



**MALLA REDDY ENGINEERING COLLEGE (AUTONOMOUS)**  
(An UGC Autonomous Institution, Approved by AICTE, New Delhi & Affiliated to JNTUH,  
Hyderabad). Accredited 2<sup>nd</sup> time by NAAC with 'A' Grade,  
Maisammaguda (H), Medchal-Malkajgiri District, Secunderabad,  
Telangana State – 500100, [www.mrec.ac.in](http://www.mrec.ac.in)

**DEPARTMENT OF MINING ENGINEERING**  
**Value Added Courses**

**2017-2018**

Sl No	Name of the value added courses	Year /sem Offered	Date From	Date To	Number of students enrolled
1	Blast Prediction & Optimization	III-I& II-I	25-09-2017	30-09-2017	54

*Luddy*  
**HOD MIN**  
Head of the Dept.  
Dept. of Mining  
Malla Reddy Engg. College



**MALLA REDDY ENGINEERING COLLEGE (AUTONOMOUS)**  
(An UGC Autonomous Institution, Affiliated to JNTUH, Hyderabad Accredited 2<sup>nd</sup> time by NAAC  
with 'A' Grade & NBA and Recipient of World Bank Assistance under TEQIP-II S.C. 1.1)  
Maisammaguda (H), Medchal-Malkajgiri District, Secunderabad,  
Telangana State – 500100  
www.mrec.ac.in

## Department of Mining Engineering


### CIRCULAR

Date: 20/09/2017

All the students are hereby informed that Value Added Course on “**Blast Prediction & Optimization**” on date 25<sup>th</sup> to 30<sup>th</sup> September, is being organized by the mining engineering department.

Students are advised to register their names to the program coordinator “**Shri SK Sameer Pasha**”, on or before 24/09/2017 and utilize this opportunity to enhance their skills by attending the program.

The detailed schedule of the program will be displayed in the notice board.

  
**Head of the Department**  
Head of the Dept.  
Dept. of Mining  
Malla Reddy Engg. College

Copy to:

- 1) Circulation in Students classroom
- 2) All HOD's
- 3) Notice Boards
- 4) PA to principal for filing.



  
**Principal**  
Malla Reddy Engineering College  
Maisammaguda, Dhulapally,  
(Post Via Kompally), Sec'bad-500100

Malla Reddy Engineering College (Autonomous) (MREC) is a fulfillment of the distinct vision of its Founder Chairman, **Sri. Ch. Malla Reddy**, the present MLA from Medchal Assembly constituency and Honourable Minister of Labour, Employment, Women and Child Development, Government of Telangana. MREC is one of the premier Engineering Colleges in the State of Telangana, established in the year 2002, approved by AICTE, New Delhi and affiliated to JNTUH, Hyderabad. The Institute is reaccredited by NBA and NAAC with 'A' Grade (II cycle). MREC has been conferred upon the Autonomous status by the University Grants Commission, Government of India in the year 2014. MREC is established with the aim of providing high quality technical education through constant innovation and academic excellence. It offers courses in the disciplines of Civil, EEE, ECE, ME, CSE, IT and Mining Engineering. MREC offers five M.Tech. Programmes and a MBA programme. MREC(A) has an impressive on-campus recruitment record with many leading corporates regularly visiting and recruiting students.

#### DEPARTMENT OF MINING ENGINEERING

Mining Engineering was started during 2013 in MREC(A), with an intake of 60 students per batch. So far, three batches of students have passed out and employed in various reputed government and private organizations within and outside the country. A good number of students are perusing higher education in India & abroad. This Department is the biggest in terms of the faculty strength in the entire South India and one of the best in the quality of faculty. The faculty are drawn from Academics, Research, Industry and Central Government Regulatory Bodies and are excellent blend of experienced and youngsters with good number of them with Ph.D. qualification. The faculty have the experience of carrying out research and consultancy works for more than 30 years. The department is continuously striving to improve the quality of education offered to the students by exposing them to various additional activities like Seminars, Conferences, Workshops, Guest Lectures, Industrial Visits, Industrial Training, On-line training programmes, Short-term courses in the mining and related areas, etc.

