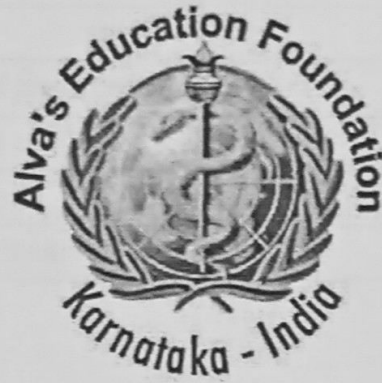


# **ALVA'S INSTITUTE OF ENGINEERING AND TECHNOLOGY**

Shobhavana Campus, Mijar – 574225, Moodbidri. Dakshina Kannada Karnataka, India.

## **DEPARTMENT OF CIVIL ENGINEERING**



### **A REPORT ON**

**“Design, Construction and Fabrication of Steel Structures”**

**2016-17**



# ALVA'S INSTITUTE OF ENGINEERING AND TECHNOLOGY

Shobhavana Campus, Mijar, Moodbidri - 574 225

Phone: 08258-262725 Fax: 08258-262726

## DEPARTMENT OF CIVIL ENGINEERING

Date: 13 Dec 2016

Place: AIET, Moodbidri.

### APPROVAL LETTER

To,

The Principal/IQAC Chairman,

AIET, Moodbidri

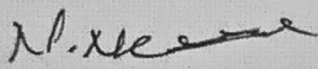


Respected Sir,

**Sub: - Approval for Organizing the State Level Workshop on**  
**"Design, Construction and Fabrication of Steel Structures"- Reg.**

With reference to the subject cited above, I would like to bring to your kind notice that, the Department is planning to host a **Five** day's State Level Workshop on **"Design, Construction and Fabrication of Steel Structures"** from **30<sup>th</sup> Jan 2017 to 03<sup>rd</sup> February 2017**.

Kindly consider the above request and approve the same for further proceedings.

Thanking you Sir.

<b>Coordinator:</b> Prof. Nikhil N 	<b>Head of the Department:</b> Prof. Durgaprasad Baliga  H.O.D. Dept. of Civil Engineering Alva's Institute of Engg. & Technology Mijar, Moodbidri - 574 225
	<b>Principal:</b>  PRINCIPAL Alva's Institute of Engg. & Technology, Mijar. MOODBIDRI - 574 225, D.K



# ALVA'S INSTITUTE OF ENGINEERING AND TECHNOLOGY

Shobhavana Campus, Mijar, Moodbidri - 574 225

Phone: 08258-262725 Fax: 08258-262726

## DEPARTMENT OF CIVIL ENGINEERING

Date: 07 Dec 2016

### CIRCULAR

All the Faculties are hereby informed to attend the meeting at 10.00 am on 08 Dec 2016.

Venue: HOD Office.

Agenda of the meeting: Five day's State Level Workshop.

H.O.D.

Dept. of Civil Engineering  
Alva's Institute of Engg. & Technology  
Mijar, Moodbidri - 574 225





# ALVA'S INSTITUTE OF ENGINEERING AND TECHNOLOGY

Shobhavana Campus, Mijar, Moodbidri - 574 225

Phone: 08258-262725 Fax: 08258-262726

## DEPARTMENT OF CIVIL ENGINEERING

Date: 08 Dec 2016

### Department Minutes of Meeting

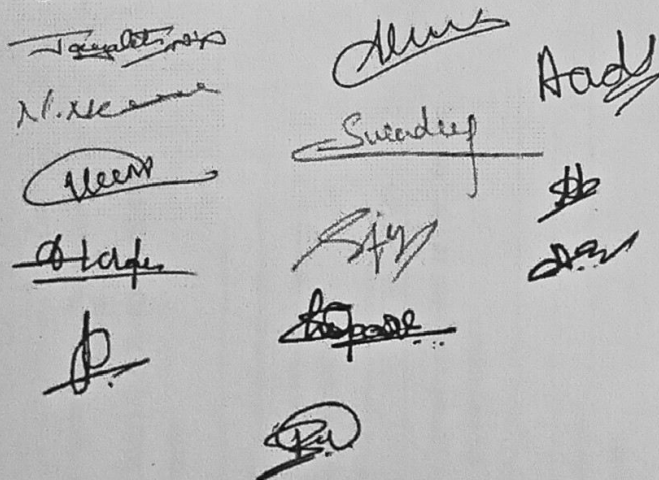
**Agenda:** Conduction of state level workshop/FDP for the academic year 2016-17.

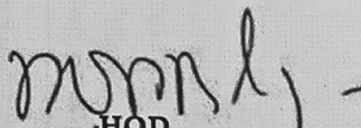
The Department of Civil Engineering has planned to organize State Level Workshop/FDP for the academic year 2016-17.

Details of discussion are as follows:

1. The workshop convener will be Prof. Nikhil N, anonymously selected by the department faculties.
2. Title of the workshop will be "**Design, Construction and Fabrication of Steel Structures**".
3. The workshop has been planned for 5 days (40 to 50 hours) with a site visit.
4. Workshop should be collaborated with INSDAG and ACCEI® Mangalore.
5. Students of final year should compulsorily have to attend.
6. All the faculties should promote about workshop so that number of faculty participants can be increased.
7. Kind support from all the faculties is required for the smooth conduction of the programme.

Signature of the Faculties:



  
H.O.D.  
Dept. of Civil Engineering  
Alva's Institute of Engg. & Technology  
Mijar, Moodbidri - 574 225



FIVE DAYS STATE LEVEL WORKSHOP  
ON

**"DESIGN, CONSTRUCTION & FABRICATION OF  
STEEL STRUCTURES "**

In association with Institute for Steel Development & Growth (INS DAG),  
Kolkata.

(30/01/2017 - 03/02/2017)

**Registration form**

1. Name : .....
2. Designation: .....
3. Qualification : .....  
(Degree, Specialization)
4. Experience : .....
5. Institution: .....
6. Whether the college is affiliated to VTU : Yes / No
7. Address for communication:  
Phone (office): .....
- Mobile: .....
- Email Id (compulsory): .....
8. Payment Details  
Bank :  
DD No. :  
Amount: Rs. :  
Date :

Signature of the applicant

**SPONSORSHIP CERTIFICATE**

Ms./Mr./Dr./Prof. ....

is a bonafide teacher of our college. He/She is sponsored to attend  
five days state level workshop on "DESIGN, CONSTRUCTION &

**FABRICATION OF STEEL STRUCTURES"**

on 30/01/2017 - 03/02/2017

Date:

Signature of the Principal

**Chief Patron**

Dr. M. Mohan Alva  
Chairman  
Alva's Education Foundation (R), Moodbidri.

