crack growth in gas turbine disk

Principal investigator : Dr.M.Selvam

Certified that out of Rs.5,30,000/- (Total Amount) of Grant-in-aid sanctioned during the financial year 2018-19 in favour of Malla Reddy College of Engineering for the research and development activities of MECH Engineers as per Sanction Order No ME/PROJECT/WO/2018/160 Date 30.08.2018. Partially, The sum of Rs.2,00,000/- has been received and appropriately utilized.

Certified that I have satisfied myself that the conditions on which the Grants in Aid was sanctioned/released have been duly fulfilled that money was actually utilized for the purposes for which it was sanctioned.

**Principal Investigator**

**Head of Institution  
(with seal)**

For M R K REDDY & Co.  
Chartered Accountants  
FRN - 0032655

**Auditor  
(with seal)**







Estd :2005

# MALLA REDDY COLLEGE OF ENGINEERING

(Formerly CM Engineering College)

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ISO 9001:2015 Certified Institution, Recognition of College under Section 2(f) & 12 (B) of the UGC Act, 1956.

Date: 01.09.2018

To

The Managing Director,

Avinash Industries, Kottivakkam,

Chennai – 600041

Dear Sir,

Subject: Requesting Sponsorship for project — Reg.

Best wishes from Malla Reddy College of Engineering!

Malla Reddy College of Engineering (Formerly CM Engineering College) has been established under the aegis of the Malla Reddy Group of institutions in the year 2005, a majestic empire, founded by chairman Sri. Ch. Malla Reddy. He has been in the field of education for the last 22 years with the intention of spearheading quality education among children from the school level itself. The faculty of various departments are actively pursuing research in their respective technical departments under R&D wing of MRCE.

**Dr.P.Karthikeyan** Department of Mechanical Engineering, is the principal investigator for this proposed work. He is an eminent person in his research area. We request your kind cooperation and financial aid of INR 3,00,000.00 (Rupees Three lakhs only) in the project entitled “**Fabrication of Composite material kitchen Work Tops**” Here with we have enclosed the budget proposal for the project. Our faculty will contact you in person along with this letter and may detail the scope of work.

We expect your positive response.

Thanking you,

Principal Investigator



Principal  
Malla Reddy College of Engineering

**Letter of Acceptance**

**Ref:** ME/TXT/2018/210

**Date:** 18.09.2018

**To**

The principal,  
Malla Reddy College of Engineering,  
Maisammaguda, Secunderabad - 500100.

**Dear Sir,**

**Ref.:** Sponsorship acquisition for Project dated: 01.09.2018

**Subject:** Acceptance for Financial support for the project “**Fabrication of Composite Material Kitchen Work Tops**”

Best wishes from Avinash Industries!!!!

This letter is to inform you that our technical team has reviewed your research project titled, “**Fabrication of Composite Material Kitchen Work Tops**” Based on the report, your proposed project got approval by the managing body. We have planned to extend our support to carry out this research work. In this regard, we are glad to sponsor your project with INR. 3,00,000.00 (Rupees Three lakhs three only ).



  
Avinash Industries,

Director

**Work Order**

**Ref:** ME/TXT/WO/2018/210

**Date:** 28.09.2018

**To**

The principal,  
Malla Reddy College of Engineering,  
Maisammaguda, Secunderabad - 500100.

**Dear Sir,**

**Subject:** Work order for the project “**Fabrication of Composite Material Kitchen Work Tops**”

**Ref.:** Sponsorship for funded Project dated: 01.09.2018

With reference to letter of acceptance (dated: 18.09.2018) ,we are accepting your budget proposal as mentioned below and also we are glad to release the work order for the project “**Fabrication of Composite Material Kitchen Work Tops**” from today onwards.

S.No	Particular	Amount
1.	Term -1	INR 2,00,000
2.	Term -2	INR 50,000
3.	Term -3	INR 50,000
	<b>Total</b>	INR 3,00,000.00

Best Wishes!!!



  
Avinash Industries,

Director

**MALLA REDDY COLLEGE OF ENGINEERING**  
**DEPARTMENT OF MECHANICAL ENGINEERING**  
**OVERVIEW OF PROJECT PROPOSAL**

<b>Title</b>	<b>Fabriaction of Composite metrial kitchen Work Tops</b>
<b>Principal Investigator</b>	<b>Dr.P.Karthikeya</b>
<b>Description</b>	<p>Quartz Surfaces a man-made product, comprises majorly ofquartz, one of nature’s strongest material and a mix of bonding agent, pigment and additives. Similar in appearance to natural stone, quartz enjoy certain innate benefits not available with natural material namely durability, strength and stain and heat resistant qualities. Further, natural stones are also porous which leaves room for bacteria to get into fissures and pores where it can be tough to eradicate, while on the other hand Engineered stone doesn’t absorb liquids resulting in easier cleaning and more effective than naturalstone.</p> <p>Engineered stone is also the fastest growing material to be used in the countertop industry. Rapid growth of the product has been driven by the material’s superior physical attributes relative to other countertop materials, its attractive relative value, as well as broad array of colors and ease of fabrication. The growth is expected to remain strong as it gains further awareness and acceptance in several existing and newer markets - the product is fairly matured and developed in Israel and Australia, it is still at a nascent stage in markets like USA and Canada, two of the largest markets in the world.</p> <p>Quartz is the most abundant mineral on Earth and one of the hardest, so it is "hardly" surprising that manufacturers saw its great potential for a surface material more than 50 years ago. Since that time, quartz countertops have grown in popularity as homeowners discovered what the earliest quartz pioneers knew - when the natural mineral quartz is improved upon by man's ingenuity, quartz countertops can compete with other natural stone countertops in every way.</p>

Principal Investigator



Principal

A/c Payee **यूनियन बँक Union Bank**

BRANCH - 501113  
MAUSAMMAGUDA - 501013  
IFSC - UBIN0571140

VALID FOR ENDORSING FROM THE DATE OF ISSUE

ISSUE DATE 28 09 2018

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1HB/34  
TO SIGN IN OR BEARER

IN RUPEES **TWO LAKHS RUPEES ONLY**

₹ \*\* 2,00,000 /-

IFSC A/c No **71140101110050038**

Chq. No. **02027527**

FOR **AVINASH INDUSTRIES**

*A. Vijay*  
Authorized Signatory

एक ही राशि सभी शाखाओं में बदलाव पर एक  
PAYABLE AT PAR AT ALL OUR BRANCHES IN INDIA

PLEASE SIGN ABOVE THIS LINE

⑆027523⑆ 500025038⑆ 7114038⑆ 30





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# MALLA REDDY COLLEGE OF ENGINEERING

(Formerly CM Engineering College)

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ISO 9001:2015 Certified Institution, Recognition of College under Section 2(f) & 12 (B) of the UGC Act, 1956.

## Utilization Certificate

Title of the Project : Fabrication of Composite material kitchen Work Tops

Principal investigator : Dr.P.Karthikeyan

Certified that out of Rs.3,00,000/- (Total Amount) of Grant-in-aid sanctioned during the financial year 2018-19 in favour of Malla Reddy College of Engineering for the research and development activities of Avinash Industries as per Sanction Order No ME/TXT/WO/2018/210 Date 28.09.2018. Partially, The sum of Rs.2,00,000/- has been received and appropriately utilized.

Certified that I have satisfied myself that the conditions on which the Grants in Aid was sanctioned/released have been duly fulfilled that money was actually utilized for the purposes for which it was sanctioned.

**Principal Investigator**


**Head of Institution  
(with seal)**



For M R K REDDY & Co.  
Chartered Accountants  
FRN - 0032655

**Auditor  
(with seal)**



A/c Payee  Union Bank

BRANCH - 501114  
MAISAMMAGUDA, 501114  
IFSC - UBIN0571148

VALID FOR 6 MONTHS FROM THE DATE OF ISSUE  
DATE: 0 2 0 5 2 0 1 9

PAY **MALLA REDDY COLLEGE OF ENGINEERING**

1HB34  
FOR CASH OR BEARER

RUPEES **FIFTY THOUSAND RUPEES ONLY**

₹ 50,000 /-

A/c No. **71140101110050046**

Cheque No. **02027535**

For **AVINASH INDUSTRIES**

  
Authorized Signatory

एक रुपया के समान सभी बैंकों पर मान्यता प्राप्त है  
NEGOTIABLE AT PAR AT ALL OUR BRANCHES IN INDIA

PLEASE SIGN ABOVE THIS LINE

⑈027535⑈ 500025038⑈ 711562⑈ 15

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(Formerly CM Engineering College)

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## Utilization Certificate

Title of the Project : Fabrication of Composite material kitchen Work Tops

Principal investigator : Dr.P.Karthikeyan

Certified that out of Rs.3,00,000/- (Total Amount) of Grant-in-aid sanctioned during the financial year 2018-19 in favour of Malla Reddy College of Engineering for the research and development activities of Avinash Industries as per Sanction Order No ME/TXT/WO/2018/210 Date 28.09.2018. Partially, The sum of Rs.50,000/- has been received and appropriately utilized.

Certified that I have satisfied myself that the conditions on which the Grants in Aid was sanctioned/released have been duly fulfilled that money was actually utilized for the purposes for which it was sanctioned.

**Principal Investigator**

**Head of Institution  
(with seal)**

**Auditor  
(with seal)**





Estd :2005

# MALLA REDDY COLLEGE OF ENGINEERING

(Formerly CM Engineering College)

Approved by AICTE - New Delhi, Affiliated to JNTU - Hyderabad, Accredited by NBA & Accredited by NAAC. ISO 9001:2015 Certified Institution, Recognition of College under Section 2(f) & 12 (B) of the UGC Act,1956.

Date: 4/10/2018

To  
The Managing Director  
Mech Engineers  
Hyderabad, Telangana -500067

Dear sir,

Subject: Requesting Sponsorship for project — Reg

.Best wishes from Malla Reddy College of Engineering!

Malla Reddy College of Engineering (Formerly CM Engineering College) has been established under the aegis of the Malla Reddy Group of institutions in the year 2005, a majestic empire, founded by chairman Sri. Ch. Malla Reddy. He has been in the field of education for the last 22 years with the intention of spearheading quality education among children from the school level itself. The faculty members of various departments are actively pursuing research in their respective technical departments under R&D wing of MRCE.

**Dr.Mageswaran** ,Professor Department of Mechanical, is the principal investigator for this proposed work.he is an eminent person in his research area. We request your kind cooperation and financial aid of INR 6,20,000.00 (Rupees Six lakhs twenty thousand only) in the project entitled “**Estimation of temperature distribution in laser welding**”. Here with we have enclosed the budget proposal for the project. Our faculty will contact you in person along with this letter and may detail the scope of work.

We expect your positive response.

Thanking you,

Principal Investigator



Principal  
Malla Reddy College of Engineering





# MECH Engineers

Plot No. 803/1, 2,3& 1003, New GIDC, Gundlav, N.H. No-48, Valsad, Gujarat,  
396035, India

## Letter of Acceptance

**Ref:** ME/PROJECT/2018/657

**Date:** 22/10/2018

**To**

The principal,  
Malla Reddy College of Engineering,  
Maisammaguda,  
Secunderabad-500100

**Dear Sir,**

**Ref :** Sponsorship for Project Dated: 4/10/2018

**Subject :** Acceptance for Financial aid for the project “**Estimation of temperature distribution in laser welding**”

Best wishes from Mech Engineers!!!

This letter is to inform you that our technical team has reviewed your research project titled, “**Estimation of temperature distribution in laser welding.**” Based on the report, your proposed project got approval by the managing body. We have planned to extend our support to carry out this research work. In this regard, we are glad to sponsor your project With INR. 6,20,000 (Six Lakhs Twenty Thousand Rupees Only).



  
Managing Director





# MECH Engineers

Plot No. 803/1, 2,3& 1003, New GIDC, Gundlav, N.H. No-48, Valsad, Gujarat,  
396035, India

Work Order

**Ref:** ME/PROJECT/WO/2018/657

**Date:** 31/10/2018

**To**

The Principal,  
Malla Reddy College of Engineering  
Dhulapally, Secunderabad-500100

**Dear Sir,**

Ref : Sponsorship for funded Project Dated: 4/10/2018

Subject : Work order for the project "**Estimation of temperature distribution  
in laser welding**"

With reference to letter of acceptance (dated: 22/10/2018) ,we are accepting your budget proposal as mentioned below and also we are glad to release the work order for the project "**Estimation of temperature distribution in laser welding**" from today onwards.

S.No	Particular	Amount
1.	Term -1	INR 2,20,000
2.	Term -2	INR 2,00,000
3.	Term -3	INR 2,00,000
	<b>Total</b>	INR 6,20,000



Managing Director

**MALLA REDDY COLLEGE OF ENGINEERING**  
**DEPARTMENT OF MECHANICAL ENGINEERING**  
**OVERVIEW OF PROJECT PROPOSAL**

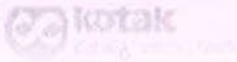
<b>Title</b>	<b>Estimation of temperature distribution in laser welding</b>
<b>Principal Investigator</b>	<b>Dr. C. Mageswaran</b>
<b>Description</b>	<p>With the implementation of more stringent emissions standards, ultrahigh strength steel has been increasingly used in vehicle body to reduce the carbon emissions, but softening in the heat-affected zone is one of the most serious issues faced with in welding of this steel. In this paper, a finite element model (FEM) was developed to estimate temperature distribution in laser welding of lapped martensitic steels M1500 considering the effect of interface. Three methods to characterize the effect of interface have been adopted. The comparison result shows that the method using two groups of contact elements with birth and death options could accurately characterize the thermal contact conductance properties of the interface before and after welding, respectively. Based on the simulated temperature-time curve, a carbon diffusion model was then developed to estimate the martensite tempering transformation in the softening zone. Maximum softening degree and location of the softening zone were estimated and validated by hardness measurement experiments</p>



Principal Investigator

  
Principal  
Malla Reddy College of Engineering

Principal



1, 118 Survey No. 84, Narajustina Sahasrabudhaniketan,  
Hyderabad - 500081  
Kotak India  
1800-230-0000

Drawn Date 10/11/2017

**THE FEDERAL BANK LIMITED**

Kukatpally Br. [ap1]  
Hyderabad - 500082  
IFSC: FDRL0001569

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का. नं. / A/c No. **15690200002410**

Chq.No. 10053140  
SG

For MECH Engineers

AUTHORISED SIGNATORY AUTHORIZED SIGNATORY  
please sign above

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Estd :2005

# MALLA REDDY COLLEGE OF ENGINEERING

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## Utilization Certificate

Title of the Project : Estimation of temperature distribution in laser welding

Principal Investigator : Dr. C. Mageswaran

Certified that out of Rs.6,20,000/- (Total Amount) of Grant-in-aid sanctioned during the financial year 2018-19 in favour of Malla Reddy College of Engineering for the research and development activities of MECH Engineers as per Sanction Order No ME/PTROJECT/2018/657 Date 31/10/2018. Partially, The sum of Rs.2,20,000/- has been received and appropriately utilized.

Certified that I have satisfied myself that the conditions on which the Grants in Aid was sanctioned/released have been duly fulfilled that money was actually utilized for the purposes for which it was sanctioned.

**Principal Investigator**

**Head of Institution  
(with seal)**

For M R K REDDY & Co.  
Chartered Accountants  
FRN - 0032655

**Auditor  
(with seal)**



THE  
**FEDERAL BANK**  
LIMITED

Kukatpally Br. Tap1  
Hyderabad - 500082  
IFSC: FDRL0001569

CURRENT ACCOUNT

Valid for 3 months only

FREEDOM CURRENT

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D O M M Y Y Y Y

Pay **MALLA REDDY COLLEGE OF ENGINEERING**

या धारक को or Bearer

रुपये Rupees **TWO LAKHS RUPEES ONLY**

अदा करें।

₹

2,00,000/-

अ. सं.  
A/c No.

15690200002419

For MECH Engineers

Chq.No 10053121  
SG



AUTHORISED SIGNATORY AUTHORIZED SIGNATORY

please sign above

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Estd :2005

# MALLA REDDY COLLEGE OF ENGINEERING

(Formerly CM Engineering College)

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## Utilization Certificate

Title of the Project : Estimation of temperature distribution in laser welding

Principal Investigator : Dr. C. Mageswaran

Certified that out of Rs.6,20,000/- (Total Amount) of Grant-in-aid sanctioned during the financial year 2018-19 in favour of Malla Reddy College of Engineering for the research and development activities of MECH Engineers as per Sanction Order No ME/PTROJECT/2018/657 Date 31/10/2018. Partially, The sum of Rs.2,00,000/- has been received and appropriately utilized.

Certified that I have satisfied myself that the conditions on which the Grants in Aid was sanctioned/released have been duly fulfilled that money was actually utilized for the purposes for which it was sanctioned.

**Principal Investigator**

**Head of Institution  
(with seal)**

For M R K REDDY & Co.  
Chartered Accountants  
FRN - 0032655

**Auditor  
(with seal)**





Estd :2005

# MALLA REDDY COLLEGE OF ENGINEERING

(Formerly CM Engineering College)

Approved by AICTE - New Delhi, Affiliated to JNTU - Hyderabad, Accredited by NBA & Accredited by NAAC. ISO 9001:2015 Certified Institution, Recognition of College under Section 2(f) & 12 (B) of the UGC Act,1956.

Date: 7/8/2017

To

The Managing Director

AMI Technologies

Hyderabad, Telangana- 500067

Dear sir,

Subject: Requesting Sponsorship for project — Reg

.Best wishes from Malla reddy college of engineering!

Malla Reddy College of Engineering (Formerly CM Engineering College) has been established under the aegis of the Malla Reddy Group of institutions in the year 2005, a majestic empire, founded by chairman Sri. Ch. Malla Reddy. He has been in the field of education for the last 22 years with the intention of spearheading quality education among children from the school level itself. The faculty of various departments are actively pursuing research in their respective technical departments under R&D wing of MRCE.

**Dr. P. John Paul** ,Professor Department of Computer Science and engineering, is the principal investigator for this proposed work.he is an eminent person in his research area. We request your kind cooperation and financial aid of INR 7,50,000.00 (Rupees seven 7 lakhs fifty thousand only) in the project entitled “**Development of Configurable platform for signal and image processing applications**” .Here with we have enclosed the budget proposal for the project. Our faculty will contact you in person along with this letter and may detail the scope of work.

We expect your positive response.

Thanking you,

Principal investigator





# AMI TECH INDIA PVT LTD

Hitech city main road, Huda techno enclave,  
Hyderabad, Telangana -500081

## Letter of Acceptance

**Ref:** MI/EXTERNAL FUND/2017/879

**Date:** 28/8/2017

**To**

The principal,  
Malla Reddy College of Engineering,  
Maisammaguda,  
Secunderabad-500100

**Dear Sir,**

**Ref :** Sponsorship for Project Dated: 7/8/2017

**Subject :** Acceptance for Financial aid for the project “**Development of Configurable platform for signal and image processing applications**”

Best wishes from AMI Technologies!!!

This letter is to inform you that our technical team has reviewed your research project titled, “**Development of Configurable platform for signal and image processing applications**” Based on the report, your proposed project got approval by the managing body. We have planned to extend our support to carry out this research work. In this regard, we are glad to sponsor your With INR. 750,000 (Seven Lakhs Fifty Thousand Rupees Only).



  
AMI Technologies,

Director



# AMI TECH INDIA PVT LTD

Hi-tech city main road, Huda techno enclave,  
Hyderabad, Telangana -500081

## Work Order

**Ref:** MI/EXTERNAL FUND/2017/879

**Date:**4/9/2017

**To**

The Principal,  
Malla Reddy College of Engineering  
Dhulapally, Secunderabad-500100

**Dear Sir,**

**Ref :** Sponsorship for funded Project Dated: 7/8/2017

**Subject :** Work order for the project “**Development of Configurable platform for signal and image processing applications**”

With reference to letter of acceptance (dated: 28/8/2017) ,we are accepting your budget proposal as mentioned below and also we are glad to release the work order for the project “**Development of Configurable platform for signal and image processing applications**” from today onwards.