#### MRGI PATRON

**Shri. Ch. Malla Reddy, M.L.A.**  
Honorable Minister of Labor, Employment,  
Women and Child Development, Government of T.S  
**Founder Chairman, MRGI**  
**Patrons**  
**Shri.Ch. Mahender Reddy, Secretary, MRGI**  
**Dr. Ch. Bhadra Reddy, President, MRGI**  
**Shri P.Praveen Reddy, Director, MRGI**  
**Chairman**  
**Dr. S. Sudhakara Reddy, Principal, MREC (A)**

#### ADVISORY COMMITTEE

- Shri Shyam Mishra , DMS, Hyderabad Region-I
- Shri Mohammad Niyazi, DMS, Hyderabad Region-II
- Shri B.R.V. Susheel Kumar, DMG, TS, Chairman, MEAI Hyderabad Chapter
- Shri S.V.S.S. Ramalingeswarudu, GM (HRD), SCCL
- Dr. R. Markandeya, Principal JNTUH-Manthani
- Shri K.J. Amaranth, Rtd CMG, SCCL
- Dr. Gopal Naik, HOD, Civil Engineering OU College of Engineering, Hyderabad
- Dr. I. Srinivas, HOD Min.E, Kakatiya University

#### CONVENER

**Shri. Narasimha reddy, HoD, Min.E, MREC (A)**

#### COORDINATOR

**Shri.SK. Sameer Pasha, Asst Prof., Min.E, MREC (A)**

#### Members

**Shri.D. Chandraekhar, Professor**  
**Dr. K.V. Shankar, Professor**  
**Shri.N.S.R. Krishna Prasad, Professor**  
**Shri.SK. Sameer Pasha, Asst.Prof**  
**Shri.M.Vishnu Teja, Asst.Prof**  
**Shri.P.Shashikanth, Asst.Prof**  
**Shri.G. Harish, Asst.Prof**

#### Address for Correspondence

Department of Mining Engineering, MREC (A)  
Contact: 9700881880, 9491145161, 9940674227

E-mail ID: [rtme2019@gmail.com](mailto:rtme2019@gmail.com)



**Department of Mining Engineering**  
**Malla Reddy Engineering College**  
(Autonomous)

is Organizing

Value Added Course  
On

**Blast Prediction &  
Optimization**

25<sup>th</sup> -30<sup>th</sup> September, 2017



*Venue: Knowledge Center, MREC(A)*

**MALLA REDDY  
ENGINEERING COLLEGE**

**(AUTONOMOUS) MAIN CAMPUS**

A UGC Autonomous Institution, Approved by  
AICTE & Affiliated to JNTUH-Hyderabad  
Reaccredited by NAAC with 'A' Grade (II Cycle)  
Maisammaguda, Dhulapally (Post) Via Kompally,  
Secunderabad-500100, Telangana State, India.



## Value Added Course

Though mining started with pickaxes, it is really the explosives and their judicious use that led to the industries to meet the ever growing demand of minerals. Blasting is the most cost effective, suitable for large production & also to break strongest of the rocks. Therefore, blasting is the most popular area in mining and construction Industries. The heterogeneous and anisotropic nature of rocks, throw challenges and it takes great deal of care and design in making the operations efficient and economically viable. Improvement in the performance can be achieved by embracing the latest and innovative technologies with minimized risk and optimized production by mining companies. Along with the merits, blasting, like any other technology, is also associated with adverse effects and hence requires careful design & implementation. World over, continuous research is taking place in the area of blasting and hence there is a need for faculty & practicing engineers to keep abreast with the latest technological practices in this area. This FDP is aiming at achieving the said objectives.

## RESOURCE PERSONS

- Shri.D. Chandraekhar, Professor, Min.E, MREC (A)
- Shri N.S.R .Krishna Prasad, Professor, Min.E, MREC(A)
- Dr. R. S. Reddy, Prof., Min.E, MREC (A)
- Shri N. Sri Chandahas, Asst. Professor. Min.E, MREC(A)

## ELIGIBILITY

IV Year Students of Mining Engineering

## Objectives of the Programme:

- To imbibe the skills and competencies required to achieve goals directed by values.
- To maintain and enhance faculty effectiveness by inculcating dynamism and leadership qualities.
- To develop commitment and ethical approach towards work, and instill a sense of responsibility towards the institution.
- To enhance communication and soft skills of the faculty by introducing innovative teaching methodologies and developing an interpersonal connection with students.