**Patrons**

Mr. Vivek Alva  
Managing Trustee  
Alva's Education Foundation (R), Moodbidri.

Dr. Peter Fernandes

Principal

Alva's Institute of Engineering & Technology,  
Moodbidri.

**Advisory Committee**

Dr. Jayanta Saha, DGM, INS DAG, Kolkata.

Dr. Katta Venkataramana, Professor of Civil Engineering,  
NITKS, Surathkal.

Dr. M. C. Narshiman, Professor of Civil Engineering,  
NITKS, Surathkal.

Dr. Krishnamurthy, Professor of Civil Engineering,  
Manipal Institute of Technology, Manipal.

Dr. Premanand Shenoy, Chief Consultant,  
Roy & Shenoy Structural Consultants, Mangaluru.

Er. Vinayak Pal, President, ACCEI, Mangaluru

Er. Vijay Vishnu Mayya, Former President,  
ACCEI, Mangaluru

Mr. B. Durgaprasad Baliga

HOD, Civil Engineering Dept, AIET, Moodbidri.

**Convener**

Mr. Nikhil. N

Assistant Professor

Dept. of Civil Engineering, AIET, Moodbidri

Mobile No. +919738443623, Email Id: nikhilcivil2006@gmail.com

**Members**

Mr. Raviprasad, Associate Professor

Mr. Arun Kumar, Sr. Assistant Professor

Mr. Surendra. P, Assistant Professor

Mr. Devi Prasad, Assistant Professor

Mr. Ramesh Rao. B, Assistant Professor

Mr. Deekshith Kumar Jain, Assistant Professor

Mr. Akruith. K, Assistant Professor

Mr. Avinash Nayak, Assistant Professor



**ALVA'S EDUCATION FOUNDATION®**

MOODBIDRI, KARNATAKA

"Moulding a better tomorrow"

**Five Days State Level Workshop**

on

**"DESIGN, CONSTRUCTION & FABRICATION OF STEEL STRUCTURES "**

In association with

Institute for Steel Development & Growth (INS DAG),  
Kolkata

**30-01-2017 - 03-02-2017**



**Organized by:**

**Department of Civil Engineering**

**Alva's Institute of Engineering and Technology**

(A Unit of Alva's Education Foundation ®, Moodbidri)

(Affiliated to VTU, Belgaum, Approved by AICTE, New Delhi,

Recognized by Govt. of Karnataka)

Shobhavana Campus, Mijar

Moodbidri- 574225

Mangalore, D.K. District, Karnataka

Website:- [www.aiet.org.in](http://www.aiet.org.in)



## ABOUT THE INSTITUTE

Alva's Institute of Engineering & Technology (AIET) is a premier Engineering Institute of Alva's Education Foundation (R) established in the year 2008. AIET is strategically located adjacent to Moodbidri -Mangalore National Highway 169, and is 24 kms from Mangalore International Airport. AIET has excellent infrastructural facilities, spacious classrooms, well equipped laboratories, separate hostels for boy & girls within the campus, modern amenities, food court, transportation facility, a well stocked -of-the-art Digital Library, Wi-fi enabled Campus. AIET has a dedicated placement cell comprising counsellors, corporate trainers working to bridge the industry-academic gap and also organizing major placement initiatives like Alva's Pragati-Udyog Mela for over 8 years.

## COURSES OFFERED

**B.E.-** Civil Engineering, Mechanical Engineering, Computer Science & Engineering, Electronics & Communication Engineering, Information Science Engineering, Master of Business Administration.

**M. Tech.-** Thermal Power Engineering, Computer Science & Engineering, VLSI Design & Embedded System.

## ABOUT CIVIL ENGINEERING DEPARTMENT

The Bachelor's degree in Civil Engineering in AIET was started in the academic year 2009-10 with an intake of 60 students. The department offers a full time B.E degree course in Civil Engineering. Our department organizes seminars, workshops & industrial visits for the benefit of students and faculty which would bring exposure of the recent trends in Civil Engineering. Students involve in the consultancy projects obtained through various govt. and non-govt. agencies. The infrastructure available in the department facilitates students to develop their skill and knowledge within the framework of curriculum prescribed by the Visvesvaraya Technological University. Our vision is to make every student a better engineer having excellence in education, entrepreneurship & innovation along with qualities like high ethical standards, integrity & credibility.

We are committed to set up a centre of excellence by offering quality technical education and providing research opportunities in civil engineering and making our students technically the best and ethically strong.

## OBJECTIVES OF WORKSHOP

The objective of this workshops is to share the methodologies and processes used in order to benchmark and analyze the steel industry's performance on diverse topics such as safety, maintenance & reliability. Workshop strives to expand the use of steel in the residential, commercial infrastructure, industrial and rural segments of the construction industry as a platform for all connected to the steel value chain - architects, consultants, structural engineers, steel producers, contractors, fabricators, hardware suppliers, government agencies, etc. Workshop prompt advisory service on materials, construction practices, interpretation of codes etc. and creating an environment for better usage of steel by acquiring and disseminating knowledge about the best practices, creating awareness amongst potential users about affordability and benefits of steel construction.

Keeping this in view, AIET is organizing a five days state level workshop in DESIGN, CONSTRUCTION & FABRICATION OF STEEL STRUCTURES to enhance the skill set of the Teaching Fraternity, Research Scholars, Site Engineers & Students.

At AIET, it is our genuine interest to inculcate an environment where all are motivated & propelled by research culture. We welcome research scholars, academicians, site engineers & students to be a part of this workshop.

## TOPICS TO BE COVERED

Introduction to Iron & Steel Making.  
Steel Products portfolio, properties, codes, Testing.  
Introduction to Structural Design.  
Connection Design- Bolted, Welded.  
Member Designs under Tension, Compression, Flexure, Combined Forces.  
Analysis & design of steel columns.  
Designing and Detailing of Base plates for Columns.  
Design Methodology for Tubular Structures with examples.  
Failures and reasons for failures in steel structures.  
Passive Fire Protection of Steel Structures.  
Structural design and Structural detailing of truss bridge for pedestrians.  
Fabrication & Erection, Handling, transporting of material.  
Use of Software for welding/fabrication drawing.  
Site Visit

## INVITED SPEAKERS

Dr. Jayanta Saha  
DGM, INSDAG, Kolkata.  
Dr. Pradyumna  
Executive Director at Geodesic Techniques, Bangalore.  
Dr. P Savolkar  
Professor, Goa Engineering College, Goa.  
Mr. Sumanta Mandal  
DGM, Marketing, RINL, Visakhapatnam.  
Mr. Madhav Kamat  
CEO, Kamath Consultants, GOA.  
Mr. Umesh B Rao  
Chairman, ACCEI, Bangalore.  
Mr. Chandra Sekhar,  
ACCEI, Bangalore  
Mr. Amit Chowdury  
Managing partner, Srijan Creation, Kolkata  
Mr. Mitra B Dutta,  
Managing partner, Trimble Solution, Mumbai