S.No	Particular	Amount
1.	Term -1	INR 3,50,000
2.	Term -2	INR 2,00,000
3.	Term -3	INR 2,00,000
	<b>Total</b>	INR 7,50,000

Best wishes



AMI Technologies,  
Director

# MALLA REDDY COLLEGE OF ENGINEERING

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

## OVERVIEW OF PROJECT PROPOSAL

<b>Title</b>	DEVELOPMENT OF CONFIGURABLE PLATFORM FOR SIGNAL AND IMAGE
<b>Principal Investigator</b>	DR. P. JOHN PAUL
<b>Description</b>	<p>An inexpensive and cost-effective configurable platform for designing real time video processing and vision systems. The platform is designed around a Field Programmable Gate Array and provides video input and output interfaces. It has been used to implement several different image and video processing systems, namely with the purpose of prototyping and teaching courses in the area of video processing systems. Experimental results show that this platform provides enough resources and speed to implement even complex systems in real time.</p>

  
Principal Investigator



  
Principal  
Malla Reddy College of Engineering





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रुपये Rupees **THREE LAKH FIFTY THOUSAND RUPEES ONLY**

अदा करें। ₹ **3,50,000/-**

Serial No. (B): CTS-5018

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## Utilization Certificate

Title of the Project : Development of Configurable platform for signal and image processing applications

Principal Investigator : Dr. P. John Paul

Certified that out of Rs.7,50,000/- (Total Amount) of Grant-in-aid sanctioned during the financial year 2017-18 in favour of Malla Reddy College of Engineering for the research and development activities of AMI Technologies as per Sanction Order No MI/EXTERNAL FUND/2017/879 Date 4/9/2017. Partially, The sum of Rs.3,50,000/- has been received and appropriately utilized.

Certified that I have satisfied myself that the conditions on which the Grants in Aid was sanctioned/released have been duly fulfilled that money was actually utilized for the purposes for which it was sanctioned.

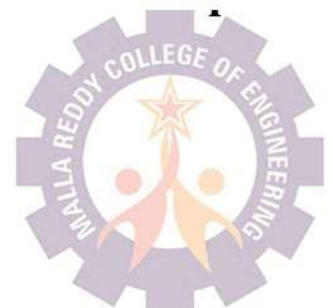
**Principal Investigator**

**Head of Institution  
(with seal)**



For M R K REDDY & Co.  
Chartered Accountants  
FRN - 0032655

**Auditor  
(with seal)**





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या धारक को **Qr Bearer**

रुपये Rupees **TWO LAKHS RUPEES ONLY**


अदा करें। ₹ 2,00,000 /-

क्या. नं.  
A/C No. **1312216146**

INSTA SAVINGS ACCOUNT  
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**AMI TECH INDIA PVT LTD**

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## Utilization Certificate

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Principal Investigator : Dr. P. John Paul

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Certified that I have satisfied myself that the conditions on which the Grants in Aid was sanctioned/released have been duly fulfilled that money was actually utilized for the purposes for which it was sanctioned.

**Principal Investigator**

**Head of Institution  
(with seal)**



**Auditor  
(with seal)**







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Telangana India  
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रुपये Rupees **TWO LAKHS RUPEES ONLY**  
अदा करें। ₹ 2,00,000 /-

कलम नं. A/C No. 1312216152 INSTA SAVINGS ACCOUNT CBS AMI TECH INDIA PVT LTD

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# MALLA REDDY COLLEGE OF ENGINEERING

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## Utilization Certificate

Title of the Project : Development of Configurable platform for signal and image processing applications

Principal Investigator : Dr. P. John Paul

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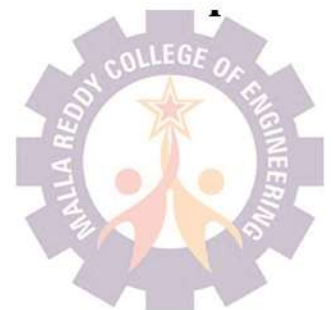
**Principal Investigator**

**Head of Institution  
(with seal)**

For M R K REDDY & Co.  
Chartered Accountants  
FRN - 0032655

(M. RAMAKRISHNA REDDY)  
Proprietor

**Auditor  
(with seal)**





Estd :2005

# MALLA REDDY COLLEGE OF ENGINEERING

(Formerly CM Engineering College)

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ISO 9001:2015 Certified Institution, Recognition of College under Section 2(f) & 12 (B) of the UGC Act, 1956.

Date:2/11/2018

To  
The Managing Director  
AMI Technologies  
Hyderabad, Telangana 500067

Dear sir,

Subject: Requesting Sponsorship for project — Reg

.Best wishes from Malla Reddy College of Engineering!

Malla Reddy College of Engineering (Formerly CM Engineering College) has been established under the aegis of the Malla Reddy Group of institutions in the year 2005, a majestic empire, founded by chairman Sri. Ch. Malla Reddy. He has been in the field of education for the last 22 years with the intention of spearheading quality education among children from the school level itself. The faculty of various departments are actively pursuing research in their respective technical departments under R&D wing of MRCE.

**Dr. Nikhil Raj** ,Professor Department of ECE, is the principal investigator for this proposed work.he is an eminent person in his research area.We request your kind cooperation and financial aid of INR 6,50,000.00 (Rupees Six lakhs fifty thousand only) in the project entitled “**Object-based Audio Reproduction and the Audio Scene**” .Here with we have enclosed the budget proposal for the project. Our faculty will contact you in person along with this letter and may detail the scope of work.

We expect your positive response.

Thanking you,

Principal Investigator



Principal  
Malla Reddy College of Engineering



# AMI TECH INDIA PVT LTD

Hitech city main road, Huda techno enclave,  
Hyderabad, Telangana -500081

## Letter of Acceptance

Ref: MI/EXTERNAL FUND/2018/1125

Date: 22/11/2018

**To**

The principal,  
Malla Reddy College of Engineering,  
Maisammaguda,  
Secunderabad-500100

**Dear Sir,**

**Ref :** Sponsorship for Project Dated: 2/11/2018

**Subject :** Acceptance for Financial aid for the project “**Object-based Audio Reproduction and the Audio Scene**”

Best wishes from AMI Technologies!!!

This letter is to inform you that our technical team has reviewed your research project titled, “**Object-based Audio Reproduction and the Audio Scene**” Based on the report, your proposed project got approval by the managing body. We have planned to extend our support to carry out this research work. In this regard, we are glad to sponsor your project With INR. 6,50,000 (Six Lakhs Fifty Thousand Rupees Only).



AMI Technologies

Director



# AMI TECH INDIA PVT LTD

Hi-tech city main road, Huda techno enclave,  
Hyderabad, Telangana -500081

## Work Order

**Ref:** MI/EXTERNAL FUND/2018/1125

**Date:**30/11/2018

**To**

The Principal,  
Malla Reddy College of Engineering  
Dhulapally,  
Secunderabad-500100

**Dear Sir,**

Ref : Sponsorship for funded Project Dated: 2/11/2018

Subject : Work order for the project "**Object-based Audio Reproduction and the Audio Scene**"

With reference to letter of acceptance (dated: 22/11/2018) ,we are accepting your budget proposal as mentioned below and also we are glad to release the work order for the project "**Object-based Audio Reproduction and the Audio Scene**" from today onwards.

S.No	Particular	Amount
1.	Term -1	INR 2,50,000
2.	Term -2	INR 2,50,000
3.	Term -3	INR 1,50,000
	<b>Total</b>	INR 6,50,000



Best wishes

  
AMI Technologies,

Director



# MALLA REDDY COLLEGE OF ENGINEERING

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

## OVERVIEW OF PROJECT PROPOSAL

<b>Title</b>	OBJECT-BASED AUDIO REPRODUCTION AND THE AUDIO SCENE
<b>Principal Investigator</b>	DR. NIKHIL RAJ
<b>Description</b>	<p>Object-based audio is an emerging representation for audio content, where content is represented in a reproduction-format-agnostic way and, thus, produced once for consumption on many different kinds of devices. This affords new opportunities for immersive, personalized, and interactive listening experiences. This paper introduces an end-to-end object-based spatial audio pipeline, from sound recording to listening. A high-level system architecture is proposed, which includes novel audio-visual interfaces to support object-based capture and listener-tracked rendering, and incorporates a proposed component for objectification, that is, recording content directly into an object-based form. Text-based and extensible metadata enable communication between the system components. An open architecture for object rendering is also proposed. The system's capabilities are evaluated in two parts. First, listener-tracked reproduction of metadata automatically estimated from two moving talkers is evaluated using an objective binaural localization model. Second, object-based scene capture with audio extracted using blind source separation (to remix between two talkers) and beamforming (to remix a recording of a jazz group) is evaluated with perceptually motivated objective and subjective experiments. These experiments demonstrate that the novel components of the system add capabilities beyond the state of the art. Finally, we discuss challenges and future perspectives for object-based audio workflows.</p>



Principal Investigator

  
Principal

Principal





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या धारक को Or Bearer

रुपये Rupees **TWO LAKH FIFTY THOUSAND RUPEES ONLY**

अदा करें। ₹ **2,50,000/-**

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AC No. **1312216276**

INSTA SAVINGS ACCOUNT  
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## Utilization Certificate

Title of the Project : Object-based Audio Reproduction and the Audio Scene

Principal Investigator : Dr. Nikhil Raj

Certified that out of Rs.6,50,000/- (Total Amount) of Grant-in-aid sanctioned during the financial year 2018-19 in favour of Malla Reddy College of Engineering for the research and development activities of AMI Technologies as per Sanction Order No MI/EXTERNAL FUND/2018/1125 Date 30/11/2018. Partially, The sum of Rs.2,50,000/- has been received and appropriately utilized.

Certified that I have satisfied myself that the conditions on which the Grants in Aid was sanctioned/released have been duly fulfilled that money was actually utilized for the purposes for which it was sanctioned.

**Principal Investigator**

**Head of Institution  
(with seal)**

For M R K REDDY & Co.  
Chartered Accountants  
FRN - 0032655

**Auditor  
(with seal)**





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Telangana India  
IFSC: KKBK0007466

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या धारक को Or Bearer

रुपये Rupees TWO LAKH FIFTY THOUSAND RUPEES ONLY

अदा करें। ₹ 2,50,000/-

बचत अं.  
A/C No. 1312216294

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Principal Investigator : Dr. Nikhil Raj

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Certified that I have satisfied myself that the conditions on which the Grants in Aid was sanctioned/released have been duly fulfilled that money was actually utilized for the purposes for which it was sanctioned.

**Principal Investigator**

**Head of Institution  
(with seal)**

**Auditor  
(with seal)**







Estd :2005

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Approved by AICTE - New Delhi, Affiliated to JNTU - Hyderabad, Accredited by NBA & Accredited by NAAC. ISO 9001:2015 Certified Institution, Recognition of College under Section 2(f) & 12 (B) of the UGC Act,1956.

Date:3/12/2018

To  
The Managing Director  
AMI Technologies  
Hyderabad, Telangana 500067

Dear sir,

Subject: Requesting Sponsorship for project — Reg

.Best wishes from Malla reddy college of engineering!

Malla Reddy College of Engineering (Formerly CM Engineering College) has been established under the aegis of the Malla Reddy Group of institutions in the year 2005, a majestic empire, founded by chairman Sri. Ch. Malla Reddy. He has been in the field of education for the last 22 years with the intention of spearheading quality education among children from the school level itself. The faculty of various departments are actively pursuing research in their respective technical departments under R&D wing of MRCE.

Dr. G. Sridhar Professor Department of ECE, is the principal investigator for this proposed work. he is an eminent person in his research area. We request your kind cooperation and financial aid of INR 330,000.00 (Rupees Three Laks Thirty Thousand only) in the project entitled “**Design and development of intelligent automated system for data measurements**” .Here with we have enclosed the budget proposal for the project. Our faculty will contact you in person along with this letter and may detail the scope of work.

We expect your positive response.

Thanking you,

Principal Investigator



Principal  
Malla Reddy College of Engineering





# AMI TECH INDIA PVT LTD

Hitech city main road, Huda techno enclave,  
Hyderabad, Telangana -500081

## Letter of Acceptance

**Ref:** MI/EXTERNAL FUND/2018/1043

**Date:** 21/12/2018

**To**

The principal,  
Malla Reddy College of Engineering,  
Maisammaguda,  
Secunderabad-500100

Dear Sir,

**Ref :** Sponsorship for Project Dated: 3/12/2018

**Subject :** Acceptance for Financial aid for the project “**Design and development of intelligent automated system for data measurements**”

Best wishes from AMI Technologies!!!

This letter is to inform you that our technical team has reviewed your research project titled, “**Design and development of intelligent automated system for data measurements**” Based on the report, your proposed project got approval by the managing body. We have planned to extend our support to carry out this research work. In this regard, we are glad to sponsor your project With INR of INR 3,30,000.00 (Rupees Three Lakhs Thirty Thousand only).



AMI Technologies,

Director



# AMI TECH INDIA PVT LTD

Hi-tech city main road, Huda techno enclave,  
Hyderabad, Telangana -500081

## Work Order

**Ref:** MI/EXTERNAL FUND/2018/1043

**Date:** 31/12/2018

**To**

The Principal,  
Malla Reddy College of Engineering  
Dhulapally, Secunderabad-500100

**Dear Sir,**

Ref : Sponsorship for funded Project Dated: 3/12/2018

Subject : Work order for the project "**Design and development of intelligent automated system for data measurements**"

With reference to letter of acceptance (dated: 21/12/2018) ,we are accepting your budget proposal as mentioned below and also we are glad to release the work order for the project "**Design and development of intelligent automated system for data measurements**" from today onwards.

S.No	Particular	Amount
1.	Term -1	INR 1,30,000
2.	Term -2	INR 1,00,000
3.	Term -3	INR 1,00,000
	<b>Total</b>	INR 3,30,000

Best wishes



AMI Technologies,

Director

# MALLA REDDY COLLEGE OF ENGINEERING

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

## OVERVIEW OF PROJECT PROPOSAL

<b>Title</b>	DESIGN AND DEVELOPMENT OF INTELLIGENT AUTOMATED SYSTEM FOR DATA MEASUREMENTS
<b>Principal Investigator</b>	DR. G.Sridhar
<b>Description</b>	<p>Agriculture automation is the main concern and emerging subject for every country. Where many types of research have been carried out like the implementation of fuzzy logic and Neuro-Fuzzy logic, automation using Expert systems and Artificial intelligence which led to great benefits. First and foremost, this paper broaches the subject of Artificial intelligence, machine learning, and embedded system. It further discusses the blending of AI and embedded technology in the agriculture sector. There are still some areas of problems which are causing the problems to agriculture field like Crop diseases infestations, lack of storage management, pesticide control, weed management, lack of irrigation and water management. In the Country like India where the water is one of the major problems for the people in agriculture sectors, and the government is trying to provide more and more support to implement automation in irrigation and agriculture. As the review suggests, The automation can be achieved along with smart embedded system by using the Arduino and Raspberry pi3 with the temperature and moisture sensor by deploying the machine learning algorithms and developing essential IoT(Internet of Things). As the world is more turning toward the online storage resources cloud computing is the major choice for data storage and management derived from the sensors and easily accessible from the users devices. The automaton in agriculture with the implementation of the embedded system is also a pivotal topic for the crop prediction, evapotranspiration process. Evapotranspiration process is imperative for maintaining the stability in the hydrologic cycle, sustainable irrigation method, and water management. The paper discusses penetration of AI and embedded systems in agriculture sector via discussing past breakthroughs. The problem of water usage among the farmers leads to the smart irrigation system which will also result in the efficient use of water resources. The irrigation system proposed is fully automated and easily accessible method which will be beneficial to the agriculture automation to future scope.</p>



Principal Investigator



Principal  
Malla Reddy College of Engineering

Principal



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Telangana India  
IFSC: KKBK0007466

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Date

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या धारक को Or Bearer

रुपये Rupees **ONE LAKH THIRTY THOUSAND RUPEES ONLY**

अदा करें। ₹ 1,30,000/-

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A/C No. **1312216266**

INSTA SAVINGS ACCOUNT  
CBS

**AMI TECH INDIA PVT LTD**

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Estd :2005

# MALLA REDDY COLLEGE OF ENGINEERING

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ISO 9001:2015 Certified Institution, Recognition of College under Section 2(f) & 12 (B) of the UGC Act, 1956.

## Utilization Certificate

Title of the Project : Design and development of intelligent automated system for data measurements

Principal Investigator : Dr. G.Sridhar

Certified that out of Rs.3,30,000/- (Total Amount) of Grant-in-aid sanctioned during the financial year 2018-19 in favour of Malla Reddy College of Engineering for the research and development activities of AMI Technologies as per Sanction Order No MI/EXTERNAL FUND/2018/1043 Date 31/12/2018. Partially, The sum of Rs.1,30,000/- has been received and appropriately utilized.

Certified that I have satisfied myself that the conditions on which the Grants in Aid was sanctioned/released have been duly fulfilled that money was actually utilized for the purposes for which it was sanctioned.

**Principal Investigator**

**Head of Institution  
(with seal)**

For M R K REDDY & Co.  
Chartered Accountants  
FRN - 0032655

**Auditor  
(with seal)**







1-118 Survey No. 64, NRI Institute Of Fashion Tech Campus,  
Hyderabad - 500081  
Telangana India  
IFSC : KKBK0007466

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दिनांक  
Date 

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Pay **MALLAREDDY COLLEGE OF ENGINEERING**

या धारक को Or Bearer

रुपये Rupees **ONE LAKH RUPEES ONLY**

अदा करें। ₹ 1,00,000/-

खाता नं.  
A/C No. **1312216289**

INSTA SAVINGS ACCOUNT  
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**AMI TECH INDIA PVT LTD**

17/04/2017

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# MALLA REDDY COLLEGE OF ENGINEERING

(Formerly CM Engineering College)

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## Utilization Certificate

Title of the Project : Design and development of intelligent automated system for data measurements

Principal Investigator : Dr. G.Sridhar

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Certified that I have satisfied myself that the conditions on which the Grants in Aid was sanctioned/released have been duly fulfilled that money was actually utilized for the purposes for which it was sanctioned

**Principal Investigator**

**Head of Institution  
(with seal)**

For M R K REDDY & Co.  
Chartered Accountants  
FRN - 0032655

**Auditor  
(with seal)**





Estd :2005

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ISO 9001:2015 Certified Institution, Recognition of College under Section 2(f) & 12 (B) of the UGC Act,1956.

Date: 2/1/2019

To  
The Managing Director  
AMI Technologies  
Hyderabad, Telangana 500067

Dear sir,

Subject: Requesting Sponsorship for project — Reg.

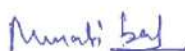
Best wishes from Malla reddy college of engineering!

Malla Reddy College of Engineering (Formerly CM Engineering College) has been established under the aegis of the Malla Reddy Group of institutions in the year 2005, a majestic empire, founded by chairman Sri. Ch. Malla Reddy. He has been in the field of education for the last 22 years with the intention of spearheading quality education among children from the school level itself. The faculty of various departments are actively pursuing research in their respective technical departments under R&D wing of MRCE.

**Dr.K.Muralibabu**, Professor Department of ECE, is the principal investigator for this proposed work. He is an eminent person in his research area. We request your kind cooperation and financial aid of INR 400,000.00 (Rupees Four Laks only) in the project entitled “**A modern development of Hardware System Design for Nondestructive Testing**”. Here with we have enclosed the budget proposal for the project. Our faculty will contact you in person along with this letter and may detail the scope of work.

We expect your positive response.

Thanking you,



Principal Investigator



  
Principal  
Malla Reddy College of Engineering



# AMI TECH INDIA PVT LTD

Hitech city main road, Huda techno enclave,  
Hyderabad, Telangana -500081

## Letter of Acceptance

Ref: MI/EXTERNAL FUND/2019/767

Date: 24/1/2019

To

The principal,  
Malla Reddy College of Engineering,  
Maisammaguda,  
Secunderabad-500100

Dear Sir,

Ref : Sponsorship for Project Dated: 2/1/2019

**Subject : Acceptance for Financial aid for the project “A modern development of Hardware System Design for Nondestructive Testing”**

Best wishes from AMI Technologies!!!