## Topics to be covered:

- Different types of explosives, accessories & their applications
- Theory of rock breakage by explosives
- Design & optimization of blast with case studies
- Design of control blasting
- Adverse effects of blasting and their minimization
- Detailed analysis of blast induced ground vibrations
- Statutory aspects related to explosives & blasting

## Test and Certificate:

A test will be conducted at the end of the program and the certificates shall be issued to those participants

## OUTCOME OF THE PROGRAM

The Students will acquire knowledge on

- Different types of explosives, accessories & their applications.
- Theory of rock breakage by explosives.
- Design & optimization of blast with case studies.
- Design of control blasting.
- Adverse effects of blasting and their minimization.
- Detailed analysis of blast induced ground vibrations.

Department of Mining Engineering  
Malla Reddy Engineering College  
(Autonomous)

is Organizing

Value Added Course  
On

## Blast Prediction & Optimization

25<sup>th</sup> -30<sup>th</sup> September, 2017

## REGISTRATION FORM

Name: .....

Name of the Institute: .....

Organization: .....

Address: .....

Mobile Number: .....

E-mail ID: .....

Date:

Signature

*Resh*  
PRINCIPAL  
Malla Reddy Engineering College  
(Autonomous)  
Signature of the Principal  
Maisamaguda, Dhulapally,  
(Post Via Kompally), Sec'bad-500



**MALLA REDDY ENGINEERING COLLEGE  
(AUTONOMOUS)**

UGC Autonomous Institution, Approved by AICTE, New Delhi & Affiliated to JNTUH, Hyderabad). Accredited 2<sup>nd</sup> time by NAAC with 'A' Grade, Maisammaguda (H), Medchal-Malkajiri District, Secunderabad,

Telangana State – 500100, [www.mrec.ac.in](http://www.mrec.ac.in)

**DEPARTMENT OF MINING ENGINEERING**

Value Added Course

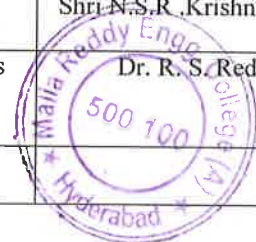
On

**Blast Prediction & Optimization**

25<sup>th</sup> -30<sup>th</sup> September, 2017

**SYLLBUS**

Date	Time	Topic	Resource Person
25-09-2017	9:30 – 11.00AM	Inaugural function	Shri.SK. Sameer Pasha -
	11:00 -11:15AM	Tea Break	
	11.15 – 12:45 PM	Importance of Blasting in mining and construction industry and experiences in explosives in industry and blast design	Shri. D. Chandrasekhar
	12:45 – 1:30PM	Lunch	
	1:30 – 2:30 PM	Different types of Explosives, their properties and fields of application	Shri N.S.R .Krishna Prasad
	2:30 – 2:45PM	Tea Break	
	2:45 -4:00 PM	Different accessories, their properties and fields of application with case studies.	Dr. R. S. Reddy
26-09-2017	9:30 – 11.00AM	Different accessories, their properties and fields of application with case studies.	Dr. R. S. Reddy
	11:00 -11:15AM	Tea Break	
	11.15 – 12:45 PM	Procedures to be adopted to obtain permissions for sms/sme.	Shri N. Sri Chandrahas
	12:45 – 1:30PM	Lunch	
	1:30 – 2:30 PM	Theory of blasting and different initiation techniques along with their fields of applications.	Shri. D. Chandrasekhar
	2:30 – 2:45PM	Tea Break	
	2:45 -4:00 PM	Opencast mine blast design criteria based on rock properties and production requirements.	Shri N.S.R .Krishna Prasad
27-09-2017	9:30 – 11.00AM	Adverse affects of blasting, their measurements & control.	Dr. R. S. Reddy
	11:00 -11:15AM	Tea Break	

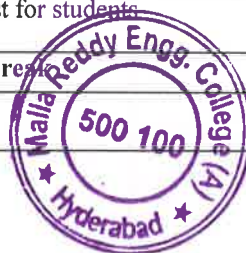


*Ravi*  
Principal  
Malla Reddy Engineering College  
Maisammaguda, Dhulapally,  
(Post Via Kompally), Sec'bad-500100