## REGISTRATION FEE

Participant registration fee - Rs. 2000.00  
For students, registration fee - Rs. 1000.00  
Demand Draft should be drawn in favour of  
"The Principal, AIET, Mijar", Payable at Moodbidri, Mangalore.  
Accommodation will be provided at earlier request."  
Venue- MBA Seminar Hall, AIET  
Shobhavana Campus, Mijar, Moodbidri-574225

## IMPORTANT DATES

Last date for receiving application- 23-01-2017  
Last date for conformation of participation- 25-01-2017

## HOW TO REGISTER

Registration form is available in the brochure, the completed form should be sent to:

Mr. Nikhil N  
Workshop Convener  
Department of Civil Engineering  
Alva's Institute of Engineering & Technology  
Mijar, Moodbidri- 574225, Karnataka  
Email Id: civilaiet08@gmail.com, nikhilcivil2006@gmail.com  
Contact No. - 9738443623





## ALVA'S INSTITUTE OF ENGINEERING & TECHNOLOGY

Shobhavana Campus, Mijar, Moodabidri, Mangalore Taluk, D.K - 574225

Phone: 08258-262725, Fax: 08258-262726

### "FIVE DAYS STATE LEVEL WORKSHOP ON "DESIGN, CONSTRUCTION & FABRICATION OF STEEL STRUCTURES"

#### Chief Patron

Dr. M. Mohan Alva  
Chairman, AEF ®

#### Patrons

Mr. Vivek Alva  
Managing Trustee, AEF®

Dr. Peter Fernandes  
Principal, AIET,  
Moodbidri

#### Advisory Committee

Dr. Jayanta Saha, DGM, INSDAG, Kolkata  
Dr. Katta Venkataramana, Professor of  
Civil Engineering, NITKS, Surathkal.  
Dr. M. C. Narshiman, Professor of Civil  
Engineering, NITKS, Surathkal.  
Dr. Krishnamurthy, Professor of Civil  
Engg., Manipal Institute of Technology,  
Manipal.  
Dr. Premanand Shenoy, Chief Consultant,  
Roy & Shenoy Structural Consultants,  
Mangaluru.  
Er. Vinayak Pai, President,  
ACCEI, Mangaluru Center, Mangaluru  
Er. Vijay Vishnu Mayya, Former President,  
ACCEI, Mangaluru Center, Mangaluru.  
Er. B. Durgaprasad Baliga,  
HOD, Civil Engineering Dept, AIET,  
Moodbidri.

#### Convener

Er. Nikhil, N,  
Assistant Professor, Dept. of Civil Engg.,  
AIET, Moodbidri

#### Members

Er. Raviprasad, Associate Professor  
Er. Arun Kumar, Sr. Assistant Professor  
Er. Surendra, P, Assistant Professor  
Er. Devi Prasad, Assistant Professor  
Er. Ramesh Rao, B, Assistant Professor  
Er. Deekshith K Jain, Assistant Professor  
Er. Akruth, K, Assistant Professor  
Er. Avinash Nayak, Assistant Professor

Ref: AIET/CV/WS/2017/

Date:

To:

Sir,

I am happy to mention that our foundation in association with Institute for steel development and growth (INSDAG), Kolkata, is organizing 5 days state level workshop on DESIGN, CONSTRUCTION & FABRICATION OF STEEL STRUCTURES on 30-1-2017 to 3-2-2017.

This workshop is to share the methodologies and process used in order to benchmark and analyze the steel industry's performance on diverse topics such as safety, maintenance & reliability. Workshop strives to expand the use of steel in the residential, commercial infrastructure, industrial and rural segments of the construction industry as a platform for all connected to the steel value chain - architects, consultants, structural engineers, steel producers, contractors, fabricators, hardware suppliers and government agencies. Workshop prompts advisory service on materials, construction practices, interpretation of codes etc. and creating an environment for better usage of steel.

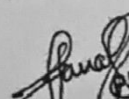
The event will be very helpful for the Civil Engineers for effective for effective use of steel in construction. The participants for the workshop are researchers, site engineers, civil engineering faculties, & students.

Organizing a workshop requires lot of support and encouragement from various organizations. In this regard we request you to be a part of the team which supports and encourages us.

Workshop welcomes the support through sponsorship. Logo & Name of Sponsors will be displayed appropriately in Backdrop, Sponsors will be given adequate mileage through coverage.

Category of Sponsor Fee		Complementary for sponsors
Diamond Sponsor	Rs. 25,000/-	Banner Display, Presentation, Announcement.
Gold Sponsor	Rs. 15,000/-	Banner Display, Announcement.
Silver Sponsor	Rs. 10,000/-	Banner Display.

With warm regards

  
PRINCIPAL  
Alva's Institute of Engg. & Technology,  
Moodbidri - 574 225, D.K.



# ALVA'S INSTITUTE OF ENGINEERING & TECHNOLOGY

Shobhavana Campus, Mijar, Moodabidri, Mangalore Taluk, D.K - 574225

Phone: 08258-262725, Fax: 08258-262726

## DEPARTMENT OF CIVIL ENGINEERING

### VARIOUS COMMITTEES FOR FIVE DAYS WORKSHOP

#### ON

### DESIGN, CONSTRUCTION & FABRICATION OF STEEL STRUCTURES

DATE: 30/01/2017 - 03/02/2017

VENUE: MBA SEMINAR HALL

COMMITTEES	DUTIES AND RESPONSIBILITIES
<b>1. SPONSORSHIP COMMITTEE</b> 1. Mr. Raviprasad 2. Mr. Sanjay S	To get sponsors for workshop from companies/institutions/industries
<b>2. FUNCTION ORGANIZING COMMITTEE</b>  1. Dr. Umeshchandra 2. Mr. Arun Kumar 3. Mr. Shankargiri	1) To decide the schedule and plan for its effective and successful execution within the stipulated time. 2) To provide sufficient copies of the detailed programme list and to place required copies of the same for the kind glance of dignitaries on the dais. 3) Decide the staff's to introduce the Chief Guests, welcome speech & vote of thanks. 4) To arrange memento, garlands, flower bouquet, and water arrangements for the guests on the stage, name plates of the guests. 5) To collect bio-data of the speakers. 6) To collect the ppts, videos, and printed notes materials, session wise and finally to compile, and write DVD.
<b>3. STAGE SETTING, SEATING ARRANGEMENT, DECORATION COMMITTEE</b>  1. Dr. Nitendra Palankar 2. Mr. Devi Prasad	1) To look into the arrangement of stage accessories, decorative items, appropriate and sufficient number of chairs to the guest on the dais, chairs to the participants, table coverings, flower vases, flower pots, lamp (deepa), lamp-oil, batthi, match-box, water bottles 2) To arrange appropriate banner showing required details. 3) To well decorate the stage with suitable lightings and other decorative items. 4) To make arrangements for sound systems with all its accessories such as sufficient number of sound boxes, microphones, cordless mike sets, well and perfectly working generator systems, projector, Laptop 5) To prepare a layout of systematic arrangement of chairs, separate for staff and student community.
<b>4. PHOTO, PRESS &amp; MEDIA COMMITTEE</b>  Mr. Surendra P.	1) To assign the responsibility of capturing every events. 2) To stress to capture every significant and memorable happenings 3) Finally to collect the photos and handover the same along with the brief report to the workshop Coordinator