This letter is to inform you that our technical team has reviewed your research project titled, “A modern development of Hardware System Design for Nondestructive Testing” Based on the report, your proposed project got approval by the managing body. We have planned to extend our support to carry out this research work. In this regard, we are glad to sponsor your project With INR. of INR 4,00,000.00 (Rupees Four Laks only)



AMI Technologies

Director



# AMI TECH INDIA PVT LTD

Hi-tech city main road, Huda techno enclave,  
Hyderabad, Telangana -500081

## Work Order

**Ref:** MI/EXTERNAL FUND/2019/767

**Date:**30/1/2019

To  
The Principal,  
Malla Reddy College of Engineering  
Dhulapally, Secunderabad-500100

**Dear Sir,**

Ref: Sponsorship for funded Project Dated: 2/1/2019

Subject : Work order for the project "**A modern development of Hardware System Design for Nondestructive Testing**"

With reference to letter of acceptance (dated: 24/1/2019) ,we are accepting your budget proposal as mentioned below and also we are glad to release the work order for the project "**A modern development of Hardware System Design for Nondestructive Testing**" from today onwards.

S.No	Particular	Amount
1.	Term -1	INR 2,00,000
2.	Term -2	INR 1,00,000
3.	Term -3	INR 1,00,000
	<b>Total</b>	INR 4,00,000

Best wishes



AMI Technologies,

Director



# MALLA REDDY COLLEGE OF ENGINEERING

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

## OVERVIEW OF PROJECT PROPOSAL

<b>Title</b>	A MODERN DEVELOPMENT OF HARDWARE SYSTEM DESIGN FOR NONDESTRUCTIVE TESTING
<b>Principal Investigator</b>	DR.K.MURALIBABU
<b>Description</b>	<p>The Nondestructive testing science is a broad field that covers variety of testing methods and applications, in addition to the associated pre and post processing mathematics. In terms of methods and techniques the Nondestructive testing modalities rely on different physical phenomena such as the electromagnetism, the acoustic emission, the thermal emission and the penetration of high-energy radiation through materials and structures. This diversity in the Nondestructive testing tools is only matched by its fields of application, which covers the testing of civil and mechanical structures and components, the online monitoring of manufacturing processes and products, and a wide array of medical applications that include dental and veterinary medicine. It will seek to introduce several Nondestructive testing embodiments to address different testing techniques that rely on several physical phenomena while addressing the wide range of its applications. This is done in an effort to highlight several types of the Nondestructive evaluations and its ability to accommodate multitudes of fields and tests. Also the manuscript will explain the different mathematical and statistical processing techniques used in pre-processing the acquired data in terms of noise reduction, data compression and signal conditioning; in addition to processing the signals and correlating it with the properties of the materials or structures that are being tested. Sections of this book will be solely dedicated to new applications or to using innovative NDT technologies. The specific Nondestructive techniques addressed in this project include; the magnetic adaptive testing, the ultrasonic testing methods, the Neutron Radio-graphy, the Superconducting Quantum Interference Device SQUID sensor based testing routines. The text will also include chapters to discuss the testing reliability and validation studies. It is structured in three main sections; mainly a section on the General Nondestructive Testing Methods and its Specific Considerations, a section on Innovative Nondestructive Testing Systems and Applications, and finally a section on the Concrete Nondestructive Testing Methods.</p>

*Murali babu*

Principal Investigator



*Principal*  
Principal  
Malla Reddy College of Engineering

Principal



1-118 Survey No. 04, Nat Institute Of Fashion Tech Campus,  
Hyderabad - 500081  
Telangana India  
IFSC: KMHM0007486

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Date

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**1312216261**

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*Sujit*  
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17/04/2017

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## Utilization Certificate

Title of the Project : A modern development of Hardware System Design for Nondestructive Testing

Principal Investigator : Dr.K.Muralibabu

Certified that out of Rs.4,00,000/- (Total Amount) of Grant-in-aid sanctioned during the financial year 2018-19 in favour of Malla Reddy College of Engineering for the research and development activities of AMI Technologies as per Sanction Order No MI/EXTERNAL FUND/2019 /767 Date 30/1/2019. Partially, The sum of Rs.2,00,000/- has been received and appropriately utilized.

Certified that I have satisfied myself that the conditions on which the Grants in Aid was sanctioned/released have been duly fulfilled that money was actually utilized for the purposes for which it was sanctioned.

**Principal Investigator**

**Head of Institution  
(with seal)**



For M R K REDDY & Co.  
Chartered Accountants  
FRN - 0032655



**Auditor  
(with seal)**







Estd :2005

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ISO 9001:2015 Certified Institution, Recognition of College under Section 2(f) & 12 (B) of the UGC Act, 1956.

Date: 04.02.2019

To  
The Managing Director,  
AMI Technologies,  
Hyderabad, Telangana – 500081.

Dear Sir,

Subject: Requesting Sponsorship for project — Reg.

Best wishes from Malla Reddy College of Engineering!

Malla Reddy College of Engineering (Formerly CM Engineering College) has been established under the aegis of the Malla Reddy Group of Institutions in the year 2005, a majestic empire, founded by chairman Sri. Ch. Malla Reddy. He has been in the field of education for the last 22 years with the intention of spearheading quality education among children from the school level itself. The faculty of various departments are actively pursuing research in their respective technical departments under R&D wing of MRCE.

**Dr.G.Nagarajan** Professor Department of ECE, is the principal investigator for this proposed work. He is an eminent person in his research area. We request your kind cooperation and financial aid of INR 600,000.00 (Rupees six lakhs only) in the project entitled “**Modern system development for observable disease diagnosis**” Here with we have enclosed the budget proposal for the project. Our faculty will contact you in person along with this letter and may detail the scope of work.

We expect your positive response.

Thanking you,

Principal Investigator



Principal  
Malla Reddy College of Engineering



# AMI TECH INDIA PVT LTD

Hi-tech city main road, Huda techno enclave,  
Hyderabad, Telangana -500081

## Letter of Acceptance

**Ref:** MI/EXTERNAL FUND/2019/1005

**Date:** 23.02.2019

**To**

The principal,  
Malla Reddy College of Engineering,  
Maisammaguda, Secunderabad - 500100.

**Dear Sir,**

**Ref.:** Sponsorship for Project Dated: 04.02.2019

**Subject:** Acceptance for Financial aid for the project “**Modern System Development for Observable Disease Diagnosis**”

Best wishes from AMI Technologies!!!!

This letter is to inform you that our technical team has reviewed your research project titled, “**Modern System Development for Observable Disease Diagnosis**” Based on the report, your proposed project got approval by the managing body. We have planned to extend our support to carry out this research work. In this regard, we are glad to sponsor your project with INR. 6, 00,000 (Six Lakhs Rupees Only).



AMI Technologies,

Director





# AMI TECH INDIA PVT LTD

Hi-tech city main road, Huda techno enclave,  
Hyderabad, Telangana -500081

## Work Order

Ref: MI/EXTERNAL FUND/2019/1005

Date: 27.02.2019

To

The principal,  
Malla Reddy College of Engineering,  
Maisammaguda, Secunderabad - 500100.

Dear Sir,

**Subject:** Work order for the project “Modern System Development for Observable Disease Diagnosis”

**Ref.:** Sponsorship for funded Project Dated: 04.02.2019

With reference to letter of acceptance (dated: 23.02.2019) ,we are accepting your budget proposal as mentioned below and also we are glad to release the work order for the project “Modern System Development for Observable Disease Diagnosis” from today onwards.

S.No	Particular	Amount
1.	Term -1	INR 2,00,000
2.	Term -2	INR 2,00,000
3.	Term -3	INR 2,00,000
	<b>Total</b>	INR 6,00,000.00

Best Wishes!!!



  
AMI Technologies,

Director

# MALLA REDDY COLLEGE OF ENGINEERING

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

## OVERVIEW OF PROJECT PROPOSAL

<b>Title</b>	MODERN SYSTEM DEVELOPMENT FOR OBSERVABLE DISEASE DIAGNOSIS
<b>Principal Investigator</b>	DR.G. NAGARAJAN
<b>Description</b>	<p>This is not an attempt to answer that question, but it does look at one aspect of thinking. An aspect which is just a tiny fraction of the whole field of research on thinking, yet an enormous field in itself, namely medical diagnosis: the way in which doctors try to find out what is wrong with their patients. This task is not performed logically, although logical, scientific methods have been worked out to mimic, improve or even replace it. Yet although humans do not perform this task in a very logical way, they do perform it in some way, following some rules, and being prone to certain types of error. It is very hard to know what goes on in the human mind. The invention of the computer, the "thinking machine", has greatly contributed to the interest in the way we think and to research into mimicking thought processes. This research has yielded many successes and surprising results, yet the "artificial intelligence" displayed by current machines is not very impressive from a human point of view. The developing field of neural network research, by attempting to copy to some extent the hardware in our own heads, may offer additional insights into thinking. This book is the description of an attempt to improve the diagnostic process, by combining human and machine capabilities into a close partnership. It is a report of the underlying philosophy, design, implementation, and a first test of a diagnostic decision support system for general practitioners. The system was designed to assist and improve human reasoning rather than replace it.</p>



Principal Investigator

  
Principal  
Malla Reddy College of Engineering

Principal



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Telangana India  
IFSC : KKBK007468

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## Utilization Certificate

Title of the Project : Modern system development for observable disease diagnosis

Principal Investigator : Dr.G.Nagarajan

Certified that out of Rs.6,00,000/- (Total Amount) of Grant-in-aid sanctioned during the financial year 2018-19 in favour of Malla Reddy College of Engineering for the research and development activities of AMI Technologies as per Sanction Order No MI/EXTERNAL FUND/2019/1005 Date 27.02.2019. Partially, The sum of Rs.2,00,000/- has been received and appropriately utilized.

Certified that I have satisfied myself that the conditions on which the Grants in Aid was sanctioned/released have been duly fulfilled that money was actually utilized for the purposes for which it was sanctioned.

**Principal Investigator**

**Head of Institution  
(with seal)**

For M R K REDDY & Co.  
Chartered Accountants  
FRN - 0032655

**Auditor  
(with seal)**







Estd :2005

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ISO 9001:2015 Certified Institution, Recognition of College under Section 2(f) & 12 (B) of the UGC Act,1956.

Date: 05.03.2019

To

The Managing Director,

Malla Reddy Inst. Of Medical Science,

Hyderabad, Telangana – 500055.

Dear Sir,

Subject: Requesting Sponsorship for project — Reg.

Best wishes from Malla Reddy College of Engineering!

Malla Reddy College of Engineering (Formerly CM Engineering College) has been established under the aegis of the Malla Reddy Group of institutions in the year 2005, a majestic empire, founded by chairman Sri. Ch. Malla Reddy. He has been in the field of education for the last 22 years with the intention of spearheading quality education among children from the school level itself. The faculty of various departments are actively pursuing research in their respective technical departments under R&D wing of MRCE.

**Dr. M. Giri** Professor Department of Computer Science and Engineering, is the principal investigator for this proposed work. He is an eminent person in his research area. We request your kind cooperation and financial aid of INR 5,20,000.00 (Rupees five lakhs twenty thousand only) in the project entitled “**Machine learning applications in cancer prognosis and prediction**” Here with we have enclosed the budget proposal for the project. Our faculty will contact you in person along with this letter and may detail the scope of work.

We expect your positive response.

Thanking you,

Principal Investigator



  
Principal  
Malla Reddy College of Engineering





# Malla Reddy Institute of Medical Sciences

## Letter of Acceptance

**Ref:** MI/MRCE/CSE/2019/593

**Date:** 22.03.2019

**To**

The principal,  
Malla Reddy College of Engineering,  
Maisammaguda, Secunderabad - 500100.

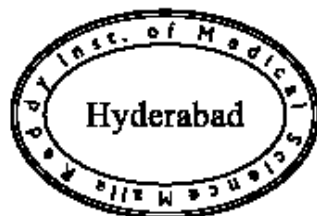
**Dear Sir,**

**Ref.:** Sponsorship for Project Dated: 05.03.2019

**Subject:** Acceptance for Financial aid for the project “**Machine Learning Applications in Cancer Prognosis and Prediction**”

Best wishes from Malla Reddy Inst. of Medical Science!!!!

This letter is to inform you that our technical team has reviewed your research project titled, “**Machine Learning Applications in Cancer Prognosis and Prediction**” Based on the report, your proposed project got approval by the managing body. We have planned to extend our support to carry out this research work. In this regard, we are glad to sponsor your project with INR 5, 20,000.00 (Rupees five lakhs twenty thousand only)



Malla Reddy Inst. of Medical Science,

Director



# Malla Reddy Institute of Medical Sciences

## Work Order

Ref: MI/MRCE/CSE/2019/593

Date: 29.03.2019

To

The Principal,  
Malla Reddy College of Engineering,  
Maisammaguda, Secunderabad - 500100.

Dear Sir,

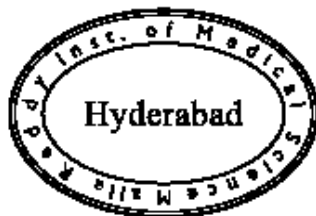
**Subject:** Work order for the project “**Machine Learning Applications in Cancer Prognosis and Prediction**”

**Ref.:** Sponsorship for funded Project Dated: 05.03.2019

With reference to letter of acceptance (dated: 22.03.2019) ,we are accepting your budget proposal as mentioned below and also we are glad to release the work order for the project “**Machine Learning Applications in Cancer Prognosis and Prediction**” from today onwards.

S.No	Particular	Amount
1.	Term -1	INR 2,20,000
2.	Term -2	INR 2,00,000
3.	Term -3	INR 1,00,000
	<b>Total</b>	INR 5,20,000.00

Best Wishes!!!



Malla Reddy Inst. of Medical Science,

Director

# MALLAREDDY COLLEGE OF ENGINEERING

## Department of Computer Science and Engineering

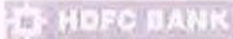
### OVERVIEW OF PROJECT PROPOSAL

Title	Machine learning applications in cancer prognosis and prediction
Principal Investigator	Dr.M.Giri
Description	<p>Cancer has been characterized as a heterogeneous disease consisting of many different subtypes. The early diagnosis and prognosis of a cancer type have become a necessity in cancer research, as it can facilitate the subsequent clinical management of patients. The importance of classifying cancer patients into high or low risk groups has led many research teams, from the biomedical and the bioinformatics field, to study the application of machine learning (ML) methods. Therefore, these techniques have been utilized as an aim to model the progression and treatment of cancerous conditions. In addition, the ability of ML tools to detect key features from complex datasets reveals their importance. A variety of these techniques, including Artificial Neural Networks (ANNs), Bayesian Networks (BNs), Support Vector Machines (SVMs) and Decision Trees (DTs) have been widely applied in cancer research for the development of predictive models, resulting in effective and accurate decision making. Even though it is evident that the use of ML methods can improve our understanding of cancer progression, an appropriate level of validation is needed in order for these methods to be considered in the everyday clinical practice. In this work, we present a review of recent ML approaches employed in the modeling of cancer progression. The predictive models discussed here are based on various supervised ML techniques as well as on different input features and data samples. Given the growing trend on the application of ML methods in cancer research, we present here the most recent publications that employ these techniques as an aim to model cancer risk or patient outcomes.</p>



Principal Investigator

  
Principal  
Malla Reddy College of Engineering



NO. 8/2, 8th FLOOR, 2ND FLOOR, 2ND FLOOR, ROAD NO. 12,  
 BAN PARA III, K. P. Y. COLONY, BANARAS, MUMBAI, MAHARASHTRA  
 RTGS / NEFT IFSC : HDFC0001999

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Malla Reddy Institute of Medical Science

Private sign stamp of the bearer

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## Utilization Certificate

Title of the Project : Machine learning applications in cancer prognosis and prediction

Principal Investigator : Dr.M.Giri

Certified that out of Rs.5,20,000/- (Total Amount) of Grant-in-aid sanctioned during the financial year 2018-19 in favour of Malla Reddy College of Engineering for research and development activities of Malla Reddy Inst. Of Medical Science per Sanction Order No MI/MRCE/CSE/ 2019/593 Date 29.03.2019. Partially, The sum of Rs.2,20,000/- has been received and appropriately utilized.

Certified that I have satisfied myself that the conditions on which the Grants in Aid was sanctioned/released have been duly fulfilled that money was actually utilized for the purposes for which it was sanctioned.

**Principal Investigator**

**Head of Institution  
(with seal)**

**Auditor  
(with seal)**







Estd :2005

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ISO 9001:2015 Certified Institution, Recognition of College under Section 2(f) & 12 (B) of the UGC Act, 1956.

Date: 02.04.2019

To

The Managing Director,

Malla Reddy Narayana Multispecialty Hospitals,

Hyderabad, Telangana – 500055.

Dear Sir,

Subject: Requesting Sponsorship for project — Reg.

Best wishes from Malla Reddy College of Engineering!

Malla Reddy College of Engineering (Formerly CM Engineering College) has been established under the aegis of the Malla Reddy Group of institutions in the year 2005, a majestic empire, founded by chairman Sri. Ch. Malla Reddy. He has been in the field of education for the last 22 years with the intention of spearheading quality education among children from the school level itself. The faculty of various departments are actively pursuing research in their respective technical departments under R&D wing of MRCE.

**Dr.P.Prabakaran** Professor Department of Computer Science and Engineering, is the principal investigator for this proposed work. He is an eminent person in his research area. We request your kind cooperation and financial aid of INR 3,00,000.00 (Rupees Three lakhs only) in the project entitled “**Android Based Health Care Monitoring System**” Here with we have enclosed the budget proposal for the project. Our faculty will contact you in person along with this letter and may detail the scope of work.

We expect your positive response.

Thanking you,

Principal Investigator



Principal  
Malla Reddy College of Engineering



**Letter of Acceptance**

**Ref:** MI/MRCE/CSE/2019/570

**Date:** 22.04.2019

**To**

The principal,  
Malla Reddy College of Engineering,  
Maisammaguda, Secunderabad - 500100.

**Dear Sir,**

**Ref.:** Sponsorship for Project Dated: 02.04.2019

**Subject:** Acceptance for Financial aid for the project “**Android Based Health Care Monitoring System**”

Best wishes from Malla Reddy Narayana Multispecialty Hospitals!!!!

This letter is to inform you that our technical team has reviewed your research project titled, “**Android Based Health Care Monitoring System**” Based on the report, your proposed project got approval by the managing body. We have planned to extend our support to carry out this research work. In this regard, we are glad to sponsor your project with of INR 3, 00,000.00 (Rupees Three lakhs only).



Dean



Malla Reddy Narayana  
Multispeciality Hospital

## Work Order

**Ref:** MI/MRCE/CSE/2019/570

**Date:** 30/4/2019

**To**

The Principal,  
Malla Reddy College of Engineering,  
Maisammaguda, Secunderabad - 500100.

**Dear Sir,**

**Subject:** Work order for the project “**Android Based Health Care Monitoring System**”


**Ref.:** Sponsorship for funded Project Dated: 02.04.2019

With reference to letter of acceptance (dated: 22/4/2019) ,we are accepting your budget proposal as mentioned below and also we are glad to release the work order for the project “**Android Based Health Care Monitoring System**” from today onwards.

S.No	Particular	Amount
1.	Term -1	INR 1,00,000
2.	Term -2	INR 1,00,000
3.	Term -3	INR 1,00,000
	<b>Total</b>	INR 3,00,000.00

Best Wishes!!!



  
Dean

# MALLAREDDY COLLEGE OF ENGINEERING

## Department of Computer Science and Engineering

### OVERVIEW OF PROJECT PROPOSAL

Title	Android Based Health Care Monitoring System
Principal Investigator	Dr.P.Prabakaran
Description	Generally in critical case patients are supposed to be monitored continuously for their $SP0_2$ , Heart Rate as well as temperature. In the earlier methods, the doctors need to be present physically or in several cases SMS will be sent using GSM. In the earlier case the history of the patient cannot be displayed, only current data is displayed. In the current paper, we are using a novel idea for continuous monitoring patient's health conditions. The health care scheme is focus on the measurement and Monitoring various biological parameters of patient's body like heart rate, oxygen saturation level in blood and temperature using a web server and android application, where doctor can continuously monitor the patient's condition on his smart phone using an Android application. And also the patient history will be stored on the web server and doctor can access the information whenever needed from anywhere and need not physically present.



Principal Investigator



Principal  
Malla Reddy College of Engineering



NO. 8-3, GEMINI/GROUND FLOOR, ZOOM HOUSE, ROAD NO. 12,  
 BANJARA HILLS, HYDERABAD 500034, ANDHRA PRADESH  
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A/c No.  
 खाते नं.