*Reddy*  
Head of the Dept.  
Dept. of Mining  
Malla Reddy Engg. College

	<b>11.15 – 12:45 PM</b>	Optimization of blast and its parameters.	Dr. R. S. Reddy
	<b>12:45 – 1:30PM</b>	<b>Lunch</b>	
	<b>1:30 – 2:30 PM</b>	Different controlled blasting techniques, their fields of application and design.	Shri N. Sri Chandrahas
	<b>2:30 – 2:45PM</b>	<b>Tea Break</b>	
	<b>2:45 -4:00 PM</b>	Different controlled blasting techniques, their fields of application and design.	Shri N. Sri Chandrahas
<b>28-09-2017</b>	<b>9:30 – 11.00AM</b>	Explosives ACT & Rules, Online management	Shri N.S.R .Krishna Prasad
	<b>11:00 -11:15AM</b>	<b>Tea Break</b>	
	<b>11.15 – 12:45 PM</b>	Procedures for obtaining permissions for Explosive Magazines including portable magazines, ANFO sheds and SME/SMS trucks	Dr. R. S. Reddy
	<b>12:45 – 1:30PM</b>	<b>Lunch</b>	
	<b>1:30 – 2:30 PM</b>	Procedures for obtaining permissions for Explosive Magazines including portable magazines, ANFO sheds and SME/SMS trucks	Dr. R. S. Reddy
	<b>2:30 – 2:45PM</b>	<b>Tea Break</b>	
	<b>2:45 -4:00 PM</b>	Different types of instruments used in Blasting related measurements	Shri N. Sri Chandrahas
<b>29-09-2017</b>	<b>9:30 – 11.00AM</b>	Case studies of controlled Blasting related measurements	Shri. D. Chandrasekhar
	<b>11:00 -11:15AM</b>	<b>Tea Break</b>	
	<b>11.15 – 12:45 PM</b>	Opencast mine blast case studies in different types of rocks and with different drill hole diameters, including explosive, accessories & ignition technique selection.	Shri N.S.R .Krishna Prasad
	<b>12:45 – 1:30PM</b>	<b>Lunch</b>	
	<b>1:30 – 2:30 PM</b>	Opencast mine blast case studies in different types of rocks and with different drill hole diameters, including explosive, accessories & ignition technique selection.	Shri N.S.R .Krishna Prasad
	<b>2:30 – 2:45PM</b>	<b>Tea Break</b>	
	<b>2:45 -4:00 PM</b>	Blast induced ground vibrations, their analysis and control	Dr. R. S. Reddy
<b>30-09-2017</b>	<b>9:30 – 11.00AM</b>	CMR, MMR, DGMS, Technical circulars and permissions for deep hole drilling and blasting.	Shri. D. Chandrasekhar
	<b>11:00 -11:15AM</b>	<b>Tea Break</b>	
	<b>11.15 – 12:45 PM</b>	CMR, MMR, DGMS, Technical circulars and permissions for deep hole drilling and blasting.	Shri. D. Chandrasekhar
	<b>12:45 – 1:30PM</b>	<b>Lunch</b>	
	<b>1:30 – 2:30 PM</b>	Interactive session & Test for students	Shri.SK. Sameer Pasha
	<b>2:30 – 2:45PM</b>	<b>Tea Break</b>	
	<b>2:45 -4:00 PM</b>	Feedback session	Shri.SK. Sameer Pasha -

*Ramesh*  
 Principal  
 Malla Reddy Engineering College  
 Maisammaguda, Dhulapally,  
 (Post Via Kompally), Sec'bad-500100



*Reddy*  
 Head of the Dept.  
 Dept. of Mining  
 Malla Reddy Engg. College





**MALLA REDDY ENGINEERING COLLEGE (AUTONOMOUS)**  
An UGC Autonomous Institution, Approved by AICTE, New Delhi & Affiliated to  
JNTUH, Hyderabad). Accredited 2<sup>nd</sup> time by NAAC with 'A' Grade,  
Maisammaguda (H), Medchal-Malkajgiri District, Secunderabad,

Telangana State – 500100, [www.mrec.ac.in](http://www.mrec.ac.in)