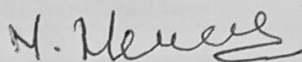
## ALVA'S INSTITUTE OF ENGINEERING & TECHNOLOGY

Shobhavana Campus, Mijar, Moodabidri, Mangalore Taluk, D.K - 574225

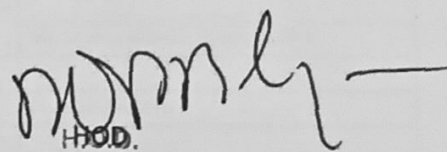
Phone: 08258-262725, Fax: 08258-262726

### DEPARTMENT OF CIVIL ENGINEERING

<b>5. DISCIPLINARY COMMITTEE</b>  ALL FACULTY MEMBERS	1) To plan for maintaining absolute discipline 2) To make sure that no empty seats in the front few rows except left 1st row of the auditorium.
<b>6. FOOD, ACCOMMODATION &amp; TRANSPORTATION COMMITTEE</b> 1. Mr. Akruth K 2. Mr. Rakesh N 3. Mr. Manjunath H S 4. Mr. Ramesh Rao 5. Mr. Aditya Tantry	To arrange the accommodation, Food and Transportation Facility for the Participants, Resource Person's and delegates
<b>7. INVITATION COMMITTEE</b> 1. Mr. Deekshit Kumar Jain 2. Mr. Avinash Nayak	1) To collect Email id's of HOD'S of different colleges 2) To collect address of colleges & companies & sending invitations
<b>7. REGISTRATION &amp; CERTIFICATE COMMITTEE</b> 1. Mrs. Veena D Sawanth 2. Ms. Rahasya K R 3. Ms. Shilpa S Vadavadagi 4. Ms. Jayalatha	1) Collect the registration fee from the participants and provide the stationary items. 2) Collect the correct details of the participants and keep the correct count of the participants 3) Arrangement of the certificate, DVD & its distribution. 4) Workshop Kit - Note Pad, Pen, Workshop Schedule, Food Coupons. 5) Delegate Badges/ID cards, external participant Badges/ID cards. 6) Attendance Certificate, Registration Format.



Convener



HOD.  
Dept. of Civil Engineering  
Alva's Institute of Engg. & Technology  
Mijar, Moodbidri - 574 225



# ALVA'S INSTITUTE OF ENGINEERING & TECHNOLOGY

Shobhavana Campus, Mijar, Moodabidri, Mangalore Taluk, D.K - 574225

Phone: 08258-262725, Fax: 08258-262726

## DEPARTMENT OF CIVIL ENGINEERING & INSTITUTE FOR STEEL DEVELOPMENT & GROWTH (INSDAG), KOLKATA

Organises

### A FIVE DAY STATE LEVEL WORKSHOP

On

### DESIGN, CONSTRUCTION & FABRICATION OF STEEL STRUCTURES

DATE: 30/01/2017 – 03/02/2017 VENUE: MBA SEMINAR HALL

Sl.No	TOPIC DESCRIPTION	TIME	RESOURCE PERSON
<b>30-01-2017 (Monday) Day 1</b>			
	Registration	8:00-8:30 am	
	Inauguration	8:30 – 9:00 am	
1.	Making, Shaping, Treating of Steel	9:00 - 10:30 am	Mr. Sumanta Mandal, RINL, Visakhapatnam
<b>TEA BREAK</b>			
2.	Welding of Steel (process, selection, testing & codes)	10:40 – 12:10 pm	Dr. Jayanta Saha, INSDAG, Kolkata
3.	Long Steel Products- Availability, Standards, Properties & Testing	12:10 - 13:40 pm	Mr. Sumanta Manda, RINL, Visakhapatnam
<b>LUNCH BREAK</b>			
4.	Corrosion Protection of steel (Concepts, Techniques, specification, case studies)	2:10-3:40 pm	Dr. Jayanta Saha, INSDAG, Kolkata
<b>TEA BREAK</b>			
5.	Passive Fire Protection of Steel Structures (Types, selection, products, case studies)	3:50 - 5:20 pm	Dr. Jayanta Saha, INSDAG Kolkata
<b>31-01-2017 (Tuesday) Day 2</b>			
6.	Additive Manufacturing, Model making with business prospects	09:30-11:30 am	Mr. Amit Chowdury, Srijan Creation,
<b>TEA BREAK</b>			
7.	Benefits of Building Information Modelling	11:40 – 1:10 pm	Mr. Mitra B Dutta, Tremble Solution, Mumbai
<b>LUNCH BREAK</b>			
8.	BIM Workflow for Steel Structures –	50 – 3:20 pm	Mr. Chandra Sekhar, Tremble Solution, Bangalore
9.	New level of communication for automated	3:20 – 4:50 pm	Mr. Chandra Sekhar, Tremble Solution, Bangalore
<b>01-02-2017 (Wednesday) Day 3</b>			
10.	Analysis & design of steel columns	9:00 - 10:30 am	Mr. Anjenaya Murthy, Bangaluru TEA
<b>BREAK</b>			
11.	Connection Design- Bolted, Welded (Types, classification, capacity, use, fixing mechanism, defects)	10:40 - 12:00 pm	Dr. P.Savoikar, Goa
12.	Designing and Detailing of Base plates for Columns	12:00 - 1:15 pm	Mr. Anjenaya Murthy, Bangaluru
<b>LUNCH BREAK</b>			
13.	Member Designs under Tension, Compression, Flexure, Combined Forces	2:00 - 3:30 pm	Dr. P.Savoikar, Goa TEA
<b>BREAK</b>			
14.	Analysis & design of open web truss members	3:40 - 5:10 PM	Mr. Madhav Kamat, ACCEI, GOA
<b>02-02-2017 (Thursday) Day 4</b>			
15.	Design Methodology for Tubular Structures with examples	9:00 – 10:30 am	Mr. Madhav Kamat, ACCEI, GOA TEA BREAK
16.	Introduction to steel structural design, fabrication & erection.	10:40 – 11:50 am	Dr. Pradyumna, Bangaluru
17.	Introduction to Software development for Structural engineers.	2:00 – 3:30 pm	Dr. Pradyumna, Bangaluru LUNCH BREAK
18.	Structural design and Structural detailing of truss bridge for pedestrians-1	11:50 – 1:20 pm	Mr. Umesh B Rao, Chairman, ACCEI, Bangaluru
<b>TEA BREAK</b>			
19.	Structural design and Structural detailing of truss bridge pedestrians -2	3:40 - 5:10 pm	Mr. Umesh B Rao, Chairman, ACCEI, Bangaluru
20.	Valedictory function	5:10 – 05:30 pm	
<b>03-02-2017 (Friday) Day 5</b>			
21.	Site visit	9:30 - 3:00 pm	By ACCEI, Mangaluru