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SB A/C

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**Malla ReddyNarayana  
 Multi Speciality Hospital**

*[Signature]*

Please sign above / उपर से अक्षर लिखें

⑈049108⑈ 500240048⑈ 003570⑈ 35





Estd :2005

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(Formerly CM Engineering College)

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## Utilization Certificate

Title of the Project : Android Based Health Care Monitoring System

Principal Investigator : Dr.P.Prabakaran

Certified that out of Rs.3,00,000/- (Total Amount) of Grant-in-aid sanctioned during the financial year 2019-20 in favour of Malla Reddy College of Engineering for research and development activities of Malla Reddy Narayana Multispeciality Hospitals per Sanction Order No MI/MRCE/CSE/ 2019/570 Date 30/4/2019. Partially, The sum of Rs.1,00,000/- has been received and appropriately utilized.

Certified that I have satisfied myself that the conditions on which the Grants in Aid was sanctioned/released have been duly fulfilled that money was actually utilized for the purposes for which it was sanctioned.

**Principal Investigator**

**Head of Institution  
(with seal)**

For M R K REDDY & Co.  
Chartered Accountants  
FRN - 0032655

**Auditor  
(with seal)**





Estd :2005

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ISO 9001:2015 Certified Institution, Recognition of College under Section 2(f) & 12 (B) of the UGC Act, 1956.

Date: 05.09.2017

To  
The Managing Director,  
AMI Technologies,  
Hyderabad, Telangana – 500081.

Dear Sir,

Subject: Requesting Sponsorship for project — Reg.

Best wishes from Malla Reddy College of Engineering!

Malla Reddy College of Engineering (Formerly CM Engineering College) has been established under the aegis of the Malla Reddy Group of institutions in the year 2005, a majestic empire, founded by chairman Sri. Ch. Malla Reddy. He has been in the field of education for the last 22 years with the intention of spearheading quality education among children from the school level itself. The faculty of various departments are actively pursuing research in their respective technical departments under R&D wing of MRCE.

**Dr. J. Kaliappan** Professor Department of ECE, is the principal investigator for this proposed work. He is an eminent person in his research area. We request your kind cooperation and financial aid of INR 2,00,000.00 (Rupees two lakhs only) in the project entitled **“Real-Time Intelligent Transportation Systems for Indian Roads”** Here with we have enclosed the budget proposal for the project. Our faculty will contact you in person along with this letter and may detail the scope of work.

We expect your positive response.

Thanking you,

Principal Investigator



Principal  
Malla Reddy College of Engineering



# AMI TECH INDIA PVT LTD

Hi-tech city main road, Huda techno enclave,  
Hyderabad, Telangana-500081

---

## Letter of Acceptance

**Ref:** MI/EXTERNAL FUND/2017/632

**Date:** 22.09.2017

**To**

The principal,  
Malla Reddy College of Engineering,  
Maisammaguda, Secunderabad - 500100.

**Dear Sir,**

**Ref.:** Sponsorship for Project Dated: 05.09.2017

**Subject:** Acceptance for Financial aid for the project “**Real-Time Intelligent Transportation Systems for Indian Roads**”

Best wishes from AMI Technologies!!!!

This letter is to inform you that our technical team has reviewed your research project titled, “**Real-Time Intelligent Transportation Systems for Indian Roads**” Based on the report, your proposed project got approval by the managing body. We have planned to extend our support to carry out this research work. In this regard, we are glad to sponsor your project with INR 2, 00,000.00 (Rupees two lakhs only)



  
AMI Technologies,

Director



# AMI TECH INDIA PVT LTD

Hi-tech city main road, Huda techno enclave,  
Hyderabad, Telangana-500081

## Work Order

Ref: MI/EXTERNAL FUND/2017/632

Date: 28.09.2017

To

The Principal,  
Malla Reddy College of Engineering,  
Maisammaguda, Secunderabad - 500100.

Dear Sir,

**Subject:** Work order for the project “Real-Time Intelligent Transportation Systems for Indian Roads”

**Ref.:** Sponsorship for funded Project Dated: 05.09.2017

With reference to letter of acceptance (dated: 22/9/2017) ,we are accepting your budget proposal as mentioned below and also we are glad to release the work order for the project “Real-Time Intelligent Transportation Systems for Indian Roads” from today onwards.

S.No	Particular	Amount
1.	Term -1	INR 1,00,000
2.	Term -2	INR 50,000
3.	Term -3	INR 50,000
	<b>Total</b>	INR 2,00,000.00

Best Wishes!!!



  
AMI Technologies,

Director



# MALLA REDDY COLLEGE OF ENGINEERING

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

## OVERVIEW OF PROJECT PROPOSAL

<b>Title</b>	REAL-TIME INTELLIGENT TRANSPORTATION SYSTEMS FOR INDIAN ROADS
<b>Principal Investigator</b>	DR.J. KALIAPPAN
<b>Description</b>	<p>Avenue site visitors' congestion is a habitual hassle international. In India, a quick growing economy, the problem is acutely felt in nearly all predominant towns. That is typically due to the fact infrastructure growth is gradual compared to boom in wide variety of cars, due to space and value constraints. Secondly, Indian traffic being non-lane based and chaotic is basically unique from the western visitors. The distinction can be understood completely handiest via experience; however a few instance eventualities can be seen at. For this reason, clever shipping systems (ITS), used for efficient visitors' management in evolved international locations, cannot be used as it is in India. ITS techniques ought to go through version and innovation to fit the contrasting visitor's characteristics of Indian roads. On this role paper, we present a complete take a look at of all to be had ITS structures, inclusive of each research prototypes and deployed structures. We next pose a hard and fast of thrilling open research troubles inside the context of Indian ITS. Finally, we listing a hard and fast of public and private organizations that play a function in Indian traffic control and research, as significant collaboration between discipline practitioners and researchers are needed for efficient switch of applicable era. Although our paper focuses on the Indian site visitor's scenario because of our arms-on experience of running with it, many of the problems and solutions mentioned in this paper are relevant for different developing international locations as properly.</p>



Principal Investigator

  
Principal  
Malla Reddy College of Engineering

Principal





1-11B Survey No. 64, Nat Institute Of Fashion Tech Campus,  
Hyderabad - 500051  
Telangana India  
IFSC : KKBK0007446

Valid for three months from the date of issue

रिजिस्टर्ड  
Date 

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Pay **MALLA REDDY COLLEGE OF ENGINEERING**

या धारक को Or Bearer

रुपये Rupees **ONE LAKH RUPEES ONLY**

अदा करें।

₹

1,00,000 /-

बैंक अ/c  
A/C No.

1312216215

INSTA SAVINGS ACCOUNT  
CBS

AMI TECH INDIA PVT LTD

17/04/2017

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*Sujit*  
Please sign above

⑈000003⑈ 500485027⑈ 004246⑈ 33



Estd :2005

# MALLA REDDY COLLEGE OF ENGINEERING

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ISO 9001:2015 Certified Institution, Recognition of College under Section 2(f) & 12 (B) of the UGC Act, 1956.

## Utilization Certificate

Title of the Project : Real-Time Intelligent Transportation Systems for Indian Roads

Principal Investigator : Dr.J.Kaliappan

Certified that out of Rs.2,00,000/- (Total Amount) of Grant-in-aid sanctioned during the financial year 2017-18 in favour of Malla Reddy College of Engineering for research and development activities of AMI Technologies per Sanction Order No MI/ EXTERNAL FUND/2017/632 Date 28.09.2017. Partially, The sum of Rs.1,00,000/- has been received and appropriately utilized.

Certified that I have satisfied myself that the conditions on which the Grants in Aid was sanctioned/released have been duly fulfilled that money was actually utilized for the purposes for which it was sanctioned.

**Principal Investigator**

**Head of Institution  
(with seal)**

For M R K REDDY & Co.  
Chartered Accountants  
FRN - 0032655

**Auditor  
(with seal)**





1-116 Survey No-84, Hat Institute Of Fashion Tech Campus,  
 Hyderabad - 500081  
 Telangana, India  
 IFSC: KMBF0003468

Valid for three months from the date of issue

दिनांक  
Date

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D	D	M	M	Y	Y	Y	Y

Pay **MALLAREDDY COLLEGE OF ENGINEERING**

या धारक को Or Bearer

रुपये Rupees **FIFTY THOUSAND RUPEES ONLY**

अदा करें;

₹

50,000/-

बैंक अ/c  
A/C No.

**1312216272**

INSTA SAVINGS ACCOUNT  
CBS

**AMI TECH INDIA PVT LTD**

Please sign above

17/04/2017

Payable At-par at all branch locations of Kotak Mahindra Bank Ltd.

⑈000003⑈ 5004850270: 004247⑈ 34



Estd :2005

# MALLA REDDY COLLEGE OF ENGINEERING

(Formerly CM Engineering College)

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ISO 9001:2015 Certified Institution, Recognition of College under Section 2(f) & 12 (B) of the UGC Act, 1956.

## Utilization Certificate

Title of the Project : Real-Time Intelligent Transportation Systems for Indian Roads

Principal Investigator : Dr.J.Kaliappan

Certified that out of Rs.2,00,000/- (Total Amount) of Grant-in-aid sanctioned during the financial year 2017-18 in favour of Malla Reddy College of Engineering for research and development activities of AMI Technologies per Sanction Order No MI/ EXTERNAL FUND/2017/632 Date 28.09.2017. Partially, The sum of Rs. 50,000/- has been received and appropriately utilized.

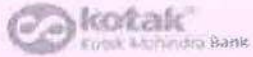
Certified that I have satisfied myself that the conditions on which the Grants in Aid was sanctioned/released have been duly fulfilled that money was actually utilized for the purposes for which it was sanctioned.

**Principal Investigator**

**Head of Institution  
(with seal)**

**Auditor  
(with seal)**





1-11B Survey No. 04, Nat Institute Of Fashion Tech Campus,  
Hyderabad - 500061  
Telangana India  
IFSC : KKBK0007468

Valid for three months from the date of issue.

दिनांक  
Date

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Pay **MALLAREDDY COLLEGE OF ENGINEERING**

या धारक को Or Bearer

रुपये Rupees **FIFTY THOUSAND RUPEES ONLY**

अदा करें। ₹ **50,000/-**

चान सं.  
A/C No. **1312216312**

INSTA SAVINGS ACCOUNT  
CBS

**AMI TECH INDIA PVT LTD**

*Sujit*

Please sign above

17/04/2017  
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⑈000003⑈ 500485027⑈ 004367⑈ 12





Estd :2005

# MALLA REDDY COLLEGE OF ENGINEERING

(Formerly CM Engineering College)

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ISO 9001:2015 Certified Institution, Recognition of College under Section 2(f) & 12 (B) of the UGC Act, 1956.

## Utilization Certificate

Title of the Project : Real-Time Intelligent Transportation Systems for Indian Roads

Principal Investigator : Dr.J.Kaliappan

Certified that out of Rs.2,00,000/- (Total Amount) of Grant-in-aid sanctioned during the financial year 2017-18 in favour of Malla Reddy College of Engineering for research and development activities of AMI Technologies per Sanction Order No MI/ EXTERNAL FUND/2017/632 Date 28.09.2017. Partially, The sum of Rs. 50,000/- has been received and appropriately utilized.

Certified that I have satisfied myself that the conditions on which the Grants in Aid was sanctioned/released have been duly fulfilled that money was actually utilized for the purposes for which it was sanctioned.

**Principal Investigator**

**Head of Institution  
(with seal)**

For M R K REDDY & Co.  
Chartered Accountants  
FRN - 0032655

**Auditor  
(with seal)**





Estd :2005

# MALLA REDDY COLLEGE OF ENGINEERING

(Formerly CM Engineering College)

Approved by AICTE - New Delhi, Affiliated to JNTU - Hyderabad, Accredited by NBA & Accredited by NAAC.  
ISO 9001:2015 Certified Institution, Recognition of College under Section 2(f) & 12 (B) of the UGC Act, 1956.

Date: 14/6/2018

To  
The Managing Director,  
AMI Technologies,  
Hyderabad, Telangana – 500081.

Dear Sir,

Subject: Requesting Sponsorship for project — Reg.

Best wishes from Malla Reddy College of Engineering!

Malla Reddy College of Engineering (Formerly CM Engineering College) has been established under the aegis of the Malla Reddy Group of institutions in the year 2005, a majestic empire, founded by chairman Sri. Ch. Malla Reddy. He has been in the field of education for the last 22 years with the intention of spearheading quality education among children from the school level itself. The faculty of various departments are actively pursuing research in their respective technical departments under R&D wing of MRCE.

**Dr. M. Thamarai** Professor Department of ECE, is the principal investigator for this proposed work. He is an eminent person in his research area. We request your kind cooperation and financial aid of INR 2,70,000.00 (Rupees Two lakhs seventy thousand only) in the project entitled “**Automation of machinery by using wireless sensor network**” Here with we have enclosed the budget proposal for the project. Our faculty will contact you in person along with this letter and may detail the scope of work.

We expect your positive response.

Thanking you,

Principal Investigator



Principal  
Malla Reddy College of Engineering



# AMI TECH INDIA PVT LTD

Hitech city main road, Huda techno enclave,  
Hyderabad, Telangana - 500081

## Letter of Acceptance

Ref: MI/EXTERNAL FUND/2018/778

Date: 2/7/2018

**To**

The principal,  
Malla Reddy College of Engineering,  
Maisammaguda, Secunderabad - 500100.

**Dear Sir,**

**Ref.:** Sponsorship for Project Dated: 14/6/2018

**Subject:** Acceptance for Financial aid for the project “Automation of Machinery by Using Wireless Sensor Network”

Best wishes from AMI Technologies!!!!

This letter is to inform you that our technical team has reviewed your research project titled, “Automation of Machinery by Using Wireless Sensor Network” Based on the report, your proposed project got approval by the managing body. We have planned to extend our support to carry out this research work. In this regard, we are glad to sponsor your project with of INR 2, 70,000.00 (Rupees Two lakhs and seventy thousands only)

AMI Technologies,





# AMI TECH INDIA PVT LTD

Hitech city main road, Huda techno enclave,  
Hyderabad, Telangana -500081

## Work Order

**Ref:** MI/EXTERNAL FUND/2018/778

**Date:** 10/07/2018

**To**

The Principal,  
Malla Reddy College of Engineering,  
Maisammaguda, Secunderabad - 500100.

**Dear Sir,**

**Subject:** Work order for the project “Automation of Machinery by Using Wireless Sensor Network”

**Ref.:** Sponsorship for funded Project Dated: 14.06.2018

With reference to letter of acceptance (dated: 02.07.2018), we are accepting your budget proposal as mentioned below and also we are glad to release the work order for the project “Automation of Machinery by Using Wireless Sensor Network” from today onwards.

S.No	Particular	Amount
1.	Term -1	INR 1,00,000
2.	Term -2	INR 80,000
3.	Term -3	INR 90,000
	<b>Total</b>	INR 2,70,000.00

Best Wishes!!!



  
AMI Technologies,

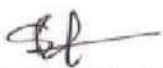
Director

# MALLA REDDY COLLEGE OF ENGINEERING

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

## OVERVIEW OF PROJECT PROPOSAL

<b>Title</b>	AUTOMATION OF MACHINERY BY USING WIRELESS SENSOR NETWORK
<b>Principal Investigator</b>	DR.R.Thamarai
<b>Description</b>	<p>This is based on wireless sensor network for home automation using Wi-Fi and Zigbee to automate the home .In order to use low power and low cost for the solution of automating the home using Wi-Fi and Zigbee technology. A prototype automation system for monitoring and controlling in home with sensor nodes and controlling nodes has been developed and tested in home. The system consists of sensor nodes, actuators nodes, router nodes, and one coordinator node.WSN is very helpful to implement the home automation system. Inside the home we have lot of electronic equipment to make our job easy. Here in this paper we implement the home automation system to advance the manual monitoring.</p>



Principal Investigator

  
Principal  
Malla Reddy College of Engineering

Principal





1-118 Survey No. 64, NRI Institute Of Fashion Tech Campus,  
Hyderabad - 500081  
Telangana India  
IFSC : KKBK0007466

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Pay **MALLAREDDY COLLEGE OF ENGINEERING**

या धारक को Or Bearer

रुपये Rupees **ONE LAKH RUPEES ONLY**

अदा करें। ₹ 1,00,000 /-

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A/C No. 1312216 301

INSTA SAVINGS ACCOUNT  
CBS

**AMI TECH INDIA PVT LTD**

17/04/2017

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Please sign above

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Estd :2005

# MALLA REDDY COLLEGE OF ENGINEERING

(Formerly CM Engineering College)

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## Utilization Certificate

Title of the Project : Automation of machinery by using wireless sensor network

Principal Investigator : Dr.M.Thamarai

Certified that out of Rs.2,70,000/- (Total Amount) of Grant-in-aid sanctioned during the financial year 2018-19 in favour of Malla Reddy College of Engineering for research and development activities of AMI Technologies per Sanction Order NoMI/EXTERNAL FUND/2018/778 Date 10/07/2018. Partially, The sum of Rs.1,00,000/- has been received and appropriately utilized.

Certified that I have satisfied myself that the conditions on which the Grants in Aid was sanctioned/released have been duly fulfilled that money was actually utilized for the purposes for which it was sanctioned.

**Principal Investigator**

**Head of Institution  
(with seal)**

For M R K REDDY & Co.  
Chartered Accountants  
FRN - 0032655

**Auditor  
(with seal)**





1-118 Survey No. 64, Nat Institute Of Fashion Tech Campus,  
Hyderabad - 500081  
Telangana India  
IFSC : KKBK0007466

Valid for three months from the date of issue  
दिनांक  
Date 

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Pay **MALLAREDDY COLLEGE OF ENGINEERING**

या धारक को Or Bearer

रुपये Rupees **EIGHTY THOUSAND RUPEES ONLY**

अदा करें। ₹ **80,000/-**

Serial No. CT-6016

ब्रान्च अ/c  
A/C No. **1312216309**

INSTA SAVINGS ACCOUNT  
CBS

**AMI TECH INDIA PVT LTD**

17/04/2017  
Payable At-par at all branch locations of Kotak Mahindra Bank Ltd.

  
Please sign above

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Estd :2005

# MALLA REDDY COLLEGE OF ENGINEERING

(Formerly CM Engineering College)

Approved by AICTE - New Delhi, Affiliated to JNTU - Hyderabad, Accredited by NBA & Accredited by NAAC. ISO 9001:2015 Certified Institution, Recognition of College under Section 2(f) & 12 (B) of the UGC Act, 1956.

## Utilization Certificate

Title of the Project : Automation of machinery by using wireless sensor network

Principal Investigator : Dr.M.Thamarai

Certified that out of Rs.2,70,000/- (Total Amount) of Grant-in-aid sanctioned during the financial year 2018-19 in favour of Malla Reddy College of Engineering for research and development activities of AMI Technologies per Sanction Order NoMI/EXTERNAL FUND/2018/778 Date 10/07/2018. Partially, The sum of Rs. 80,000/- has been received and appropriately utilized.

Certified that I have satisfied myself that the conditions on which the Grants in Aid was sanctioned/released have been duly fulfilled that money was actually utilized for the purposes for which it was sanctioned.

**Principal Investigator**

**Head of Institution  
(with seal)**

For M R K REDDY & Co.  
Chartered Accountants  
FRN - 0032655

**Auditor  
(with seal)**







1-118 Survey No. 04, Near Institute Of Fashion Tech Campus,  
Hyderabad - 500081  
Telangana India  
IFSC : KKBK0007466

Valid for three months from the date of issue  
Date: 1 6 0 4 2 0 1 9  
D D M M Y Y Y Y

Pay **MALLA REDDY COLLEGE OF ENGINEERING**

या धारक को Or Bearer

रुपये Rupees **NINTY THOUSAND RUPEES ONLY**

अदा करें। ₹ 90,000 /-

बैंक अ/c A/C No. **1312216342**

INSTA SAVINGS ACCOUNT  
CBS

**AMI TECH INDIA PVT LTD**

17/04/2017

Payable At-par at all branch locations of Kotak Mahindra Bank Ltd.