**Department: Mining Engineering**

**Course : Blast Prediction & Optimization**

**Date: 25<sup>th</sup> To -30<sup>th</sup> September, 2017**

Registration students list

Sl.No	Roll No	Name	Sl.No	Roll No	Name
1	13J41A2501	AITHA MANI TEJA	15	13J41A2517	GOSKULA VISHNUVARDHAN
2	13J41A2502	BAIRI RAVI THEJA	16	13J41A2518	GUMASA BHASKAR
3	13J41A2503	BATHULA SRINIVAS	17	13J41A2519	GUMMADI NARENDER
4	13J41A2504	BEDDALA VAMSHIKRISHNA	18	13J41A2520	GUTHIKONDA SHIVA KUMAR
5	13J41A2505	BELLAM ARUN	19	13J41A2521	HALAVATH BHARATH NAIK
6	13J41A2506	BHUKYA BASHA NAYAK	20	13J41A2522	JAVVAJI VENKATESH
7	13J41A2507	BINGI MAHESH	21	13J41A2523	KADIYALA SAI BHARGAV
8	13J41A2508	BOLLAPELLI SRINIVAS	22	13J41A2524	KALLOJI RAJESH
9	13J41A2509	CHITTI RAHUL	23	13J41A2525	KALWAL KUNAL LAXMAN
10	13J41A2511	DONGALA SRIKANTH	24	13J41A2526	KAMA AJAY
11	13J41A2513	GADDA SURESH	25	13J41A2527	KANDUNURI SUNIL
12	13J41A2514	GADIKOPPULA SHIVAKUMAR	26	13J41A2528	KATTULA KARTHIK
13	13J41A2515	GANDLA RAJKUMAR	27	13J41A2529	KOLIPAKA VINAY
14	13J41A2516	GANDU SRIKANTH	28	13J41A2530	KOMURAVELLY SUMANTH
15	13J41A2517	GOSKULA VISHNUVARDHAN	29	13J41A2531	KOTIKA TULASI RAM
16	13J41A2518	GUMASA BHASKAR	30	13J41A2532	LINGALA VENKATESH

Malla Reddy Engg. College  
Dept. of Mining  
Head of the Dept.  
*[Signature]*



*[Signature]*  
Principal  
Malla Reddy Engineering College  
Maisammaguda, Dhulapally,  
(Post Via Kompally), Sec'bad-500100

31	14J41A2501	AMBIR SATHVIKUMAR	43	15J41A2501	AKULA SANDEEP
32	14J41A2502	AREPELLI PRASHANTH	44	15J41A2502	AKHILESH YADAV
33	14J41A2503	ARTHAM RAMAKRISHNA	45	15J41A2503	AKULA SAITEJA
34	14J41A2504	AVULA ANIL KUMAR	46	15J41A2504	BATHINI SRI HARSHAVARDHAN
35	14J41A2505	BANDARI SHIVAPRASAD	47	15J41A2505	BENDU SURENDAR
36	14J41A2506	BANDI SAMPATH KUMAR	48	15J41A2506	BODA SRIDHAR
37	14J41A2507	BANOTH LAXMANSINGH	49	15J41A2507	BOORA VINAY
38	14J41A2508	BANOTH UDAY THIWARI	50	15J41A2508	CHIKKULAPALLI RAJU
39	14J41A2509	BHUKYA SATISH KUMAR	51	15J41A2509	DOKKA CHANDAN BABU
40	14J41A2510	BILLA VENKATESH	52	15J41A2510	DOMMATI VAMSHI KRISHNA
41	14J41A2511	BOBBILI ABHINAV SAI	53	15J41A2511	DUGGIRALA SHIVAJI
42	14J41A2512	BOINI AKHIL	54	15J41A2512	GUNDARAPU SAI KUMAR



*Recd*  
Principal  
Malla Reddy Engineering College  
Maisammaguda, Dhulapally,  
(Post Via Kompally), Sec'bad-500100

*Sumddy*  
Head of the Dept.  
Dept. of Mining  
Malla Reddy Engg. College





Explosives Substance Act, 1908

Sl. No.	Section	Section No.	Section Title
1	Definition of Explosives	2	Explosives
2	Classification of Explosives	3	Classification of Explosives
3	Manufacture of Explosives	4	Manufacture of Explosives
4	Storage of Explosives	5	Storage of Explosives
5	Transportation of Explosives	6	Transportation of Explosives
6	Use of Explosives	7	Use of Explosives
7	Penalties	8	Penalties
8	Offences	9	Offences
9	Enforcement	10	Enforcement



*Reddy*  
Principal  
Malla Reddy Engineering College  
Maisammaguda, Dhulapally,  
(Post Via Kompally), Sec'bad-500 100