# **ALVA'S INSTITUTE OF ENGINEERING & TECHNOLOGY**

Shobhavana Campus, Mijar, Moodabidri, Mangalore Taluk, D.K – 574225

Phone: 08258-262725, Fax: 08258-262726

## **DEPARTMENT OF CIVIL ENGINEERING**

### **A BRIEF REPORT ON 5 DAYS STATE LEVEL WORKSHOP**

On

### **DESIGN, CONSTRUCTION & FABRICATION OF STEEL STRUCTURES**

The Civil Engineering Department of Alva's Institute of Engineering & Technology, Mijar, organized **5 DAYS STATE LEVEL WORKSHOP** on “**DESIGN, CONSTRUCTION AND FABRICATION OF STEEL STRUCTURES**” from **30/1/2017** to **03/02/2017** from various eminent personalities.

### **Programme Proceedings :**

The inauguration began at 08:30 A.M. The gathering was cordially welcomed by Dr. H G Umeshchandra (Associate Professor). The function began by seeking the blessings from god by a song by Nidhi Bhat (6<sup>th</sup> semester). The lightening of the lamp was done by chief guests, our beloved Principal, Head of the Department. Later Dr. Nitendra Palankar (Sr.Associate Professor) of Civil Engineering Department introduced the chief guest Dr. Jayanta K Saha, DGM, INSDAG, Kolkata and Mr. Adhitya tantri (assistant professor) of civil engineering introduced Mr. Sumanta Mandal, RINL, Vishakhapatnam. Dr. Peter Fernandes, Principal, AIET was president over the function.



**DAY-1: (30-01-2017)****Technical Talk by Sumanta Mandal on Making, Shaping, Treating of steel: (9:00 am to 10:30 am) & long steel products: (12:10 pm to 1:40 pm).**

A technical talk on “**Making, Shaping, Treating of Steel**” presented by the resource person. There are a diverse and increasing range of areas, fields, disciplines, branches or specialties of engineering. These developed from civil, mechanical, chemical, electrical and electronic engineering, as knowledge developed as subjects subdivided, merged or new subjects arose. The emergence of new branches of engineering is usually indicated by the establishment of new university departments, new professional engineering organizations or new sections in existing organizations.

Though steel is a very vast subject it was beautifully explained about its making, shaping and treating of steel. He gave a detailed idea about the long steel products their availability, standards, techniques to use them, their specifications and case studies on long steel products. He also explained about their uses in construction industries and in capital goods sector. With these topics he shared with us a very good knowledge of long steel products which will help us in our future work places.

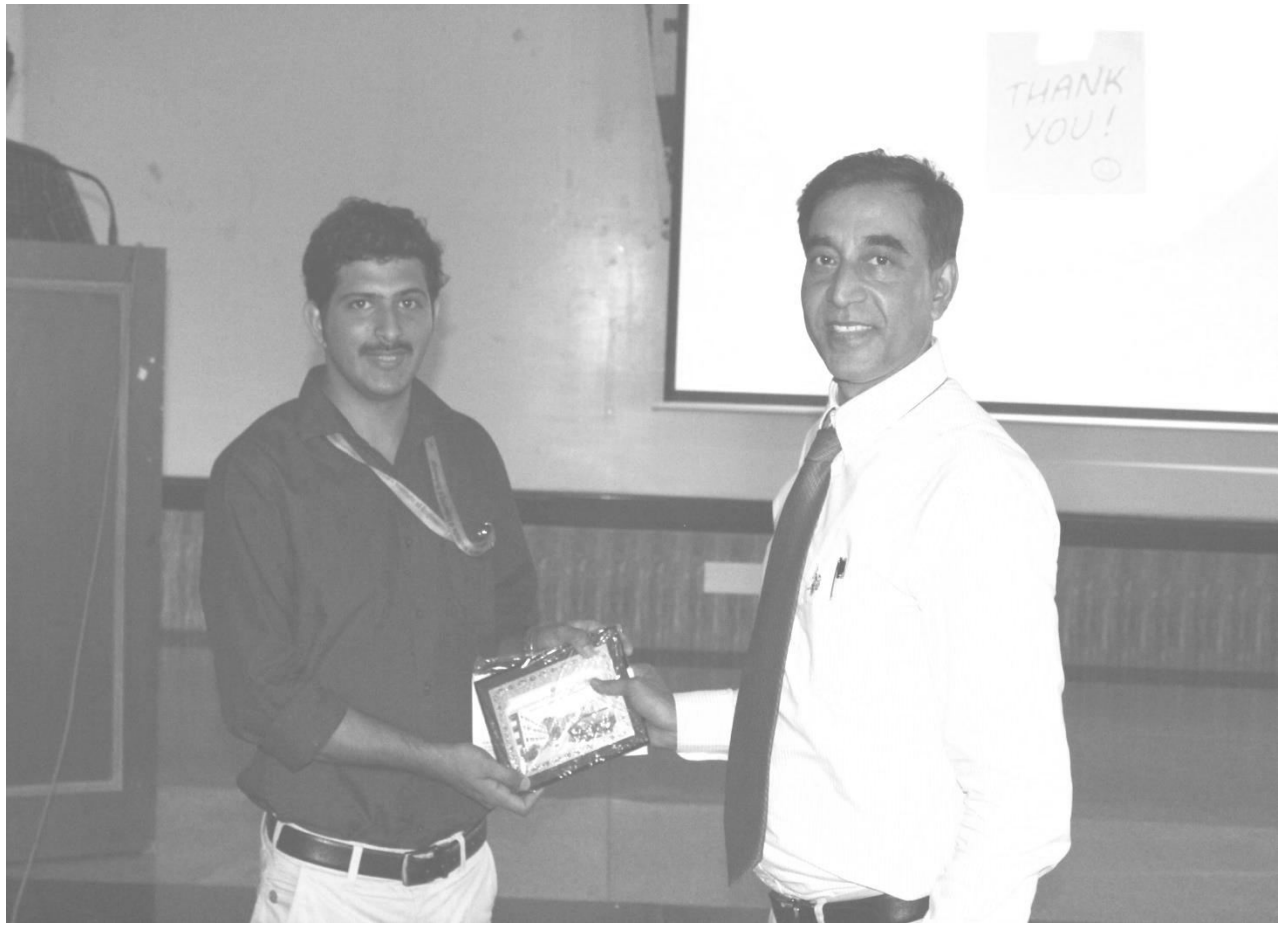
**Technical Talk by Dr. Jayanta K Saha about welding of steel: (10:40 am to 12:10 pm), corrosion protection of steel (2:10 pm to 3:40 pm) & passive fire protection of steel structures (3:50pm to 5:20pm)**