  
Please sign above

⑈000003⑈. 500485027⑈ 004245⑈ 32





# MALLA REDDY COLLEGE OF ENGINEERING

(Formerly CM Engineering College)

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ISO 9001:2015 Certified Institution, Recognition of College under Section 2(f) & 12 (B) of the UGC Act, 1956.

## Utilization Certificate

Title of the Project : Automation of machinery by using wireless sensor network

Principal Investigator : Dr.M.Thamarai

Certified that out of Rs.2,70,000/- (Total Amount) of Grant-in-aid sanctioned during the financial year 2018-19 in favour of Malla Reddy College of Engineering for research and development activities of AMI Technologies per Sanction Order NoMI/EXTERNAL FUND/2018/778 Date 10/07/2018. Partially, The sum of Rs .90,000/- has been received and appropriately utilized.

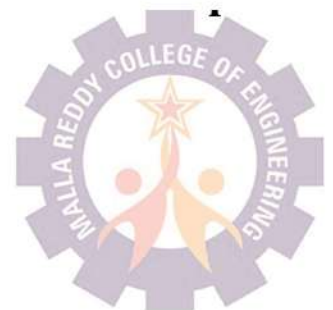
Certified that I have satisfied myself that the conditions on which the Grants in Aid was sanctioned/released have been duly fulfilled that money was actually utilized for the purposes for which it was sanctioned.

**Principal Investigator**

**Head of Institution  
(with seal)**

For M R K REDDY & Co.  
Chartered Accountants  
FRN - 0032655

**Auditor  
(with seal)**





Estd :2005

# MALLA REDDY COLLEGE OF ENGINEERING

(Formerly CM Engineering College)

Approved by AICTE - New Delhi, Affiliated to JNTU - Hyderabad, Accredited by NBA & Accredited by NAAC.  
ISO 9001:2015 Certified Institution, Recognition of College under Section 2(f) & 12 (B) of the UGC Act, 1956.

Date: 20/8/2018

To

The Managing Director

Eminosoft

Hyderabad, Telangana – 500 067

Dear Sir,

Subject: Requesting Sponsorship for project — Reg.

Best wishes from Malla Reddy College of Engineering!

Malla Reddy College of Engineering (Formerly CM Engineering College) has been established under the aegis of the Malla Reddy Group of institutions in the year 2005, a majestic empire, founded by chairman Sri. Ch. Malla Reddy. He has been in the field of education for the last 22 years with the intention of spearheading quality education among children from the school level itself. The faculty of various departments are actively pursuing research in their respective technical departments under R&D wing of MRCE.

**Dr.T.Nedunchezhiyan**, Professor Department of Computer Science and engineering, is the principal investigator for this proposed work. He is an eminent person in his research area. We request your kind cooperation and financial aid of INR 2,10,000.00 (Rupees Two lakh Ten Thousand only) in the project entitled “**Service Based Data Analysis through Cloud Computing**”. Here with we have enclosed the budget proposal for the project. Our faculty will contact you in person along with this letter and may detail the scope of work.

We expect your positive response.

Thanking you,

Principal investigator



Principal  
Malla Reddy College of Engineering

## Letter of Acceptance

**Ref:** MI/R&D/2018/1125

**Date:** 12/9/2018

**To**

The principal,  
Malla Reddy College of Engineering,  
Maisammaguda,  
Secunderabad-500100

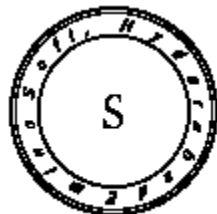
**Dear Sir,**

**Ref :** Sponsorship for Project Dated: 20/8/2018

**Subject :** Acceptance for Financial aid for the project “**Service Based Data Analysis through Cloud Computing**”

Best wishes from Emينو Soft!!!

This letter is to inform you that our technical team has reviewed your research project titled, “**Service Based Data Analysis through Cloud Computing**”. Based on the report , your proposed project got approval by the managing body. We have planned to extend our support to carry out this research work. In this regard, we are glad to sponsor your project With INR. 2,10,000.00 (Rupees Two lakh Ten Thousand only).



Director

## Work Order

**Ref:** MI/R&D/2018/1125

**Date:** 20/9/2018

**To**

The Principal,  
Malla Reddy College of Engineering  
Dhulapally, Secunderabad-500100

**Dear Sir,**

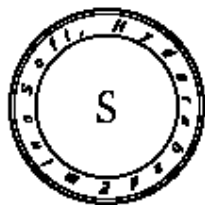
**Ref :** Sponsorship for funded Project Dated: 20/8/2018

**Subject :** Work order for the project "**Service Based Data Analysis through Cloud Computing**"

With reference to letter of acceptance (dated: 12/9/2018) ,we are accepting your budget proposal as mentioned below and also we are glad to release the work order for the project "**Service Based Data Analysis through Cloud Computing**" from today onwards.

S.No	Particular	Amount
1.	Term -1	INR 1,10,000
2.	Term -2	INR 50,000
3.	Term -3	INR 50,000
	<b>Total</b>	INR 2,10,000

Best wishes



Director

# MALLAREDDY COLLEGE OF ENGINEERING

## Department of Computer Science and Engineering

### OVERVIEW OF PROJECT PROPOSAL

Title	Service Based Data Analysis through Cloud Computing
Principal Investigator	Dr.T.Nedunchezhiyan
Description	Businesses have long used data analytics to help direct their strategy to maximize profits. Ideally data analytics helps eliminate much of the guesswork involved in trying to understand clients, instead systemically tracking data patterns to best construct business tactics and operations to minimize uncertainty. Not only does analytics determine what might attract new customers, often analytics recognizes existing patterns in data to help better serve existing customers, which is typically more cost effective than establishing new business. In an ever-changing business world subject to countless variants, analytics gives companies the edge in recognizing changing climates so they can take initiate appropriate action to stay competitive. Alongside analytics, cloud computing is also helping make business more effective and the consolidation of both clouds and analytics could help businesses store, interpret, and process their big data to better meet their clients' needs.



Principal Investigator



Principal  
Malla Reddy College of Engineering  
Principal



THE  
**FEDERAL BANK**  
LIMITED

Kukatpally Br. [ap]  
Hyderabad - 500082  
IFSC: FDRL0001569

**CURRENT ACCOUNT**  
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1	2	0	9	2	0	1	8
D	D	M	M	Y	Y	Y	Y

**FREEDOM CURRENT**

या धारक को or Bearer

Pay **MALLA REDDY COLLEGE OF ENGINEERING**

रुपये Rupees **ONE LAKH TEN THOUSAND RUPEES ONLY**

अदा करें।

₹

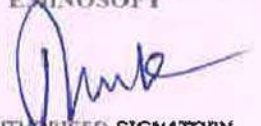
**1,10,000 /-**

अ. न.  
A/c No.

**15690200002456**

**Chq.No. 10053127**  
**SG**

For **EMINOSOFT**



**AUTHORISED SIGNATORY** **AUTHORISED SIGNATORY**

PAYABLE AT ALL BRANCHES OF FEDERAL BANK



Estd :2005

# MALLA REDDY COLLEGE OF ENGINEERING

(Formerly CM Engineering College)

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ISO 9001:2015 Certified Institution, Recognition of College under Section 2(f) & 12 (B) of the UGC Act, 1956.

## Utilization Certificate

Title of the Project : Service Based Data Analysis through Cloud Computing

Principal Investigator : Dr.T.Nedunchezhiyan

Certified that out of Rs.2,10,000/- (Total Amount) of Grant-in-aid sanctioned during the financial year 2018-19 in favour of Malla Reddy College of Engineering for research and development activities of Eminosoft per Sanction Order No MI/R&D/2018/1125 Date 20/9/2018. Partially, The sum of Rs.1,10,000/- has been received and appropriately utilized.

Certified that I have satisfied myself that the conditions on which the Grants in Aid was sanctioned/released have been duly fulfilled that money was actually utilized for the purposes for which it was sanctioned.

**Principal Investigator**

**Head of Institution  
(with seal)**

**Auditor  
(with seal)**



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**FEDERAL BANK**  
LIMITED

Kukatpally Br. [ap]  
Hyderabad - 500082  
IFSC: FDRL0001569

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D	D	M	M	Y	Y	Y	Y

FREEDOM CURRENT

Pay **MALLA REDDY COLLEGE OF ENGINEERING**

या धारक को or Bearer

रुपये Rupees **FIFTY THOUSAND RUPEES ONLY**

अदा करें

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50,000 /-

अ. न.  
A/c No.

13690200002488

For EMINOSOFT

Chq.No 10053159  
SG

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## Utilization Certificate

Title of the Project : Service Based Data Analysis through Cloud Computing

Principal Investigator : Dr.T.Nedunchezhiyan

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Certified that I have satisfied myself that the conditions on which the Grants in Aid was sanctioned/released have been duly fulfilled that money was actually utilized for the purposes for which it was sanctioned.

**Principal Investigator**

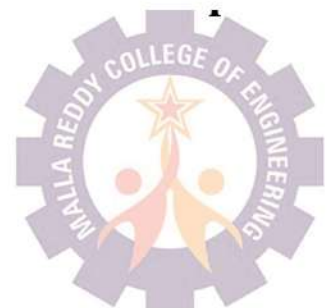
**Head of Institution  
(with seal)**



For M R K REDDY & Co.  
Chartered Accountants  
FRN - 0032655



**Auditor  
(with seal)**







Estd :2005

# MALLA REDDY COLLEGE OF ENGINEERING

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ISO 9001:2015 Certified Institution, Recognition of College under Section 2(f) & 12 (B) of the UGC Act, 1956.

Date: 8/10/2018

To

The Managing Director

Eminosoft

Hyderabad, Telangana – 500 067

Dear Sir,

Subject: Requesting Sponsorship for project — Reg.

Best wishes from Malla Reddy College of Engineering!

Malla Reddy College of Engineering (Formerly CM Engineering College) has been established under the aegis of the Malla Reddy Group of institutions in the year 2005, a majestic empire, founded by chairman Sri. Ch. Malla Reddy. He has been in the field of education for the last 22 years with the intention of spearheading quality education among children from the school level itself. The faculty of various departments are actively pursuing research in their respective technical departments under R&D wing of MRCE.

**Dr.M.Srinivaslu**, Professor Department of Computer Science and engineering, is the principal investigator for this proposed work. He is an eminent person in his research area. We request your kind cooperation and financial aid of INR 1,90,000.00 (Rupees one lakh nintey Thousand only) in the project entitled **“Empirical Web Accessibility Evaluation for Blind Web Users”** Here with we have enclosed the budget proposal for the project. Our faculty will contact you in person along with this letter and may detail the scope of work.

We expect your positive response.

Thanking you,

Principal Investigator



Principal  
Malla Reddy College of Engineering



## Letter of Acceptance

**Ref:** MI/R&D/2018/566

**Date:** 25/10/2018

**To**

The principal,  
Malla Reddy College of Engineering,  
Maisammaguda,  
Secunderabad-500100

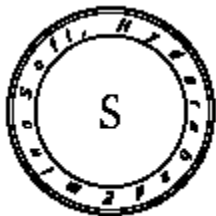
**Dear Sir,**

**Ref :** Sponsorship for Project Dated: 8/10/2018

**Subject :** Acceptance for Financial aid for the project “**Empirical Web  
Accessibility Evaluation for Blind Web Users**”

Best wishes from Emino Soft!!!

This letter is to inform you that our technical team has reviewed your research project titled, “**Empirical Web Accessibility Evaluation for Blind Web Users**”. Based on the report , your proposed project got approval by the managing body. We have planned to extend our support to carry out this research work. In this regard, we are glad to sponsor your project With INR. 1,90,000.00 (Rupees one lakh ninety Thousand only).



Director

Work Order

**Ref:** MI/R&D/2018/566

**Date:** 31/10/2018

**To**

The Principal,  
Malla Reddy College of Engineering  
Dhulapally, Secunderabad-500100

**Dear Sir,**

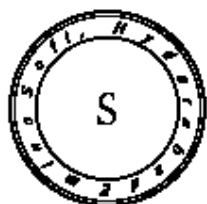
**Ref :** Sponsorship for funded Project Dated: 8/10/2018

**Subject :** Work order for the project "**Empirical Web Accessibility Evaluation for Blind Web Users**"

With reference to letter of acceptance (dated: 25/10/2018) ,we are accepting your budget proposal as mentioned below and also we are glad to release the work order for the project "**Empirical Web Accessibility Evaluation for Blind Web Users**" from today onwards.

S.No	Particular	Amount
1.	Term -1	INR 75,000
2.	Term -2	INR 50,000
3.	Term -3	INR 65,000
	<b>Total</b>	INR 1,90,000

Best wishes



Director

# MALLAREDDY COLLEGE OF ENGINEERING

## Department of Computer Science and Engineering

### OVERVIEW OF PROJECT PROPOSAL

Title	Empirical Web Accessibility Evaluation for Blind Web Users
Principal Investigator	Dr.M.Srinivaslu
Description	<p>Websites were originally conceived for a text-based interface, but very early (from MOSAIC on) they became the epitome of graphic interface applications. A Web page is inherently complex since it simultaneously conveys pieces of content and relationships among them, “links ” to other pages, etc. If the core of the communication lies in the content, a lot of additional but often fundamental semantics comes from visual features: i.e. layout, colors, fonts, spatial relationships, positioning within the page, etc. In addition, in modern Web applications, a large portion of the content is visual (e.g. pictures, graphics), or based on visual perception (e.g. tables, diagrams, etc.). Accessing the Web, for users with disabilities, can be difficult or even very difficult in many senses. In this paper we address the issue of accessibility for a specific type of disability, i.e. blindness. The most useful technology devised for blind users is based upon “ screenreaders”, i.e. software tools that “read ” pages aloud. The W3C consortium, through the WAI initiative, has taken the step of providing guidelines, in order to tell developers what they should (or should not) do in order to build “readable ” pages. The main thesis of this paper is that the W3C guidelines only guarantee “technical readability”, i.e. the very fact that screenreaders can work; they do not ensure at all the fact that the a Website is “accessible ” by blind users, in the sense that blind users can effectively access it. For this reason we advocate “usable accessibility”</p>



Principal Investigator



Principal  
Malla Reddy College of Engineering

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D	D	M	M	Y	Y	Y	Y

FREEDOM CURRENT

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या धारक को or Bearer

रुपये Rupees **SEVENTY FIVE THOUSAND RUPEES ONLY**

अदा करें।

₹

75,000 /-

अ. सं.  
A/c No.

15690200002460

Chq.No 10053131  
SG

For EMINOSOFT



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## Utilization Certificate

Title of the Project : Empirical Web Accessibility Evaluation for Blind Web Users

Principal Investigator : Dr.M.Srinivaslu

Certified that out of Rs.1,90,000/- (Total Amount) of Grant-in-aid sanctioned during the financial year 2018-19 in favour of Malla Reddy College of Engineering for research and development activities of Eminsoft per Sanction Order No MI/R&D/2018/566 Date 31/10/2018. Partially, The sum of Rs.75,000/- has been received and appropriately utilized.

Certified that I have satisfied myself that the conditions on which the Grants in Aid was sanctioned/released have been duly fulfilled that money was actually utilized for the purposes for which it was sanctioned.

Principal Investigator

Head of Institution  
(with seal)



For M R K REDDY & Co.  
Chartered Accountants  
FRN - 0032655

Auditor  
(with seal)





THE  
**FEDERAL BANK**  
LIMITED

Kukatpally Br. [ap]  
Hyderabad - 500082  
IFSC: FDRL0001569

**CURRENT ACCOUNT**  
Valid for 3 months only

1	2	0	3	2	0	1	9
D	E	M	M	Y	Y	Y	Y

**FREEDOM CURRENT**

Pay **MALLA REDDY COLLEGE OF ENGINEERING**

या धारक को or Bearer

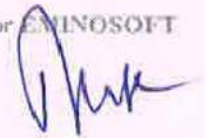
रुपये Rupees **FIFTY THOUSAND RUPEES ONLY**

अदा करें | ₹ **50,000 /-**

कॉ. सं. A/c No.	156902000413-490
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Chq.No 10053161  
SG

for **EMINOSOFT**



**AUTHORISED SIGNATORY AUTHORIZED SIGNATORY**  
please sign above

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ISO 9001:2015 Certified Institution, Recognition of College under Section 2(f) & 12 (B) of the UGC Act, 1956.

## Utilization Certificate

Title of the Project : Empirical Web Accessibility Evaluation for Blind Web Users

Principal Investigator : Dr.M.Srinivaslu

Certified that out of Rs.1,90,000/- (Total Amount) of Grant-in-aid sanctioned during the financial year 2018-19 in favour of Malla Reddy College of Engineering for research and development activities of Eminosoft per Sanction Order No MI/R&D/2018/566 Date 31/10/2018. Partially, The sum of Rs.50,000/- has been received and appropriately utilized.

Certified that I have satisfied myself that the conditions on which the Grants in Aid was sanctioned/released have been duly fulfilled that money was actually utilized for the purposes for which it was sanctioned.

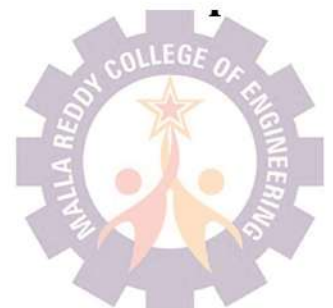
**Principal Investigator**

**Head of Institution  
(with seal)**



For M R K REDDY & Co.  
Chartered Accountants  
FRN - 0032655

**Auditor  
(with seal)**



THE  
**FEDERAL BANK**  
LIMITED

Kukatpally Br. [ap]  
Hyderabad - 500082  
IFSC: FDRL0001569

CURRENT ACCOUNT

Valid for 3 months only

FREEDOM CURRENT

1	7	0	5	2	0	1	9
D	D	M	M	Y	Y	Y	Y

Pay **MALLA REDDY COLLEGE OF ENGINEERING**

या धारक को or Bearer

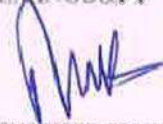
रुपये Rupees **SIXTY FIVE THOUSAND RUPEES ONLY**

अदा करें। ₹ 65,000/-

का. सं. A/c No. 15690200002512

Chq.No 10053173  
SG

For EMINOSOFT



AUTHORISED SIGNATORY AUTHORIZED SIGNATORY  
please sign above

PAYABLE AT ALL BRANCHES OF FEDERAL BANK



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## Utilization Certificate

Title of the Project : Empirical Web Accessibility Evaluation for Blind Web Users

Principal Investigator : Dr.M.Srinivaslu

Certified that out of Rs.1,90,000/- (Total Amount) of Grant-in-aid sanctioned during the financial year 2018-19 in favour of Malla Reddy College of Engineering for research and development activities of Eminsoft per Sanction Order No MI/R&D/2018/566 Date 31/10/2018. Partially, The sum of Rs.65,000/- has been received and appropriately utilized.

Certified that I have satisfied myself that the conditions on which the Grants in Aid was sanctioned/released have been duly fulfilled that money was actually utilized for the purposes for which it was sanctioned.

**Principal Investigator**

**Head of Institution  
(with seal)**



For M R K REDDY & Co.  
Chartered Accountants  
FRN - 0032655



**Auditor  
(with seal)**







Estd :2005

# MALLA REDDY COLLEGE OF ENGINEERING

(Formerly CM Engineering College)

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ISO 9001:2015 Certified Institution, Recognition of College under Section 2(f) & 12 (B) of the UGC Act, 1956.

Date: 12/11/2018

To  
The Managing Director  
Avinash Industries  
Hyderabad, Telangana – 500 067

Dear Sir,

Subject: Requesting Sponsorship for project — Reg.

Best wishes from Malla Reddy College of Engineering!

Malla Reddy College of Engineering (Formerly CM Engineering College) has been established under the aegis of the Malla Reddy Group of institutions in the year 2005, a majestic empire, founded by chairman Sri. Ch. Malla Reddy. He has been in the field of education for the last 22 years with the intention of spearheading quality education among children from the school level itself. The faculty of various departments are actively pursuing research in their respective technical departments under R&D wing of MRCE.

**Dr.J.Chandru**, Professor Department of Computer Science and engineering, is the principal investigator for this proposed work. He is an eminent person in his research area. We request your kind cooperation and financial aid of INR 2,20,000.00 (Rupees two lakh twenty Thousand only) in the project entitled “**Study of thermal hydraulic performance of elliptical shape tube in cross flow heat exchanger**” Here with we have enclosed the budget proposal for the project. Our faculty will contact you in person along with this letter and may detail the scope of work.