*Reddy*  
Head of the Dept  
Dept. of Mining  
Malla Reddy Engg. College



**MALLA REDDY ENGINEERING COLLEGE  
(AUTONOMOUS)**

UGC Autonomous Institution, Approved by AICTE, New Delhi & Affiliated to JNTUH, Hyderabad). Accredited 2<sup>nd</sup> time by NAAC with 'A' Grade, Maisammaguda (H), Medchal-Malkajgiri District, Secunderabad,

Telangana State – 500100, [www.mrec.ac.in](http://www.mrec.ac.in)

**DEPARTMENT OF MINING ENGINEERING**

Value Added Course

On

**Blast Prediction & Optimization**

25<sup>th</sup> -30<sup>th</sup> September, 2017

**SUMMARY REPORT**

Rock fragmentation in mining and construction industries is widely achieved using drilling and blasting technique. The technique remains the most effective and efficient means of breaking down rock mass into smaller pieces. However, apart from its intended purpose of rock breakage, throw, and heave, blasting operations generate adverse impacts, such as ground vibration, air blast, fly rock, fumes, and noise that have significant operational and environmental implications on mining activities. Consequently, blast impact studies are conducted to determine an optimum blast design that can maximize the desirable impacts and minimize the undesirable ones. To achieve this objective, several blast impact estimation empirical models have been developed. However, despite being the industry benchmark, empirical model results are based on a limited number of factors affecting the outcomes of a blast. As a result, modern-day researchers are employing machine learning (ML) techniques for blast impact prediction. The ML approach can incorporate several factors affecting the outcomes of a blast, and therefore, it is preferred over empirical and other statistical methods. This paper reviews the various blast impacts and their prediction models with a focus on empirical and machine learning methods. The details of the prediction methods for various blast impacts—including their applications, advantages, and limitations—are discussed. The literature reveals that the machine learning methods are better predictors compared to the empirical models. However, we observed that presently these ML models are mainly applied in academic research.



*Raees*  
Principal

**Malla Reddy Engineering College  
Maisammaguda, Dhulapally,  
(Post Via Kompally), Sec'bad-500100**

*Suddy*  
Head of the Dept.  
Dept. of Mining  
Malla Reddy Engg. College





**MALLA REDDY ENGINEERING COLLEGE (AUTONOMOUS)**  
(UGC Autonomous Institution, Approved by AICTE, New Delhi & Affiliated to  
JNTUH, Hyderabad). Accredited 2<sup>nd</sup> time by NAAC with 'A' Grade,  
Maisammaguda (H), Medchal-Malkajgiri District, Secunderabad,  
Telangana State – 500100, [www.mrec.ac.in](http://www.mrec.ac.in)

### Value Added Course Summarized Course Feedback Report

Calculating Averages of Student Ratings for 5-Point Scale

Department: MINING ENGINEERING

Name of the Value Added Course: BLAST PREDICTION & OPTIMIZATION

Academic year: 2017-18

Duration: 25<sup>th</sup> to 30<sup>th</sup> September 2017

S.No	Parameter	Feedback All Parameters Scored Rank
1	Course Content	5.63
2	Skill development	4.71
3	Motivation	4.66
4	Regularity and punctuality of teacher	4.54
5	Coverage of content	4.49
6	Interaction	4.46
7	Individual attention	4.71
8	Outcome(s)	4.57

Suggestions: Apart from the beneficial utilizations of the explosive energy in fragmentation of the rocks in civil and mining works, a significant percentage of that is wasted in different ways, such as fly rock, back-break, ground vibration, air blast, dust and noxious gases.

Principal

Malla Reddy Engineering College  
(Autonomous)



*Chandrasekar*  
HOD

*Raveendh*  
Principal

Malla Reddy Engineering College  
Maisammaguda, Dhulapally,  
(Post Via Kompally), Sec'bad-500100.





# Malla Reddy Engineering College

(Autonomous)

Maisammaguda, Dhulapally (Post via Kompally), Secunderabad-500100  
(An UGC Autonomous Institution, Affiliated to JNTUH, Re-Accredited by NAAC with 'A' Grade, (II Cycle))

Department of Mining Engineering  
Value Added Course on

## BLAST PREDICTION & OPTIMIZATION

### *Certificate & participation*

This is to certify that Dr./Mr./Ms/- \_\_\_\_\_ KOTIKA TULASIRAM has successfully

Participated in the thirty days Value added Course conducted between 25<sup>th</sup> to 30<sup>th</sup> September, 2017.