Dr. Jayanta K Saha explained us all about the selection of right welding process, knowledge in weldment design, selection of materials of weldment, knowledge of welding machines, understanding metallurgical factors, testing techniques for sound weld, welding procedure specification, fabrication and the knowledge of standards: AWS, IS 800. All these concepts were explained wonderfully and conveyed in detail.

He also briefed out about the corrosion protection of steel concept, techniques to overcome this, specifications used in this and the case study about corrosion

At the end of the day 1 he explained about the Passive fire protection of steel structures their types, selection, products and case study about passive fire protection.



**DAY-2: (31-01-2017)**

**Technical Talk by Mr. Mitra B Dutta on Benefits of building information modeling through trimble solution (11:40 am to 1:10 pm).**

Mr. Mitra B Dutta gave a brief introduction about the most advanced BIM software through trimble solutions. He also explained about the difference between the BIM and virtual construction which was indeed a very useful topic which will assist us in future. He also briefed out about the tremble solutions which is one of the most advanced technology used in the construction projects by which we can build multi storied buildings with ease and no difficulties.



**Technical Talk by Mr.Chandrashekar on Benefits of building information modeling workflow and automation (1:50 pm to5:00 pm)**

Here in this session we got much practical knowledge about the BIM software its usage and the procedure to get a license for the software which served us the most useful indeed the session was much interesting as it was more a kind of practical session. The step by step procedure of the tekla software was taught. Where **BIM** is a process for creating and managing all of the information on a project – before, during and after construction. The output of this process is the Building Information Model, the digital description of every aspect of the built asset. **Tekla Structures** is 3D building information





modeling (BIM) software used in the building and construction industries for steel and concrete detailing, precast and cast in-situ. The software enables users to create and manage 3D structural models in concrete or steel, and guides them through the process from concept to fabrication.<sup>[9]</sup> The process of shop drawing creation is automated. Along with the creation of CNC-files, files for controlling reinforcement bending machines, controlling precast concrete manufacturing, importing in PLM-systems etc. Tekla Structures is available in different configurations and localized environments to suit different segment- and culture-specific needs.



**DAY-3:(01-02-2017)**

**Technical Talk by Mr. Anjaneya Murthy on analysis & design of steel columns (9:00 am to 10:30 am) & Designing and detailing of base plates of columns (12:00 pm to 1:15 pm)**

Mr. Anjaneya murthy explained about the function and purpose of column base plates are to provide a spread and distribution of column loads from the steel column to the weaker concrete footing. The base plate acts as an intermediate stress distributor in a similar way the concrete footing distributes load from the footing to the softer soils below. When the column load contains a moment, the base plate may require design to ensure uplift of the base plate does not occur which is achieved by designing anchor bolts to resist the tensile forces. Base plate design typically involves an iterative procedure to solve for unknowns which can be time consuming without a useful tool such as a formatted spreadsheet.



**Technical Talk by Dr. P. Savoikar on connection designs bolted and welded (10:40 am to 12:00 pm) & Member design under tension, compression, flexure, combined forces (02:00 pm to 3:30 pm)**



Dr. P. Savoikar gave a talk on joints in steel structures that is both welded as well as bolted joints. Most of the failures occur due to the improper joints. So it was indeed an interesting topic. He explained about the types of joints, classification, capacity, use, fixing mechanism and defects of the joints in steel structures. In recent days it is having more scope so that the failure can be avoided.

And he also explained us about the design of member when it is subjected to tension, compression, flexure and combined forces. The behavior of the member when it is subjected to various loads and the need for safe design under various loads were explained clearly. The talk was indeed so much beneficial.



**Technical Talk by Mr. Madhav kamath on analysis of open web truss members (3:40 pm to 5:10 pm)**

Mr. Madhav kamath briefed out about the analysis of open truss members which are designed to provide architectural freedom for commercial and light industrial applications. He also explained about the various types of trusses and their applications and he gave a detailed account on open web truss members and their applications, Web trusses provide architectural freedom for commercial and light-industrial construction applications.



Designed and built specifically for each job, they create efficient and economical floor and roof solutions.







**DAY-4:(02-02-2017)**

**Technical Talk by Mr.Madhav kamath on design methodology for tubular structures (9:00 am to 10:30 am)**

Mr. Madhav Kamath explained us about the tubular structures and their application in general Buildings, Columns, roof Trusses, purlins. Industrial Buildings, Built-up columns, Column and Truss Frames, Portal frames, Special structures, Long span roofs, Arches, Domes, Sports-stadia roofs, Railway station structures, Sign posts, Gantries, Lighting Towers, Transmission Towers, Oil drilling platforms. He also talked about the stability of the trusses under various loads. This talk was indeed very useful.

**Technical Talk by Dr. Pradhyumna on introduction to steel structured design, fabrication & erection & introduction to software development for structural engineers (11:40 am- 1:20 pm)**

Dr. Pradhyumna gave a talk on introduction to steel structured design, fabrication and erection. The steel-framed building derives most of its competitive advantage from the virtues of prefabricated components, which can be assembled speedily at site. Unlike concreting, which is usually a wet process conducted at site, steel is produced and subsequently fabricated within a controlled environment. This ensures high quality, manufacture offsite with improved precision and enhanced speed of construction at site. The efficiency of fabrication and erection in structural steelwork dictates the success of any project involving steel-intensive construction. Current practices of fabrication and erection of steel structures in India are generally antiquated and inefficient. Most structural engineers use 3D integrated structural analysis and design software in their daily work. These software make modeling geometries of structures and analyzing loads much more efficient, therefore decreasing the time and effort needed for finite element analysis. Many of these software have integrated and diverse features, such as analyzing a diversified profile of structural elements (slabs, openings, foundations, columns, walls, bracings, beams, etc), modeling structures of different materials, checking for geometrical errors, and outputting analysis and graphical files. This talk gave us more updated knowledge on using software's in structural engineering.