We expect your positive response.

Thanking you,

Principal Investigator



Principal  
Malla Reddy College of Engineering



**Letter of Acceptance**

**Ref:** MI/EXT/2018/989

**Date:** 30/11/2018

**To**

The principal,  
Malla Reddy College of Engineering,  
Maisammaguda,  
Secunderabad-500100

**Dear Sir,**

**Ref :** Sponsorship for Project Dated: 12/11/2018

**Subject :** Acceptance for Financial aid for the project “**Study of thermal hydraulic performance of elliptical shape tube in cross flow heat exchanger**”

Best wishes from Emino Soft!!!

This letter is to inform you that our technical team has reviewed your research project titled, “**Study of thermal hydraulic performance of elliptical shape tube in cross flow heat exchanger**” .Based on the report , your proposed project got approval by the managing body. We have planned to extend our support to carry out this research work. In this regard, we are glad to sponsor your project With INR. 2,20,000.00 (Rupees two lakh twenty Thousand only).



  
Director

Work Order

**Ref:** MI/EXT/2018/989

**Date:** 5/12/2018

To

The Principal,  
Malla Reddy College of Engineering  
Dhulapally, Secunderabad-500100

**Dear Sir,**

Ref : Sponsorship for funded Project Dated: 12/11/2018

Subject : Work order for the project **“Study of thermal hydraulic performance of elliptical shape tube in cross flow heat exchanger”**

With reference to letter of acceptance (dated: 30/11/2018) ,we are accepting your budget proposal as mentioned below and also we are glad to release the work order for the project **“Study of thermal hydraulic performance of elliptical shape tube in cross flow heat exchanger”** from today onwards.

S.No	Particular	Amount
1.	Term -1	INR 1,00,000
2.	Term -2	INR 70,000
3.	Term -3	INR 50,000
	<b>Total</b>	INR 2,20,000

Best wishes



*Santosh Kumar*  
Director

**MALLA REDDY COLLEGE OF ENGINEERING**  
**DEPARTMENT OF MECHANICAL ENGINEERING**  
**OVERVIEW OF PROJECT PROPOSAL**

<b>Title</b>	<b>Study of thermal hydraulic performance of elliptical shape tube in cross flow heat exchanger</b>
<b>Principal Investigator</b>	<b>Dr.J.Chandru</b>
<b>Description</b>	<p>Experimental investigation is carried out to study thermal-hydraulic performance of elliptic shape tube cross flow heat exchanger with staggered tube arrangement at 45° angle of attack. The staggered tube arrangement is having longitudinal and transverse pitch equal. Hot water passed through the tubes at 45° angle of attack and cold atmospheric air flows over the tubes in a cross arrangement. Heat transfer takes place from hot water to cold atmospheric air by the mode of convection. Effect of different mass flow rate of air on convective heat transfer coefficient, Reynolds number, Prandtl number and heat transfer would be calculated. Effect of using elliptic shape staggered tube arrangement at 45° angle of attack would be compared with Zukauskas correlation for circular staggered tube bank arrangement.</p> <p>Heat exchangers have wide range of applications such as in the chemical process, thermal power, air conditioning, refrigeration, cryogenic, heat recovery and automobile industries. The applications of heat exchanger increases rapidly, it leads to increase demand of higher thermal performance and economical heat exchanger. Increase in thermal performance leads to increase in size, energy, material, and cost of heat exchangers.</p> <p>Heat exchangers are found in different industrial sectors where heat has to be transferred between different media. Circular tubes are generally used in the construction of heat exchanger because of the manufacturing easiness. The problem with the circular tubes is that causes separation, wakes and produces high pressure drop. A non-circular tubes offer very low hydraulic resistance and require less pumping power. In recent years non circular tubes flat, oval, elliptical, cam shaped tubes are considered as heat transfer element in cross flow heat exchangers</p>



Principal Investigator


  
 Principal  
 Malla Reddy College of Engineering

Principal



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## Utilization Certificate

Title of the Project : Study of thermal hydraulic performance of elliptical shape tube in cross flow heat exchanger

Principal Investigator : Dr.J.Chandru

Certified that out of Rs.2,20,000/- (Total Amount) of Grant-in-aid sanctioned during the financial year 2018-19 in favour of Malla Reddy College of Engineering for research and development activities of Avinash Industries per Sanction Order No MI/EXT/2018/989 Date 30/11/2018. Partially, The sum of Rs.1,00,000/- has been received and appropriately utilized.

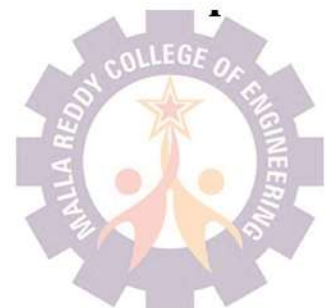
Certified that I have satisfied myself that the conditions on which the Grants in Aid was sanctioned/released have been duly fulfilled that money was actually utilized for the purposes for which it was sanctioned.

**Principal Investigator**

**Head of Institution  
(with seal)**

For M R K REDDY & Co.  
Chartered Accountants  
FRN : 0032655

**Auditor  
(with seal)**



Union Bank

BRANCH - A/C 1015  
MAISAMMAGUDA - 501014  
IFSC: UBIN0571140

DATE 1 5 0 2 2 0 1 9

RAY MALLA REDDY COLLEGE OF ENGINEERING

IHB34  
OR BEARER

RUPEES SEVENTY THOUSAND RUPEES ONLY

₹ 70,000/-

A/c No 711401010050050

Cheque No. 02027530

For: AVINASH INDUSTRIES

Authorized Signatory

PAIDABLE AT PAR AT ALL OUR BRANCHES IN INDIA

PLEASE SIGN ABOVE THIS LINE

027523 5000250380 711501 12





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(Formerly CM Engineering College)

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ISO 9001:2015 Certified Institution, Recognition of College under Section 2(f) & 12 (B) of the UGC Act, 1956.

## Utilization Certificate

Title of the Project : Study of thermal hydraulic performance of elliptical shape tube in cross flow heat exchanger

Principal Investigator: Dr.J.Chandru

Certified that out of Rs.2,20,000/- (Total Amount) of Grant-in-aid sanctioned during the financial year 2018-19 in favour of Malla Reddy College of Engineering for research and development activities of Avinash Industries per Sanction Order No MI/EXT/2018/989 Date 30/11/2018. Partially, The sum of Rs.70,000/- has been received and appropriately utilized.

Certified that I have satisfied myself that the conditions on which the Grants in Aid was sanctioned/released have been duly fulfilled that money was actually utilized for the purposes for which it was sanctioned.

**Principal Investigator**

**Head of Institution  
(with seal)**

For M R K REDDY & Co.  
Chartered Accountants  
FRN - 0032655

(M. RAMAKRISHNA REDDY)  
Proprietor

**Auditor  
(with seal)**



A/c Payee **Union Bank**

Branch - 501014  
MAISAMMAGUDA - 501014  
IFSC UBIN0671148

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PAY **MALLA REDDY COLLEGE OF ENGINEERING**

1H834

TO BE PAID TO: OR BEARER

**RUPEES FIFTY THOUSAND RUPEES ONLY**

₹ 50,000/-

3121 9921

For **AVINASH INDUSTRIES**

A/C No 711401010050062

Cheque No. 02027551

*Avinash*  
Authorized Signatory

पेय करे के सभी बैंक शाखाओं में मंगल्य है।  
PAYABLE AT ALL AT ALL OUR BRANCHES IN INDIA

PLEASE SIGN ABOVE THIS LINE

\*027523\* 500026038\* 711519\* 20



# MALLA REDDY COLLEGE OF ENGINEERING

(Formerly CM Engineering College)

Approved by AICTE - New Delhi, Affiliated to JNTU - Hyderabad, Accredited by NBA & Accredited by NAAC.  
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## Utilization Certificate

Title of the Project : Study of thermal hydraulic performance of elliptical shape tube in cross flow heat exchanger

Principal Investigator : Dr.J.Chandru

Certified that out of Rs.2,20,000/- (Total Amount) of Grant-in-aid sanctioned during the financial year 2018-19 in favour of Malla Reddy College of Engineering for research and development activities of Avinash Industries per Sanction Order No MI/EXT/2018/989 Date 30/11/2018. Partially, The sum of Rs.50,000/- has been received and appropriately utilized.

Certified that I have satisfied myself that the conditions on which the Grants in Aid was sanctioned/released have been duly fulfilled that money was actually utilized for the purposes for which it was sanctioned.

**Principal Investigator**

**Head of Institution  
(with seal)**

For M R K REDDY & Co.  
Chartered Accountants  
FRN - 0032655

**Auditor  
(with seal)**







# MALLA REDDY COLLEGE OF ENGINEERING

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ISO 9001:2015 Certified Institution, Recognition of College under Section 2(f) & 12 (B) of the UGC Act, 1956.

Date: 13/4/2018

To

The Managing Director

Avinash Industries

Hyderabad, Telangana – 500 067

Dear Sir,

Subject: Requesting Sponsorship for project — Reg.

Best wishes from Malla Reddy College of Engineering!

Malla Reddy College of Engineering (Formerly CM Engineering College) has been established under the aegis of the Malla Reddy Group of institutions in the year 2005, a majestic empire, founded by chairman Sri. Ch. Malla Reddy. He has been in the field of education for the last 22 years with the intention of spearheading quality education among children from the school level itself. The faculty of various departments are actively pursuing research in their respective technical departments under R&D wing of MRCE.

**Dr.A.K.S.Ansari**, Professor Department of Computer Science and engineering, is the principal investigator for this proposed work. He is an eminent person in his research area. We request your kind cooperation and financial aid of INR 2,40,000.00 (Rupees two lakh forty Thousand only) in the project entitled **“Comparative Performance Analysis for Solar Air Heating System using Artificial Roughness and Porous Media”** Here with we have enclosed the budget proposal for the project. Our faculty will contact you in person along with this letter and may detail the scope of work.

We expect your positive response.

Thanking you,

Principal investigator



Principal  
Malla Reddy College of Engineering

**Letter of Acceptance**

**Ref:** MI/EXT/2018/432

**Date:** 27/4/2018

**To**

The principal,  
Malla Reddy College of Engineering,  
Maisammaguda,  
Secunderabad-500100

**Dear Sir,**

**Ref :** Sponsorship for Project Dated: 13/4/2018

**Subject :** Acceptance for Financial aid for the project “**Comparative Performance Analysis for Solar Air Heating System using Artificial Roughness and Porous Media**”

Best wishes from Avinash Industries!!!

This letter is to inform you that our technical team has reviewed your research project titled, “**Comparative Performance Analysis for Solar Air Heating System using Artificial Roughness and Porous Media**” .Based on the report , your proposed project got approval by the managing body. We have planned to extend our support to carry out this research work. In this regard, we are glad to sponsor your project With INR. 2,40,000.00 (Rupees two lakh forty Thousand only).



Director



Work Order

**Ref:** MI/EXT/2018/432

**Date:** 3/5/2018

**To**

The Principal,  
Malla Reddy College of Engineering  
Dhulapally, Secunderabad-500100

**Dear Sir,**

**Ref** : Sponsorship for funded Project Dated: 13/4/2018

**Subject** : Work order for the project “**Comparative Performance Analysis for Solar Air Heating System using Artificial Roughness and Porous Media**”

With reference to letter of acceptance (dated: 27/4/2018) ,we are accepting your budget proposal as mentioned below and also we are glad to release the work order for the project “**Comparative Performance Analysis for Solar Air Heating System using Artificial Roughness and Porous Media**” from today onwards.

S.No	Particular	Amount
1.	Term -1	INR 1,40,000
2.	Term -2	INR 50,000
3.	Term -3	INR 50,000
	<b>Total</b>	INR 2,40,000

Best wishes

  
Director



**MALLA REDDY COLLEGE OF ENGINEERING**  
**DEPARTMENT OF MECHANICAL ENGINEERING**  
**OVERVIEW OF PROJECT PROPOSAL**

<b>Title</b>	<b>Comparative Performance Analysis for Solar Air Heating System using Artificial Roughness and Porous Media</b>
<b>Principal Investigator</b>	<b>Dr.A.K.S.Ansari</b>
<b>Description</b>	Solar energy has emerged as one of the alternate to conventional sources of energy. Solar air heaters are one of the important devices to utilize solar energy. But, poor heat transfer coefficient is one of the major problem in solar air heater. In this research article, an attempt is made to increase heat transfer coefficient of solar air heater by putting Hollow bodies over the absorber plate. These resulted in increase in heat transfer coefficient, efficiency and increase in outlet temperature of air simultaneously



Principal Investigator



Principal  
Malla Reddy College of Engineering

Principal

PAY MALLA REDDY COLLEGE OF ENGINEERING

18834  
OR BEARER

RUPEES ONE LAKH FORTY THOUSAND RUPEES ONLY

₹ 1,40,000/-

A/c No. 711401010050012

Check No. 02027501

For AVINASH INDUSTRIES

*Avinash*  
Authorized Signatory

PAID BY ALL OUR BRANCHES IN INDIA

PLEASE SIGN ABOVE THIS LINE

⑈027521⑈ 500025038⑈ 711403⑈ 31



Estd :2005

# MALLA REDDY COLLEGE OF ENGINEERING

(Formerly CM Engineering College)

Approved by AICTE - New Delhi, Affiliated to JNTU - Hyderabad, Accredited by NBA & Accredited by NAAC.  
ISO 9001:2015 Certified Institution, Recognition of College under Section 2(f) & 12 (B) of the UGC Act, 1956.

## Utilization Certificate

Title of the Project : Comparative Performance Analysis for Solar Air Heating System using Artificial Roughness and Porous Media

Principal Investigator : Dr.A.K.S.Ansari

Certified that out of Rs.2,40,000/- (Total Amount) of Grant-in-aid sanctioned during the financial year 2018-19 in favour of Malla Reddy College of Engineering for research and development activities of Avinash Industries per Sanction Order No MI/EXT/2018/432 Date 3/5/2018. Partially, The sum of Rs.1,40,000/- has been received and appropriately utilized.

Certified that I have satisfied myself that the conditions on which the Grants in Aid was sanctioned/released have been duly fulfilled that money was actually utilized for the purposes for which it was sanctioned.

**Principal Investigator**

**Head of Institution  
(with seal)**

For M R K REDDY & Co.  
Chartered Accountants  
FRN - 0032655

(M. RAMAKRISHNA REDDY)  
Proprietor



**Auditor  
(with seal)**



एन.ए.सी. बैंक Union Bank

BRANCH - 501014  
MAISAMMAIGUDA - 501014  
IFSC - UBIN0571148

VALID FOR 6 MONTHS FROM THE DATE OF ISSUE

DATE 15 11 2018

PAY MALLA REDDY COLLEGE OF ENGINEERING

1HB34

OR BEARER

RUPEES FIFTY THOUSAND RUPEES ONLY

₹ \*\* 50,000 /-

50000

बैंक अ/c नं.  
A/C No

711401010050026

चेक नं.  
Cheque No.

02027515

For AVINASH INDUSTRIES



Authorized Signatory's

ये चेक सर्व शाखाओं में अदा किया जा सकता है  
PAYABLE AT ALL OUR BRANCHES IN INDIA

PLEASE SIGN ABOVE THIS LINE

⑆0②7523⑆ 500025038⑆ 711402⑆ 30





Estd :2005

# MALLA REDDY COLLEGE OF ENGINEERING

(Formerly CM Engineering College)

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## Utilization Certificate

Title of the Project : Comparative Performance Analysis for Solar Air Heating System using Artificial Roughness and Porous Media

Principal Investigator : Dr.A.K.S.Ansari

Certified that out of Rs.2,40,000/- (Total Amount) of Grant-in-aid sanctioned during the financial year 2018-19 in favour of Malla Reddy College of Engineering for research and development activities of Avinash Industries per Sanction Order No MI/EXT/2018/432 Date 3/5/2018. Partially, The sum of Rs.50,000/- has been received and appropriately utilized.

Certified that I have satisfied myself that the conditions on which the Grants in Aid was sanctioned/released have been duly fulfilled that money was actually utilized for the purposes for which it was sanctioned.

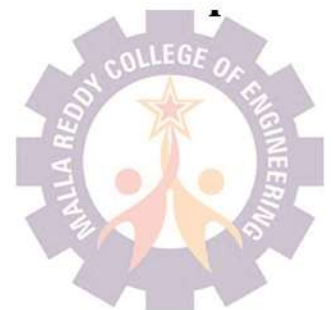
**Principal Investigator**

**Head of Institution  
(with seal)**



For M R K REDDY & Co.  
Chartered Accountants  
FRN - 0032655

**Auditor  
(with seal)**





Estd :2005

# MALLA REDDY COLLEGE OF ENGINEERING

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ISO 9001:2015 Certified Institution, Recognition of College under Section 2(f) & 12 (B) of the UGC Act, 1956.

Date: 23/8/2018

To  
The Managing Director  
Avinash Industries  
Hyderabad, Telangana – 500 067

Dear Sir,

Subject: Requesting Sponsorship for project — Reg.

Best wishes from Malla Reddy College of Engineering!

Malla Reddy College of Engineering (Formerly CM Engineering College) has been established under the aegis of the Malla Reddy Group of institutions in the year 2005, a majestic empire, founded by chairman Sri. Ch. Malla Reddy. He has been in the field of education for the last 22 years with the intention of spearheading quality education among children from the school level itself. The faculty of various departments are actively pursuing research in their respective technical departments under R&D wing of MRCE.

**Dr.V.venugopal**, Professor Department of Computer Science and engineering, is the principal investigator for this proposed work. He is an eminent person in his research area. We request your kind cooperation and financial aid of INR 2,10,000.00 (Rupees two lakh ten Thousand only) in the project entitled “**Investigation on waste heat recovery system for Diesel engine using an Organic Rankine cycle**” Here with we have enclosed the budget proposal for the project. Our faculty will contact you in person along with this letter and may detail the scope of work.

We expect your positive response.

Thanking you

Principal investigator



Principal  
Malla Reddy College of Engineering

**Letter of Acceptance**

**Ref:** MI/EXT/2018/1221

**Date:** 6/9/2018

**To**

The principal,  
Malla Reddy College of Engineering,  
Maisammaguda,  
Secunderabad-500100

**Dear Sir,**

**Ref :** Sponsorship for Project Dated: 23/8/2018

**Subject :** Acceptance for Financial aid for the project **“Investigation on waste heat recovery system for Diesel engine using an Organic Rankine cycle”**

Best wishes from Avinash Industries!!!

This letter is to inform you that our technical team has reviewed your research project titled, **“Investigation on waste heat recovery system for Diesel engine using an Organic Rankine cycle”**. Based on the report, your proposed project got approval by the managing body. We have planned to extend our support to carry out this research work. In this regard, we are glad to sponsor your project With INR. 2,10,000.00 (Rupees two lakh ten Thousand only).





Director

Work Order

**Ref:** MI/EXT/2018/1221

**Date:** 15/9/2018

**To**

The Principal,  
Malla Reddy College of Engineering  
Dhulapally, Secunderabad-500100

**Dear Sir,**

**Ref :** Sponsorship for funded Project Dated: 23/8/2018

**Subject :** Work order for the project **“Investigation on waste heat recovery system for Diesel engine using an Organic Rankine cycle”**

With reference to letter of acceptance (dated: 6/9/2018) ,we are accepting your budget proposal as mentioned below and also we are glad to release the work order for the project **“Investigation on waste heat recovery system for Diesel engine using an Organic Rankine cycle”** from today onwards.