*Sameer Pasha*  
Shri SK Sameer Pasha  
Program Coordinator & Asst-Prof.  
Department of Min-Engg.

*Narasimha Reddy*  
Shri. Narasimha Reddy  
Program Convener & Head  
Department of Mining Engg.

*Ravinder*  
Principal  
Malla Reddy Engineering College  
Maisammaguda, Dhulapally,  
(Post Via Kompally), Sec'bad-500100

*Sudhakar Reddy*  
Dr.S.Sudhakar Reddy  
Co-Chairman & Principal  
MREC (A)



# Malla Reddy Engineering College (Autonomous)

Maisammaguda, Dhulapally (Post via Kompally), Secunderabad-500100  
(An UGC Autonomous Institution, Affiliated to JNTUH, Re-Accredited by NAAC with 'A' Grade, (II Cycle))

Department of Mining Engineering  
Value Added Course on

## BLAST PREDICTION & OPTIMIZATION

### *Certificate & participation*

This is to certify that Dr./Mr./Ms/- \_\_\_\_\_ KATTULA KARTHIK has successfully

Participated in the thirty days Value added Course conducted between 25<sup>th</sup> to 30<sup>th</sup> September, 2017.

*Resub*  
Principal  
Malla Reddy Engineering College  
Maisammaguda, Dhulapally,  
(Post Via Kompally), Sec'bad-500100

*Sameer Pasha*  
Shri SK Sameer Pasha  
Program Coordinator & Asst-Prof.  
Department of Min-Engg.

*Narasimha Reddy*  
Shri. Narasimha Reddy  
Program Convener & Head  
Department of Mining Engg.

*Sudhakar Reddy*  
Dr.S.Sudhakar Reddy  
Co-Chairman & Principal  
MREC (A)



# Malla Reddy Engineering College (Autonomous)

Maisammaguda, Dhulapally (Post via Kompally), Secunderabad-500100  
(An UGC Autonomous Institution, Affiliated to JNTUH, Re-Accredited by NAAC with 'A' Grade, (II Cycle))

Department of Mining Engineering  
Value Added Course on

## BLAST PREDICTION & OPTIMIZATION

### *Certificate & participation*

This is to certify that Dr./Mr./Ms/- JAVVAJI VENKATESH has successfully

Participated in the thirty days Value added Course conducted between 25<sup>th</sup> to 30<sup>th</sup> September, 2017.



*Sameer Pasha*  
Shri SK Sameer Pasha  
Program Coordinator & Asst-Prof.  
Department of Min-Engg.

*Narasimha Reddy*  
Shri. Narasimha Reddy  
Program Convener & Head  
Department of Mining Engg.

*S. Suchakar Reddy*  
Dr.S.Suchakar Reddy  
Co-Chairman & Principal  
MREC (A)

*Principal*  
Malla Reddy Engineering College  
Maisammaguda, Dhulapally,  
(Post Via Kompally), Sec'bad-500100  
(Post Via Kompally), Sec'bad-500100





# Malla Reddy Engineering College (Autonomous)

Maisammaguda, Dhulapally (Post via Kompally), Secunderabad-500100  
(An UGC Autonomous Institution, Affiliated to JNTUH, Re-Accredited by NAAC with 'A' Grade, (II Cycle))

Department of Mining Engineering  
Value Added Course on

## BLAST PREDICTION & OPTIMIZATION

### *Certificate & participation*

This is to certify that Dr./Mr./Ms/- \_\_\_\_\_ KAMA AJAY \_\_\_\_\_ has successfully

Participated in the thirty days Value added Course conducted between 25<sup>th</sup> to 30<sup>th</sup> September, 2017.



*Sameer Pasha*  
Shri SK Sameer Pasha  
Program Coordinator & Asst-Prof.  
Department of Min-Engg.

*Narasimha Reddy*  
Shri. Narasimha Reddy  
Program Convener & Head  
Department of Mining Engg.

*Ramesh*  
Principal  
Malla Reddy Engineering College  
Maisammaguda, Dhulapally,  
(Post Via Kompally), Sec'bad-500100

*Sudhakar Reddy*  
Dr.S.Sudhakar Reddy  
Co-Chairman & Principal  
MREC (A)