**Technical Talk by Mr. Umesh B Rao structural design and structural detailing of truss bridge for pedestrians (02:00 pm to 05:00 pm)**

Mr. Umesh B Rao explained about the structural design and detailing of truss bridge for pedestrians. This session was more of a practical one rather than too much practical. He explained about the design considerations, Application options for prefabricated steel truss pedestrian bridges, Terminology used to describe a prefabricated steel truss pedestrian bridge and Items to consider for proper layout of a trail bridge. This talk was so much motivating and it was indeed our pleasure to be a part of it.

**Valedictory:**

Prof. Rahasya K R (Assistant Professor) of Civil Engineering Department was the mistress of ceremony, the Guest & audience were welcomed by Prof. Nikhil N (Assistant Professor) of Civil Engineering Department Mr. Umesh B Rao was the chief guest & B Durgaprasad Baliga, Head of Civil Engineering Department was the president of valedictory. Feedbacks from the external participants and the students were taken. Mr. Umesh B Rao talked about the current status of civil engineering and also gave some of the valuable suggestions which was very helpful. Finally Vote of thanks was proposed by the Prof. Veena D Sawanth.



# ALVA'S INSTITUTE OF ENGINEERING & TECHNOLOGY

Shobhavana Campus, Mijar, Moodabidri, Mangalore Taluk, D.K – 574225

Phone: 08258-262725, Fax: 08258-262726

## DEPARTMENT OF CIVIL ENGINEERING

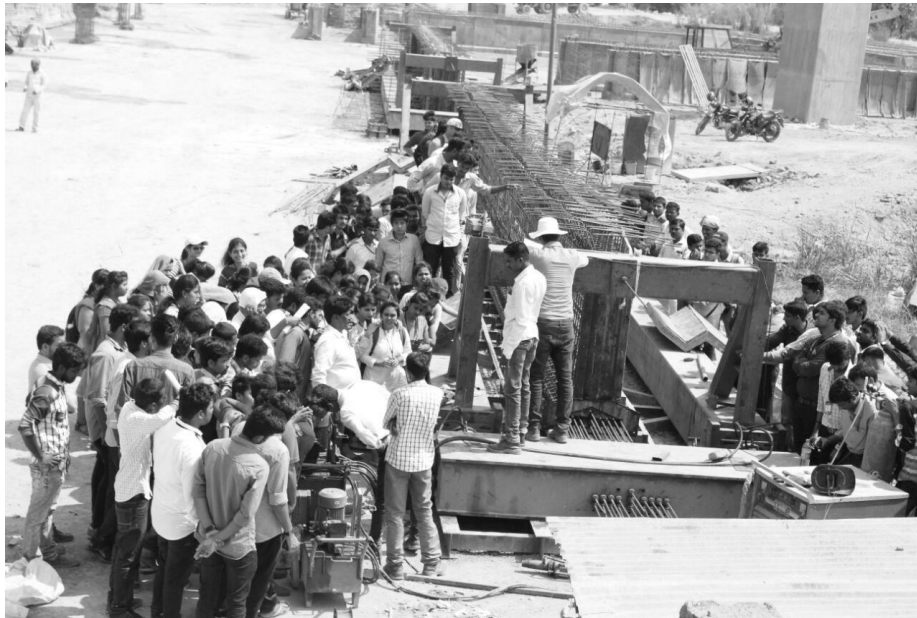




**DAY-5:**

**SITE VISIT BY ACCEI, MANGALURU:**

Site visit was held in mangaluru by ACCEI. There we got to see the practical applications and problems that will arise in sites. We got to study about the Fly overs which were under construction and the topics regarding post tensioning. It was indeed a great experience.





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## DEPARTMENT OF CIVIL ENGINEERING



*[Handwritten Signature]*

H.O.D.

Dept. of Civil Engineering  
Alva's Institute of Engg. & Technology  
Mijar, Moodbidri - 574 225



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## DEPARTMENT OF CIVIL ENGINEERING

### ATTENDANCE OF PARTICIPANTS

Sl. No.	Participant Name	Institution Name	30 Jan	31 Jan	01 Feb	02 Feb	03 Feb	Remarks
1.	Prof. Subramanya R S	S D M, Ujjire	P	P	P	P	P	
2.	Prof. Durgaprasad Baliga	AIET	P	P	P	P	P	
3.	Dr. H G Umeshchandra	AIET	P	P	P	P	P	
4.	Dr. Nitendra Palankar	AIET	P	P	P	P	P	
5.	Prof. Raviprasad	AIET	P	P	P	P	P	
6.	Prof. Arun Kumar G S	AIET	P	P	P	P	P	
7.	Prof. Veena D Savanth	AIET	P	P	P	P	P	
8.	Prof. Nikhil N	AIET	P	P	P	P	P	
9.	Prof. Sanjay S	AIET	P	P	P	P	P	
10.	Prof. Shankargiri K S	AIET	P	P	P	P	P	
11.	Prof. Surendra P	AIET	P	P	P	P	P	
12.	Prof. Deviprasad	AIET	P	P	P	P	P	
13.	Prof. Bhojaraj	AIET	P	P	P	P	P	
14.	Prof. Rahasya	AIET	P	P	P	P	P	
15.	Prof. Jayalatha	AIET	P	P	P	P	P	
16.	Prof. Akruth K	AIET	P	P	P	P	P	
17.	Prof. Rakesh N	AIET	P	P	P	P	P	
18.	Prof. Manjunatha H S	AIET	P	P	P	P	P	
19.	Prof. Aditya B Tantry	AIET	P	P	P	P	P	
20.	Prof. Ramesh Rao B	AIET	P	P	P	P	P	
21.	Prof. Deekshith K Jain	AIET	P	P	P	P	P	
22.	Prof. Avinash K N	AIET	P	P	P	P	P	
23.	Prof. Sudesh A S	BIT, Mgr	P	P	P	P	P	
24.	Prof. Vikram R S	YIT, Mdbdr	P	P	P	P	P	
25.	Prof. Vijin Xavier	S D M, Ujjire	P	P	P	P	P	
26.	Prof. Jayaprakash	VCET, Puttur	P	P	P	P	P	
27.								