S.No	Particular	Amount
1.	Term -1	INR 1,10,000
2.	Term -2	INR 50,000
3.	Term -3	INR 50,000
	<b>Total</b>	INR 2,10,000

Best wishes





Director



**MALLA REDDY COLLEGE OF ENGINEERING**  
**DEPARTMENT OF MECHANICAL ENGINEERING**  
**OVERVIEW OF PROJECT PROPOSAL**

<b>Title</b>	<b>Investigation on waste heat recovery system for Diesel engine using an Organic Rankine cycle</b>
<b>Principal Investigator</b>	<b>Dr.V.venugopal</b>
<b>Description</b>	<p>Energy-saving, stricter regulations on pollution prevention, increasing energy efficiency and reducing operational costs have become common and primary issues for maritime industry, recently. One of the methods to improve these requirements onboard is to use a waste heat recovery system based on organic Rankine cycle. In this article, organic Rankine cycle–based waste heat recovery system for a chemical/oil tanker is investigated at different engine operating conditions by thermodynamic, environmental and economic analyses. The jacket cooling water, scavenge air, exhaust gas and combination of these three sources are used as the waste heat sources. R245fa is selected as the working fluid. The performance parameters of four different organic Rankine cycle–based waste heat recovery systems integrated with the main engine of the tanker are calculated and presented. The results show that by using the organic Rankine cycle–based waste heat recovery system onboard, it is possible to increase the overall thermal efficiency of the ship’s power plant by more than 6% and the combined organic Rankine cycle–based waste heat recovery system can meet all navigation electricity demand when the engine is operated at 82% maximum continuous rating or higher engine loads. In comparison with other organic Rankine cycle–based waste heat recovery systems, the combined organic Rankine cycle–based waste heat recovery system has the highest capital cost, but it has the shortest payback time. Furthermore, this system can reduce the ship emissions by about 6.9%.</p>



Principal Investigator


  
Principal  
Malla Reddy College of Engineering

Principal



A/c Payee **Union Bank**

BRANCH - NO 1033  
MADRASNAGUDA - 501014  
IFSC UBIN0521543

DATE 15 09 2018

PAY **MALLA REDDY COLLEGE OF ENGINEERING**

1HB04  
TO BE PAID TO OR BEARER

**RUPEES ONE LAKH TEN THOUSAND RUPEES ONLY**

₹ 1,10,000/-

Bank A/c No. 711401010050018

Chq No. 02027509

For **AVINASH INDUSTRIES**

*Avinash*  
Authorized Signatory  
PLEASE SIGN ABOVE THIS LINE

पेय करी खाते पर सभी जमावों से स्विकार लेते हैं  
PAYABLE AT PAR AT ALL OUR BRANCHES IN INDIA

⑈027523⑈ 500020038⑈ 711401⑈ 32



Estd :2005

# MALLA REDDY COLLEGE OF ENGINEERING

(Formerly CM Engineering College)

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## Utilization Certificate

Title of the Project : Investigation on waste heat recovery system for Diesel engine using an Organic Ranking cycle

Principal Investigator: Dr.V.venugopal

Certified that out of Rs.2,10,000/- (Total Amount) of Grant-in-aid sanctioned during the financial year 2018-19 in favour of Malla Reddy College of Engineering for research and development activities of Avinash Industries per Sanction Order No MI/EXT/2018/1221 Date 15/9/2018. Partially, The sum of Rs.1,10,000/- has been received and appropriately utilized.

Certified that I have satisfied myself that the conditions on which the Grants in Aid was sanctioned/released have been duly fulfilled that money was actually utilized for the purposes for which it was sanctioned.

**Principal Investigator**

**Head of Institution  
(with seal)**

For M R K REDDY & Co.  
Chartered Accountants  
FRN - 0032655

**Auditor  
(with seal)**



A/c Payee



BRANCH - SOUTH  
MAISAMAGUDA - 551014  
IFSC: URIN0571143

VALID FOR 3 MONTHS FROM THE DATE OF ISSUE  
DATE 1 0 0 4 2 0 1 8

PAV MALLA REDDY COLLEGE OF ENGINEERING

THB34

TO THE ORDER BEARER

₹ RUPEES FIFTY THOUSAND RUPEES ONLY

₹ 50,000/-

आका  
A/c No. 7114010110050059

चेक  
Cheque No. 02027548

FOR AVINASH INDUSTRIES

*Avinash*  
Authorized Signatory

PLEASE SIGN ABOVE THIS LINE

एक ही चेक को दो बार नहीं खर्च किया जा सकता है  
PAYABLE AT PAR AT ALL OUR BRANCHES IN INDIA

⑆0 275 23⑆ 500026038⑆ 711405⑆ 35

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Principal Investigator : Dr.V.venugopal

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Certified that I have satisfied myself that the conditions on which the Grants in Aid was sanctioned/released have been duly fulfilled that money was actually utilized for the purposes for which it was sanctioned.

**Principal Investigator**

**Head of Institution  
(with seal)**

For M R K REDDY & Co.  
Chartered Accountants  
FRN - 0032655

**Auditor  
(with seal)**







# MALLA REDDY COLLEGE OF ENGINEERING

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ISO 9001:2015 Certified Institution, Recognition of College under Section 2(f) & 12 (B) of the UGC Act, 1956.

Date: 25.10.2018

To  
The Managing Director,  
MECH Engineers,  
Valsad, Gujarat – 396035.

Dear Sir,

Subject: Requesting Sponsorship for project — Reg.

Best wishes from Malla Reddy College of Engineering!

Malla Reddy College of Engineering (Formerly CM Engineering College) has been established under the aegis of the Malla Reddy Group of institutions in the year 2005, a majestic empire, founded by chairman Sri. Ch. Malla Reddy. He has been in the field of education for the last 22 years with the intention of spearheading quality education among children from the school level itself. The faculty of various departments are actively pursuing research in their respective technical departments under R&D wing of MRCE.

**Dr.S.Ramesh** Department of Mechanical Engineering, is the principal investigator for this proposed work. He is an eminent person in his research area. We request your kind cooperation and financial aid of INR 3,00,000.00 (Rupees Three lakhs only) in the project entitled “**Development and Corrosion Studies of Fly Ash Based Geo polymer material**” Here with we have enclosed the budget proposal for the project. Our faculty will contact you in person along with this letter and may detail the scope of work.

We expect your positive response.

Thanking you,

Principal Investigator



Principal  
Malla Reddy College of Engineering





# MECH Engineers

Plot No. 803/1, 2,3 & 1003, New GIDC, Gundlav, N.H. No-48, Valsad, Gujarat,  
396035, India

## Letter of Acceptance

**Ref:** ME/PROJECT/2018/210

**Date:** 15.11.2018

**To**

The Principal,  
Malla Reddy College of Engineering,  
Maisammaguda, Secunderabad - 500100.

**Dear Sir,**

**Ref.:** Sponsorship acquisition for Project dated: 25.10.2018

**Subject:** Acceptance for Financial support for the project “**Development and Corrosion Studies of Fly Ash Based Geopolymer Material**”

Best wishes from MECH Engineers!!!!

This letter is to inform you that our technical team has reviewed your research project titled, “**Development and Corrosion Studies of Fly Ash Based Geopolymer Material**” Based on the report, your proposed project got approval by the managing body. We have planned to extend our support to carry out this research work. In this regard, we are glad to sponsor your project with INR. 3, 00,000.00 (Rupees Three lakhs only).



Managing Director



# MECH Engineers

Plot No. 803/1, 2,3 & 1003, New GIDC, Gundlav, N.H. No-48, Valsad, Gujarat,  
396035, India

## Work Order

**Ref:** ME/PROJECT/WO/2018/210

**Date:** 26.11.2018

**To**

The Principal,  
Malla Reddy College of Engineering,  
Maisammaguda, Secunderabad - 500100.

**Dear Sir,**

**Subject:** Work order for the project “**Development and Corrosion Studies of Fly Ash Based Geopolymer Material**”

**Ref.:** Sponsorship for funded Project dated: 25.10.2018

With reference to letter of acceptance (dated: 15.11.2018) ,we are accepting your budget proposal as mentioned below and also we are glad to release the work order for the project “**Development and Corrosion Studies of Fly Ash Based Geopolymer Material**” from today onwards.

S.No	Particular	Amount
1.	Term -1	INR 1,00,000
2.	Term -2	INR 1,00,000
3.	Term -3	INR 1,00,000
	<b>Total</b>	INR 3,00,000.00

Best Wishes!!!



Managing Director

MALLA REDDY COLLEGE OF ENGINEERING  
DEPARTMENT OF MECHANICAL ENGINEERING  
OVERVIEW OF PROJECT PROPOSAL

<b>Title</b>	<b>Development and Corrosion Studies of Fly Ash Based Geopolymer material</b>
<b>Principal Investigator</b>	<b>Dr.S.Ramesh</b>
<b>Description</b>	<p>Fly ash is the fine solid particulate residue driven out of the boiler with the flue gases in coal-fired power plants. Now it can be used for making geopolymer which acts as a cement-like product. The geopolymer technology provides an alternative good solution to the utilization of fly ash with little negative impact on environment. This review summarizes and examines the scientific advances in the preparation, properties and applications of fly ash-based geopolymer. The production of fly ash-based geopolymer is mainly based on alkali activated geopolymerization which can occur under mild conditions and is considered as a cleaner process due to much lower CO<sub>2</sub> emission than that from the production of cement. The geopolymerization can trap and fix the trace toxic metal elements from fly ash or external sources. The Si/Al ratios, the type and the amount of the alkali solution, the temperature, the curing conditions, and the additives are critical factors in a geopolymerization process. The mechanical performances of the fly ash-based geopolymer, including compressive strength, flexural and splitting tensile strength, and durability such as the resistance to chloride, sulfuric acid, thermal, freeze-thaw and efflorescence, are the primary concerns. These properties of fly ash-based geopolymer are inherently dependent upon the chemical composition and chemical bonding and the porosity. The mechanical properties and durability can be improved by fine tuning Si/Al ratios, alkali solutions, curing conditions, and adding slag, fiber, rice husk-bark ash and red mud. Fly ash-based geopolymer is expected to be used as a kind of novel green cement. Fly ash-based geopolymer can be used as a class of materials to adsorb and immobilize toxic or radioactive metals. The factors affecting the performances of fly ash-based geopolymer concrete, in particular aggregate, are discussed. For future studies on fly ash-based geopolymer, further enhancing mechanical performance, scaling up production and exploring new applications are suggested.</p>



Principal Investigator




Principal

**HDFC BANK**

233 B, 7th Floor, 7th Cross, 1st Stage, 2nd Mile, Road No. 12,  
Bangalore 560075, Karnataka State, India  
RTGS / NEFT IFSC : HDFC0001905

Weekly Holiday on MONDAY!  
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Rupees रुपये **ONE LAKH RUPEES ONLY**

अदा करें ₹ 1,00,000/-

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**MECH ENGINEERS**

Payable at par through clearing/transfer at all branches of HDFC BANK LTD

*[Signature]*  
Please sign above / नीचे की ओर हस्ताक्षर करें

⑈049108⑈ 500240048⑈ 003525⑈ 10



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## Utilization Certificate

Title of the Project : Development and Corrosion Studies of Fly Ash Based Geopolymer material

Principal Investigator : Dr.S.Ramesh

Certified that out of Rs.3,00,000/- (Total Amount) of Grant-in-aid sanctioned during the financial year 2018-19 in favour of Malla Reddy College of Engineering for research and development activities of MECH Engineers per Sanction Order No ME/PROJECT/WO/2018/210 Date 26.11.2018. Partially, The sum of Rs.1,00,000/- has been received and appropriately utilized.

Certified that I have satisfied myself that the conditions on which the Grants in Aid was sanctioned/released have been duly fulfilled that money was actually utilized for the purposes for which it was sanctioned.

**Principal Investigator**

**Head of Institution  
(with seal)**

For M R K REDDY & Co.  
Chartered Accountants  
FRN - 0032655

**Auditor  
(with seal)**









Estd :2005

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## Utilization Certificate

Title of the Project : Development and Corrosion Studies of Fly Ash Based Geopolymer material

Principal Investigator : Dr.S.Ramesh

Certified that out of Rs.3,00,000/- (Total Amount) of Grant-in-aid sanctioned during the financial year 2018-19 in favour of Malla Reddy College of Engineering for research and development activities of MECH Engineers per Sanction Order No ME/PROJECT/WO/2018/210 Date 26.11.2018. Partially, The sum of Rs.1,00,000/- has been received and appropriately utilized.

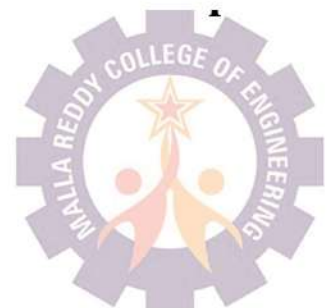
Certified that I have satisfied myself that the conditions on which the Grants in Aid was sanctioned/released have been duly fulfilled that money was actually utilized for the purposes for which it was sanctioned.

**Principal Investigator**

**Head of Institution  
(with seal)**

For M R K REDDY & Co.  
Chartered Accountants  
FRN - 0032655

**Auditor  
(with seal)**





Estd :2005

# MALLA REDDY COLLEGE OF ENGINEERING

(Formerly CM Engineering College)

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ISO 9001:2015 Certified Institution, Recognition of College under Section 2(f) & 12 (B) of the UGC Act, 1956.

Date: 29.01.2019

To  
The Managing Director,  
MECH Engineers,  
Valsad, Gujarat – 396035.

Dear Sir,

Subject: Requesting Sponsorship for project — Reg.

Best wishes from Malla Reddy College of Engineering!

Malla Reddy College of Engineering (Formerly CM Engineering College) has been established under the aegis of the Malla Reddy Group of institutions in the year 2005, a majestic empire, founded by chairman Sri. Ch. Malla Reddy. He has been in the field of education for the last 22 years with the intention of spearheading quality education among children from the school level itself. The faculty of various departments are actively pursuing research in their respective technical departments under R&D wing of MRCE.

**Dr.K.Prabu** Department of Mechanical Engineering, is the principal investigator for this proposed work. He is an eminent person in his research area. We request your kind cooperation and financial aid of INR 2,00,000.00 (Rupees Two lakhs only) in the project entitled “**Re-Use of Textile Waste as a Construction Material**” Here with we have enclosed the budget proposal for the project. Our faculty will contact you in person along with this letter and may detail the scope of work.

We expect your positive response.

Thanking you,

Principal Investigator



Principal  
Malla Reddy College of Engineering



# MECH Engineers

Plot No. 803/1, 2,3 & 1003, New GIDC, Gundlav, N.H. No-48, Valsad, Gujarat,  
396035, India

## Letter of Acceptance

**Ref:** ME/PROJECT/2019/196

**Date:** 18.02.2019

**To**

The principal,  
Malla Reddy College of Engineering,  
Maisammaguda, Secunderabad - 500100.

**Dear Sir,**

**Ref.:** Sponsorship acquisition for Project dated: 29.01.2019

**Subject:** Acceptance for Financial support for the project “**Re-Use of Textile Waste as a Construction Material**”

Best wishes from MECH Engineers!!!!

This letter is to inform you that our technical team has reviewed your research project titled, “**Re-Use of Textile Waste as a Construction Material**” Based on the report, your proposed project got approval by the managing body. We have planned to extend our support to carry out this research work. In this regard, we are glad to sponsor your project with INR. 2, 00,000.00 (Rupees Two lakhs only).



Managing Director



# MECH Engineers

Plot No. 803/1, 2,3 & 1003, New GIDC, Gundlav, N.H. No-48,Valsad, Gujarat,  
396035, India

## Work Order

**Ref:** ME/PROJECT/WO/2019/196

**Date:** 26.02.2019

**To**

The Principal,  
Malla Reddy College of Engineering,  
Maisammaguda, Secunderabad - 500100.

**Dear Sir,**

**Subject:** Work order for the project “Re-Use of Textile Waste as a Construction Material”

**Ref.:** Sponsorship for funded Project dated: 29.01.2019.

With reference to letter of acceptance (dated: 18.02.2019) ,we are accepting your budget proposal as mentioned below and also we are glad to release the work order for the project “Re-Use of Textile Waste as a Construction Material” from today onwards.

S.No	Particular	Amount
1.	Term -1	INR 75,000
2.	Term -2	INR 75,000
3.	Term -3	INR 50,000
	<b>Total</b>	INR 2,00,000.00

Best Wishes!!!



Managing Director



**MALLA REDDY COLLEGE OF ENGINEERING**  
**DEPARTMENT OF MECHANICAL ENGINEERING**  
**OVERVIEW OF PROJECT PROPOSAL**

<b>Title</b>	<b>Re-Use of Textile Waste as a Construction Material</b>
<b>Principal Investigator</b>	<b>Dr.K.Prabu</b>
<b>Description</b>	<p>The main objective of this study is to investigate the potential use of various solid wastes for producing construction materials. The paper is based on the comprehensive review of available literature on the construction materials including different kinds of solid wastes. The traditional methods for producing construction materials are using the valuable natural resources. Besides, the industrial and urban management systems are generating solid wastes, and most often dumping them in open fields. These activities pose serious detrimental effects on the environment. To safeguard the environment, many efforts are being made for the recycling of different types of solid wastes with a view to utilizing them in the production of various construction materials. This paper discusses the environmental implications caused by the generation of various solid wastes, and highlights their recycling potentials and possible use for producing construction materials. In addition, this paper shows the applications of solid waste based construction materials in real construction, and identifies the research needs.</p>



Principal Investigator



Principal  
Malla Reddy College of Engineering

Principal





Estd :2005

# MALLA REDDY COLLEGE OF ENGINEERING

(Formerly CM Engineering College)

Approved by AICTE - New Delhi, Affiliated to JNTU - Hyderabad, Accredited by NBA & Accredited by NAAC.  
ISO 9001:2015 Certified Institution, Recognition of College under Section 2(f) & 12 (B) of the UGC Act, 1956.

## Utilization Certificate

Title of the Project : Re-Use of Textile Waste as a Construction Material

Principal Investigator : Dr.K.Prabu

Certified that out of Rs.2,00,000/- (Total Amount) of Grant-in-aid sanctioned during the financial year 2018-19 in favour of Malla Reddy College of Engineering for research and development activities of MECH Engineers per Sanction Order No ME/PROJECT/WO/2019/196 Date 26.02.2019. Partially, The sum of Rs.75,000/- has been received and appropriately utilized.

Certified that I have satisfied myself that the conditions on which the Grants in Aid was sanctioned/released have been duly fulfilled that money was actually utilized for the purposes for which it was sanctioned.

**Principal Investigator**

**Head of Institution  
(with seal)**

For M R K REDDY & Co.  
Chartered Accountants  
FRN - 0032655

**Auditor  
(with seal)**



Estd :2005



# MALLA REDDY COLLEGE OF ENGINEERING

(Formerly CM Engineering College)

Approved by AICTE - New Delhi, Affiliated to JNTU - Hyderabad, Accredited by NBA & Accredited by NAAC.  
ISO 9001:2015 Certified Institution, Recognition of College under Section 2(f) & 12 (B) of the UGC Act,1956.

Date: 24.01.2018

To  
The Managing Director,  
Eminosoft,  
Hyderabad, Telangana – 500067.

Dear Sir,

Subject: Requesting Sponsorship for project — Reg.

Best wishes from Malla Reddy College of Engineering!

Malla Reddy College of Engineering (Formerly CM Engineering College) has been established under the aegis of the Malla Reddy Group of institutions in the year 2005, a majestic empire, founded by chairman Sri. Ch. Malla Reddy. He has been in the field of education for the last 22 years with the intention of spearheading quality education among children from the school level itself. The faculty of various departments are actively pursuing research in their respective technical departments under R&D wing of MRCE.

**Dr.U.Feroze khan** Department of Computer Science and Engineering, is the principal investigator for this proposed work. He is an eminent person in his research area. We request your kind cooperation and financial aid of INR 3,06,000.00 (Rupees Three lakhs six thousand rupees only) in the project entitled “**Research Issues in Cloud Computing**” Here with we have enclosed the budget proposal for the project. Our faculty will contact you in person along with this letter and may detail the scope of work.

We expect your positive response.

Thanking you,

Principal Investigator



Principal  
Malla Reddy College of Engineering



## Letter of Acceptance

**Ref:** ME/R&D/2018/156

**Date:** 09.02.2018

**To**

The principal,  
Malla Reddy College of Engineering,  
Maisammaguda, Secunderabad - 500100.

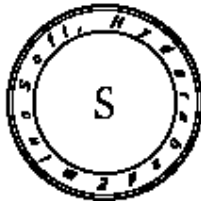
**Dear Sir,**

**Ref.:** Sponsorship acquisition for Project dated: 24.01.2018

**Subject:** Acceptance for Financial support for the project “**Research Issues in Cloud Computing**”

Best wishes from Eminosoft!!!!!!