*N. Srinivas*

*monish*  
Dept. of Civil Engineering  
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**DEPARTMENT OF CIVIL ENGINEERING****FIVE DAYS WORKSHOP****ON****DESIGN, CONSTRUCTION & FABRICATION OF STEEL STRUCTURES****DATE: 30-01-2017 - 03-02-2017****INCOME - EXPENDITURE STATEMENT****Workshop income:**

External participants Reg. fee collected	: 10,000.00
Forum Fund	: 1, 38,000.00
Sponsors	: 42,000.00
Institute sponsor	: 20,000.00

**Total amount collected: 2, 10, 000.00****Expenses**

SL. NO.	PARTICULARS	DATE & BILL NO	AMOUNT (Rs.)
01	Travelling allowances		1,08,785.00
02	Honorarium		29,700.00
03	Food Bill (food court)		15,000.00
04	Workshop kits	27-1-2017, 1377	5,971.00
05	Printing charges (Madhuban colourz)	2296, 2227, 2294, 2295, 2242, 2278, 2279	13,922.00
06	ID card covers	28-1-2017, 1985	1,152.00
07	Flower & water bottle	NA	300.00
08	Hotel bill (hotel Ballal Tourist)	1-2-2017, 3482,3478	4,167.00
09	Food	29-1-2017, 28145,228135	685.00
10	Food	30-1-2017, 28166,j340,008663,28229	1,067.00
11	Food	31-1-2017, 28292,28233,28290	929.00
11	Food	1-2-2017 ,16,17,30	310.00
12	Food	2-2-2017, 28358	325.00
13	Food	3-2-2017, 7	76.00
14	Vehicle Parking charges	29,30,31-1-2017, 83454,81280,81496	180.00
15	Fuel	30 to 3-2017, 810,526,L25358,L25359, NA	3100.00
16	DVD 20 No's	NA	500.00
<b>TOTAL</b>			<b>1,86,169.00</b>





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## DEPARTMENT OF CIVIL ENGINEERING

30-01-2017 (Day 1)			
NAME	Honorarium+ Local Travel Allowance	TA	TICKET NO / CAR NO
Dr. JAYANTA SHAH, INSDAG KOLKATA	7,500.00 +1100	28,975.00	5891259667069, 5891259667132, 5891259668509
Sumanth Mandle Rnil, Visakhapatnam	5,000.00 +1100	28,975.00	5891259667070, 5891259667133, 5891259668510
<b>Total</b>	<b>14,700.00</b>	<b>57,950.00</b>	

31-01-2017 (Day 2)			
NAME	Honorarium	TA	TICKET NO / CAR NO
Mr. Chandra Sekhar Bangalore	-	-	-
Mr. Mitra B Dutta	-	-	-
<b>Total</b>	-	-	-

01-02-2017 (Day 3)			
NAME	Honorarium	TA	TICKET NO / CAR NO
Anjenaya Murthy Bangaluru	-	4,150.00	A5FP3P
Dr. Savoikar Goa	5,000.00	15,071.00	NF79291
<b>Total</b>	<b>5,000.00</b>	<b>19,221.00</b>	

02-02-2017 (Day 4)			
NAME	Honorarium	TA	TICKET NO / CAR NO
Mr. Madhav Kamath ACCEI, Goa	-	18,566.00	NF78554, NF79338, NF79340
Dr. Pradumna Bangaluru	5,000.00	4,800.00	KA03, N-2822
Umesh B Rao Bangaluru	5,000.00	8,248.00	ODZ43K
<b>Total</b>	<b>10,000.00</b>	<b>31,614.00</b>	



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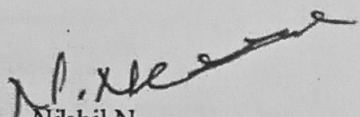
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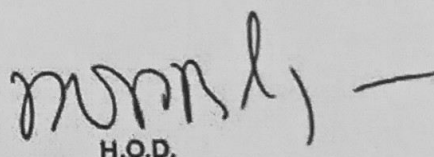
## DEPARTMENT OF CIVIL ENGINEERING

03-02-2017 (Day 5)			
NAME	Honorarium	TA	TICKET NO / CAR NO
Site visit	-	-	-
Total	-	-	-

### Sponsors List:

Sl No	Company	Cheque No & Date	Amount (Rs)	Remarks
1	Bharath Infotech	By Cash	15,000.00	Directly will be Submitted to Principal
2	Veerendra Associates	000261, 24-01-2017	10,000.00	Submitted to Finance Section
3	Sri Siddi RNB Developers	703733, 28-01-2017	10,000.00	Submitted to Finance Section
4	Cadd Centre, Moodbidri	000528, 25-01-2017	7,000.00	Submitted to Finance Section
TOTAL			42,000.00	

  
Nikhil N  
(Convener)

  
H.O.D.  
Dept. of Civil Engineering  
Alva's Institute of Engineering & Technology  
Mijar, Moodbidri - 574 225

Date: 09/02/2017

Encl: Original Bills





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DEPARTMENT OF CIVIL ENGINEERING

## FIVE DAYS WORKSHOP

ON

## DESIGN, CONSTRUCTION & FABRICATION OF STEEL STRUCTURES

DATE: 30-01-2017 - 03-02-2017

### Feedback Form

Dear Participant,

Thank you for your keen participation in this workshop. We value your comments and evaluations which will help in our effort to be more responsive to the needs of the participants. Kindly fill the feedback form:

Description	Excellent	Good	Needs improvement	Poor
Covered Useful Material		✓		
Practical to my needs and interests		✓		
Well organized	✓			
Presented at right level		✓		
Effective activities	✓			
Speaker knowledge	✓			
Speaker presentation	✓			
Speaker responses for queries		✓		
Overall, rate in the scale of 5	✓			
Any suggestion or Comments:				



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## DEPARTMENT OF CIVIL ENGINEERING

### FIVE DAYS WORKSHOP

#### ON

### DESIGN, CONSTRUCTION & FABRICATION OF STEEL STRUCTURES

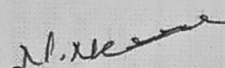
DATE: 30-01-2017 - 03-02-2017

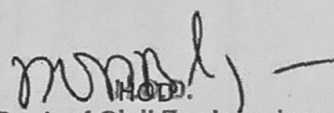
#### Feedback Analysis

Total Feedback forms received: 24

Total number of questions: 09

Q. No.	Option			
	Poor	Needs improvement	Good	Excellent
All questions	0	2	90	129
Avg.	0	$2/221 = 1 \%$	$90/221 = 40 \%$	$129/221 = 59 \%$

  
Convener

  
HOD.  
Dept. of Civil Engineering  
Alva's Institute of Engg. & Technology  
Mijar, Moodbidri - 574 225





# ALVA'S INSTITUTE OF ENGINEERING & TECHNOLOGY MOODBIDRI

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Shobhavana Campus, Mijar, Moodbidri DK Karnataka-574225



## DEPARTMENT OF CIVIL ENGINEERING

### Certificate

This is to certify that Mr./~~Ms.~~ **VIKRAM...R.S.**.....  
from **Y.I.T., MOODBIDRI**..... has attended the State level 5 days  
workshop Program on "Design, Construction and Fabrication  
of Steel Structures" from 30<sup>th</sup> January 2017 to 03<sup>rd</sup> February  
2017.

Mr. Nikhil N  
Coordinator

Prof. B Durgaprasad Baliga  
Head of the Department  
Civil Engineering

Dr. Peter Fernandes  
Principal  
AIET Moodbidri