This letter is to inform you that our technical team has reviewed your research project titled, “**Research Issues in Cloud Computing**” Based on the report, your proposed project got approval by the managing body. We have planned to extend our support to carry out this research work. In this regard, we are glad to sponsor your project with INR.3, 60,000.00 (Rupees Three lakhs and sixty thousand rupees only).



Director



## Work Order

**Ref:** ME/R&D/WO/2018/156

**Date:** 20.02.2018

**To**

The Principal,  
Malla Reddy College of Engineering,  
Maisammaguda, Secunderabad - 500100.

**Dear Sir,**

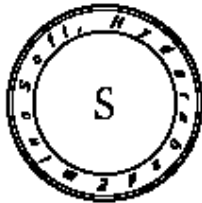
**Subject:** Work order for the project “**Research Issues in Cloud Computing**”

**Ref.:** Sponsorship for funded Project dated: 24.01.2018

With reference to letter of acceptance (dated: 09.02.2018) ,we are accepting your budget proposal as mentioned below and also we are glad to release the work order for the project “**Research Issues in Cloud Computing**” from today onwards.

S.No	Particular	Amount
1.	Term -1	INR 1,50,000
2.	Term -2	INR 1,00,000
3.	Term -3	INR 1,10,000
	<b>Total</b>	INR 3,60,000.00

Best Wishes!!!

  
Director

# MALLAREDDY COLLEGE OF ENGINEERING

## Department of Computer Science and Engineering

### OVERVIEW OF PROJECT PROPOSAL

Title	Research Issues in Cloud Computing
Principal Investigator	Dr.U.Feroze khan
Description	<p>Proceedings of the Global Engineering, Science and Technology Conference 201228-29 December 2012, Dhaka, Bangladesh</p> <p>Cloud Computing-Research Issues and Challenges</p> <p>NaziaMajadi</p> <p>Cloud computing uses the internet and central remote servers to maintain data and applications. It allows consumers and businesses to use applications without installation and access their personal files at any computer with internet access. This technology allows for much more efficient computing by centralizing data storage, processing and bandwidth. The appearance of cloud computing has made a tremendous impact on the Information Technology (IT) industry over the past few years. Recently IT industry needs Cloud computing services to provide best opportunities to real world. Cloud computing is in initial stages, with many issues still to be addressed. The objective of this paper is to explore the different research issues and challenges of cloud computing and identify important research opportunities in this increasingly important area. In this paper, there are different challenges categorized under design, performance, and security challenges.</p>

  
Principal Investigator



  
Principal  
Malla Reddy College of Engineering

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Chq.No. 10053149  
SG

For EMPOSOFIT



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# MALLA REDDY COLLEGE OF ENGINEERING

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ISO 9001:2015 Certified Institution, Recognition of College under Section 2(f) & 12 (B) of the UGC Act, 1956.

## Utilization Certificate

Title of the Project : Research Issues in Cloud Computing

Principal Investigator : Dr.U.Feroze khan

Certified that out of Rs.3,60,000/- (Total Amount) of Grant-in-aid sanctioned during the financial year 2017-18 in favour of Malla Reddy College of Engineering for research and development activities of Eminsoft per Sanction Order No ME/R&D/WO/2018/156 Date 20.02.2018. Partially, The sum of Rs.1,50,000/- has been received and appropriately utilized.

Certified that I have satisfied myself that the conditions on which the Grants in Aid was sanctioned/released have been duly fulfilled that money was actually utilized for the purposes for which it was sanctioned.

**Principal Investigator**

**Head of Institution  
(with seal)**

For M R K REDDY & Co.  
Chartered Accountants  
FRN - 0032655

(M. RAMAKRISHNA REDDY)  
Proprietor

**Auditor  
(with seal)**



THE  
**FEDERAL BANK**  
LIMITED

Kukatpally Br. [ap]  
Hyderabad - 500082  
IFSC: FDRL0001569

CURRENT ACCOUNT  
Valid for 3 months only

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Pay **MALLA REDDY COLLEGE OF ENGINEERING**

या धारक को or Bearer

रुपये Rupees **ONE LAKH RUPEES ONLY**

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1,00,000/-

खा. सं.  
A/c No.

**15690200002518**

For EMNOSOFT



Chq.No 10053168  
SG

AUTHORISED SIGNATORY AUTHORIZED SIGNATORY

please sign above

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Estd :2005

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## Utilization Certificate

Title of the Project : Research Issues in Cloud Computing

Principal Investigator : Dr.U.Feroze khan

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Certified that I have satisfied myself that the conditions on which the Grants in Aid was sanctioned/released have been duly fulfilled that money was actually utilized for the purposes for which it was sanctioned.

**Principal Investigator**

**Head of Institution  
(with seal)**

**Auditor  
(with seal)**





# MALLA REDDY COLLEGE OF ENGINEERING

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ISO 9001:2015 Certified Institution, Recognition of College under Section 2(f) & 12 (B) of the UGC Act, 1956.

Date: 21.03.2018

To  
The Managing Director,  
MECH Engineers,  
Valsad, Gujarat – 396035.

Dear Sir,

Subject: Requesting Sponsorship for project — Reg.

Best wishes from Malla Reddy College of Engineering!

Malla Reddy College of Engineering (Formerly CM Engineering College) has been established under the aegis of the Malla Reddy Group of institutions in the year 2005, a majestic empire, founded by chairman Sri. Ch. Malla Reddy. He has been in the field of education for the last 22 years with the intention of spearheading quality education among children from the school level itself. The faculty of various departments are actively pursuing research in their respective technical departments under R&D wing of MRCE.

**Dr. G.Mahesh** Department of Mechanical Engineering, is the principal investigator for this proposed work. He is an eminent person in his research area. We request your kind cooperation and financial aid of INR 3, 80,000.00 (Rupees Three lakhs and eighty thousand only) in the project entitled **“Development of three axis in vehicle”** Here with we have enclosed the budget proposal for the project. Our faculty will contact you in person along with this letter and may detail the scope of work.

We expect your positive response.

Thanking you,

Principal Investigator



Principal  
Malla Reddy College of Engineering



# MECH Engineers

Plot No. 803/1,2,3 & 1003, New GIDC, Gundlav, N.H. No-48, Valsad, Gujarat,  
396035, India

## Letter of Acceptance

**Ref:** ME/PROJECT/2018/690

**Date:** 10.04.2018

**To**

The principal,  
Malla Reddy College of Engineering,  
Maisammaguda, Secunderabad - 500100.

**Dear Sir,**

**Ref.:** Sponsorship acquisition for Project dated: 21.03.2018

**Subject:** Acceptance for Financial aid support the project “**Development of Three Axis in Vehicle**”

Best wishes from MECH Engineers!!!!

This letter is to inform you that our technical team has reviewed your research project titled, “**Development of Three Axis in Vehicle**” Based on the report, your proposed project got approval by the managing body. We have planned to extend our support to carry out this research work. In this regard, we are glad to sponsor your project with INR. 3, 80,000.00 (Rupees Three lakhs and eighty thousand rupees only).



A handwritten signature in black ink.

MECH Engineers,

Director



# MECH Engineers

Plot No. 803/1,2,3 & 1003, New GIDC, Gundlav, N.H. No-48, Valsad, Gujarat,  
396035, India

## Work Order

Ref: ME/PROJECT/WO/2018/690

Date: 21.04.2018

To

The Principal,  
Malla Reddy College of Engineering,  
Maisammaguda, Secunderabad - 500100.

Dear Sir,

**Subject:** Work order for the project “Development of Three Axis in Vehicle”

**Ref.:** Sponsorship for funded Project dated: 21.03.2018

With reference to letter of acceptance (dated: 10.04.2018) ,we are accepting your budget proposal as mentioned below and also we are glad to release the work order for the project “Development of Three Axis in Vehicle” from today onwards.

S.No	Particular	Amount
1.	Term -1	INR 2,00,000
2.	Term -2	INR 1,00,000
3.	Term -3	INR 80,000
	<b>Total</b>	INR 3,80,000.00

Best Wishes!!!



MECH Engineers,

Director

**MALLA REDDY COLLEGE OF ENGINEERING**  
**DEPARTMENT OF MECHANICAL ENGINEERING**  
**OVERVIEW OF PROJECT PROPOSAL**

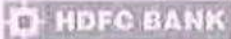
<b>Title</b>	<b>Development of three axis in vehicle</b>
<b>Principal Investigator</b>	<b>Dr. G.Mahesh</b>
<b>Description</b>	<p>Trailer has lots of applications in today's world. In industrial and domestic considerations, tippers can pull a variety of products including gravel, grain, sand, fertilizer, heavy rocks, etc. By considering wide scope of the topic, it is necessary to do study and research on the topic of tipper mechanism in order to make it more economical and efficient. In existing system, tipper can unload only in one side by using pneumatic jack or conveyor mechanism. By this research it is easy for the driver to unload the trailer and also it reduces time and fuel consumption. For making tipper mechanism with such above conditions hydraulic jack mechanism can be used. This paper has mainly focused on above difficulty. Hence a prototype of suitable arrangement has been designed. The vehicles can be unloaded from the trailer in three axes without application of any impact force. The Direction control valves which activate the ram of the hydraulic cylinder which lifting the trailer cabin in require side. By this research it is easy for the driver to unload the trailer and it reduces the time.</p>

Principal Investigator



Principal





NS 8 2-00/VAH/ET/EM/1 FLOOR, ZOOM HOUSE, ROAD NO.12,  
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ISO 9001:2015 Certified Institution, Recognition of College under Section 2(f) & 12 (B) of the UGC Act, 1956.

## Utilization Certificate

Title of the Project : Development of three axes in vehicle

Principal Investigator : Dr. G.Mahesh

Certified that out of Rs.3,80,000/- (Total Amount) of Grant-in-aid sanctioned during the financial year 2018-19 in favour of Malla Reddy College of Engineering for research and development activities of MECH Engineers per Sanction Order No ME/PROJECT/WO/2018/690 Date 21.04.2018. Partially, The sum of Rs.2,00,000/- has been received and appropriately utilized.

Certified that I have satisfied myself that the conditions on which the Grants in Aid was sanctioned/released have been duly fulfilled that money was actually utilized for the purposes for which it was sanctioned.

**Principal Investigator**

**Head of Institution  
(with seal)**

For M R K REDDY & Co.  
Chartered Accountants  
FRN - 0032655

**Auditor  
(with seal)**





50, 1<sup>st</sup> BHK/A/2/GH/3RD FLOOR, TOWER HOUSE, ROAD NO 12,  
BANWALA HILLS, HYDERABAD 500082 ANDHRA PRADESH  
RTGS/NEFT IFSC: HDFC0001995

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अदा करें



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(Formerly CM Engineering College)

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## Utilization Certificate

Title of the Project : Development of three axes in vehicle

Principal Investigator : Dr. G.Mahesh

Certified that out of Rs.3,80,000/- (Total Amount) of Grant-in-aid sanctioned during the financial year 2018-19 in favour of Malla Reddy College of Engineering for research and development activities of MECH Engineers per Sanction Order No ME/PROJECT/WO/2018/690 Date 21.04.2018. Partially, The sum of Rs.1,00,000/- has been received and appropriately utilized.

Certified that I have satisfied myself that the conditions on which the Grants in Aid was sanctioned/released have been duly fulfilled that money was actually utilized for the purposes for which it was sanctioned.

**Principal Investigator**

**Head of Institution  
(with seal)**

**Auditor  
(with seal)**







Estd :2005

# MALLA REDDY COLLEGE OF ENGINEERING

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ISO 9001:2015 Certified Institution, Recognition of College under Section 2(f) & 12 (B) of the UGC Act, 1956.

Date: 13.03.2019

To  
The Managing Director,  
MECH Engineers,  
Valsad, Gujarat – 396035.

Dear Sir,

Subject: Requesting Sponsorship for project — Reg.

Best wishes from Malla Reddy College of Engineering!

Malla Reddy College of Engineering (Formerly CM Engineering College) has been established under the aegis of the Malla Reddy Group of institutions in the year 2005, a majestic empire, founded by chairman Sri. Ch. Malla Reddy. He has been in the field of education for the last 22 years with the intention of spearheading quality education among children from the school level itself. The faculty of various departments are actively pursuing research in their respective technical departments under R&D wing of MRCE.

**Dr.S.Sivaganesan** Department of Mechanical Engineering, is the principal investigator for this proposed work. He is an eminent person in his research area. We request your kind cooperation and financial aid of INR 3,00,000.00 (Rupees Three lakhs rupees only) in the project entitled “**Automatic Air Jet Machining for Machining of Glass Plates**” Here with we have enclosed the budget proposal for the project. Our faculty will contact you in person along with this letter and may detail the scope of work.

We expect your positive response.

Thanking you,

Principal Investigator



Principal  
Malla Reddy College of Engineering





# MECH Engineers

Plot No. 803/1,2,3 & 1003, New GIDC, Gundlav, N.H. No-48, Valsad, Gujarat,  
396035, India

## Letter of Acceptance

**Ref:** ME/PROJECT/2019/310

**Date:** 03.04.2019

**To**

The principal,  
Malla Reddy College of Engineering,  
Maisammaguda, Secunderabad - 500100.

**Dear Sir,**

**Ref.:** Sponsorship acquisition for Project dated: 13.03.2019

**Subject:** Acceptance for Financial support for the project “**Automatic Air Jet Machining for Machining of Glass Plates**”

Best wishes from MECH Engineers!!!!

This letter is to inform you that our technical team has reviewed your research project titled, “**Automatic Air Jet Machining for Machining of Glass Plates**” Based on the report, your proposed project got approval by the managing body. We have planned to extend our support to carry out this research work. In this regard, we are glad to sponsor your project with INR. 3, 00,000.00 (Rupees Three lakhs rupees only).



  
MECH Engineers,

Director



# MECH Engineers

Plot No. 803/1,2,3 & 1003, New GIDC, Gundlav, N.H. No-48, Valsad, Gujarat,  
396035, India

## Work Order

Ref: ME/PROJECT/WO/2019/310

Date: 16.04.2019

**To**

The Principal,  
Malla Reddy College of Engineering,  
Maisammaguda, Secunderabad - 500100.

**Dear Sir,**

**Subject:** Work order for the project “Automatic Air Jet Machining for Machining of Glass Plates”

**Ref.:** Sponsorship for funded Project dated: 13.03.2019

With reference to letter of acceptance (dated: 03.04.2019) ,we are accepting your budget proposal as mentioned below and also we are glad to release the work order for the project “Automatic Air Jet Machining for Machining of Glass Plates” from today onwards.

S.No	Particular	Amount
1.	Term -1	INR 1,00,000
2.	Term -2	INR 1,00,000
3.	Term -3	INR 1,00,000
	<b>Total</b>	INR 3,00,000.00

Best Wishes!!!



MECH Engineers,

Director

**MALLA REDDY COLLEGE OF ENGINEERING**  
**DEPARTMENT OF MECHANICAL ENGINEERING**  
**OVERVIEW OF PROJECT PROPOSAL**

<b>Title</b>	<b>Automatic Air Jet Machining For Machining Of Glass Plates</b>
<b>Principal Investigator</b>	<b>Dr.S.Sivaganesan</b>
<b>Description</b>	<p>Abrasive Jet Machining (AJM) is the process of material removal from a workpiece by the application of a high speed stream of abrasive particles carried in a gas medium from a nozzle. The material removal process is mainly by erosion. The AJM will chiefly be used to cut shapes in hard and brittle materials like glass, ceramics etc. the machine will be automated to have 3 axes travel. The different components of AJM are Horizontal motion module (X-Y Table), Vertical motion module (Z motion), Vibrator, dehumidifier, Pressure Regulator, and Dust filter etc. The different components are selected after appropriate design calculations. In this project, a model of the Abrasive Jet Machine is designed using CAD packages like AutoCAD, CATIA etc taking into consideration of commercially available components. Care has been taken to use less fabricated components rather than directly procuring them, because, the lack of accuracy in fabricated components would lead to a diminished performance of the machine</p>



Principal Investigator




Principal  
Malla Reddy College of Engineering

Principal



NO 6-2 4811/VA/ GROUND FLOOR, 200M HOUSE, ROAD NO.12,  
 HANJANA HILLS, HYDERABAD-500054, ANDHRA PRADESH  
 RTGS / NEFT IFSC : HDFC0001995

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A/c No.  
 खाते नं.

**19951050012424**

SB A/C

**MECH ENGINEERS**

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ISO 9001:2015 Certified Institution, Recognition of College under Section 2(f) & 12 (B) of the UGC Act, 1956.

## Utilization Certificate

Title of the Project : Automatic Air Jet Machining For Machining Of Glass Plates

Principal Investigator : Dr.S.Sivaganesan

Certified that out of Rs.3,00,000/- (Total Amount) of Grant-in-aid sanctioned during the financial year 2019-20 in favour of Malla Reddy College of Engineering for research and development activities of MECH Engineers per Sanction Order No ME/PROJECT/WO/2019/310 Date 16.04.2019. Partially, The sum of Rs.1,00,000/- has been received and appropriately utilized.

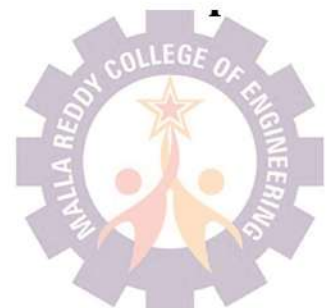
Certified that I have satisfied myself that the conditions on which the Grants in Aid was sanctioned/released have been duly fulfilled that money was actually utilized for the purposes for which it was sanctioned.

**Principal Investigator**

**Head of Institution  
(with seal)**

For M R K REDDY & Co.  
Chartered Accountants  
FRN - 0032655

**Auditor  
(with seal)**







Katuri Medical College & Hospital,  
Katurinagar, Guntur,  
Andhra Pradesh,  
India.91-863-2288555.556,557,  
[kmchgnt@gmail.com](mailto:kmchgnt@gmail.com), Fax: 0863-2288205

Ref.No:KMC&H/ CONTRACTING PROJECTS/2017/03

Date:23/04/2017

To

Dr. V. Bhoopathy

Professor / CSE,

Malla Reddy College of Engineering.

Sir

Sub: Issuing of Project Sanction Letter- Reg.

With reference to the research project Title “**Pharmacy Database Management System**” submitted by you, We are pleased to inform you that the project has been processed and that the KMC&H has provisionally considered the proposal for providing financial assistance to the time of Rs. 5, 00,000 (5 Lakhs only).The principal Investigator may fill in the related documents in all respects expressing his interested in undertaking the project and submit the documents immediately to the KMC&H office.

Yours faithfully

Copy to

KMC&H-AO



**Standard Fireworks**  
**Sivakasi, Tamil Nadu,**  
**India - 626 123.**  
**Phone: (+91) 4562 223366.**

Ref. No: SF/OUTSOURCING PROJECTS/ 2016/09

Dt: 27/06/2016

To

Dr. P. Velmurugan

Professor,

Department of Mechanical Engineering,

Malla Reddy College of Engineering.

Sir/Madam

Sub: Issuing of Project Sanction Letter- Reg.

With reference to the research project Title “**Influence of Nano Powders in Fireworks Manufacturing**” submitted by you, We are pleased to inform you that the project has been processed and that the SF has provisionally considered the proposal for providing financial assistance to the time of Rs. 5, 00,000 (5 Lakhs only).The principal Investigator may fill in the related documents in all Respects expressing his interested in undertaking the project and submit the documents immediately to the SF office.

Yours faithfully

A handwritten signature in black ink, appearing to read 'Aishwari'.

Copy to

SF Office



Ref.No: KAMS&RC/OUTSOURCING PROJECTS/2015/07

Date: 16.08.2015

To

Dr.T. Sunil

Professor / CSE,

Malla Reddy College of Engineering.

Sir/Madam

Sub: Issuing of Project Sanction Letter- Reg.

With reference to the research project Title “**An Android based Monitoring and Alarm System for Patients with Chronic Obtrusive Disease**” submitted by you, We are pleased to inform you that the project has been processed and that the KAMS&RC has provisionally considered the proposal for providing financial assistance to the time of Rs. 4, 00,000 (4 Lakhs only).The principal Investigator may fill in the related documents in all Respects expressing his interested in undertaking the project and submit the documents immediately to the KAMS&RC Admin Office.

Yours faithfully

Copy to

KAMS&RC Admin Office