



## **MEAI PROFESSIONAL DEVELOPMENT PROGRAM - II**

**MPDP – II COURSE**  
**{SEPTEMBER - 2022}**  
**GLIMPES**

SUSHEEL KUMAR RAJASEKAR THOTAPALLI Manjunath Govindappa Manjunath T.S. Vijay Singh A R

Vijay Singh A R's application(s) - 64% +

### Mineral Concession Rules, 2016

Royalty (Rule 39) : Ad-valorem???

**Selling Price???** → **IBM Avg. Sale Price**

# Day 1

- ❖ Elements of Blast Parameters
- ❖ MMDR
- ❖ Implementation of IT in Mining

Edit Share View Audio & Video Participant Meeting Help

Manjunath Govindappa Manjunath Govindappa Vijay Singh A R Manjunath T.S.

Vijay Singh A R's application(s) - 64% +

### Constitutional Provisions – Bifurcation of powers between Central Govt. & State Governments

## SEVENTH SCHEDULE

LIST I	LIST II	LIST III
UNION LIST	STATE LIST	CONCURRENT LIST
[98 ENTRIES]	[57 ENTRIES]	[52 ENTRIES]

09-Sep-2022 3

MG APG TK G

More Ramulu, CSIR-CIMFR... - 64% +

### Fragmentation/Fracture Mechanism:

Fracturing and deformation around an explosion

1. Detonation process is completed in few microseconds
2. Results in generation high temperature and pressurization of bore hole
3. Generation of compressive stress and strong shock waves
4. Reflection of outgoing stress waves from free surfaces.
5. Creation of tensile stress in the rock due to reflected shock waves
6. Tensile fracturing due to interaction of shock waves free surfaces known as Spalling

**ConSite Alarm Report Mechanism**

Quick counter action without depending on effort of the person in charge

A problem occurred!

Real time

ConSite  
Global-Service  
Intelligence Filter 24 hr Monitoring

Operator realized it.

Machine down

Machine down

Emergency Caution

THCM/ Dealer Customer's Office

**Digital Image**

Color Image

Grey Image

Digital Numbers (DNs)

R	G	B
31	36	15
232	239	177

19	
86	

- ❖ New Technological Trends in Opencast Mining Machinery
- ❖ Geostatistics in Exploration & Mining
- ❖ Hydrospectral Technology, Mineral Exploration, EIA & Management
- ❖ Mineral Auction

**Geostatistics in Exploration and Mining**

Robust estimation of grade and tonnage is key to energy efficient mining and exploration practice.

- Developing methodologies
- Application of novel estimation techniques.
- Estimation of non-traditional variables.
- Analysis of how the change in inputs affects the final result.
- Incorporating geological information into geostatistical practice.

**COMMODITY CYCLE**

1. Acquisition
2. Clearance
3. Operation
4. Sales & Marketing
5. Monitoring & maintenance

**Day 2**





Risk Rating Criteria

## DAY 3

❖ Safety Management in Mineral Industry

❖ Mine Costing

## DIGITALIZATION IN MINING SAFETY INTERNET OF THINGS (IOT)

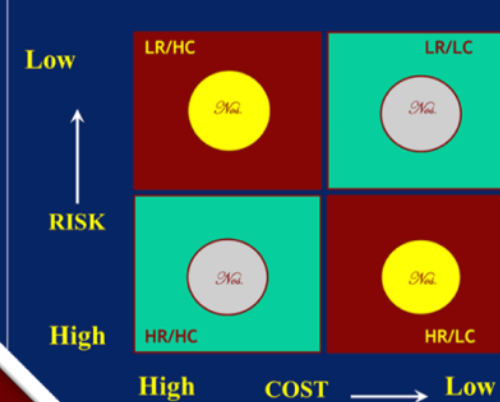


## DIGITALIZATION IN MINING SAFETY

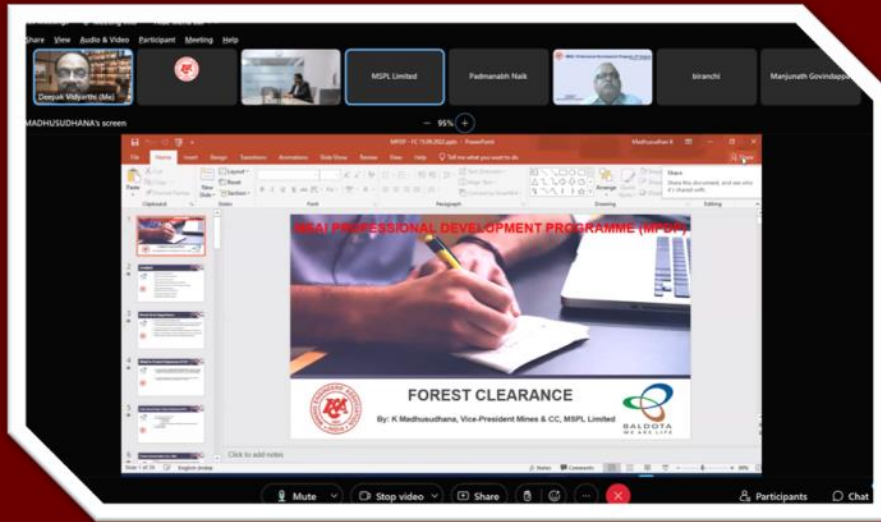


Virtual Reality

## Johari's Window



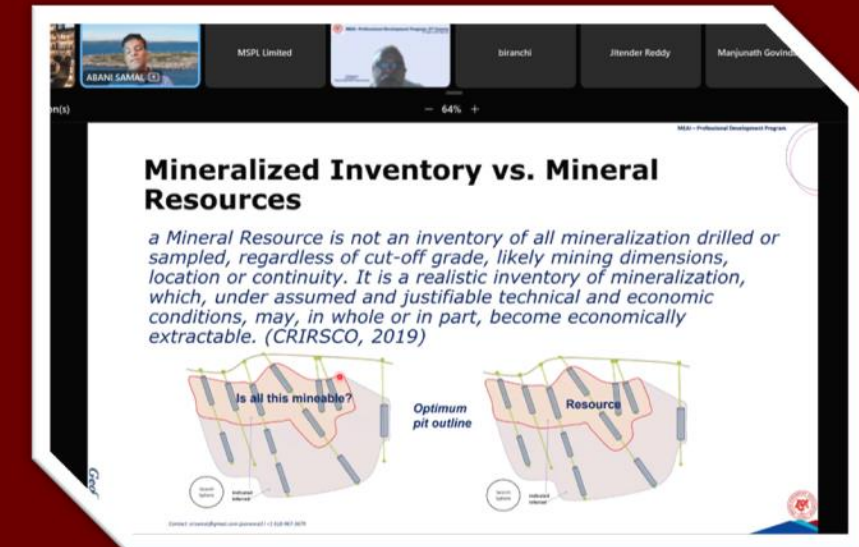
Cost of Implementation of Crisis Management Plan



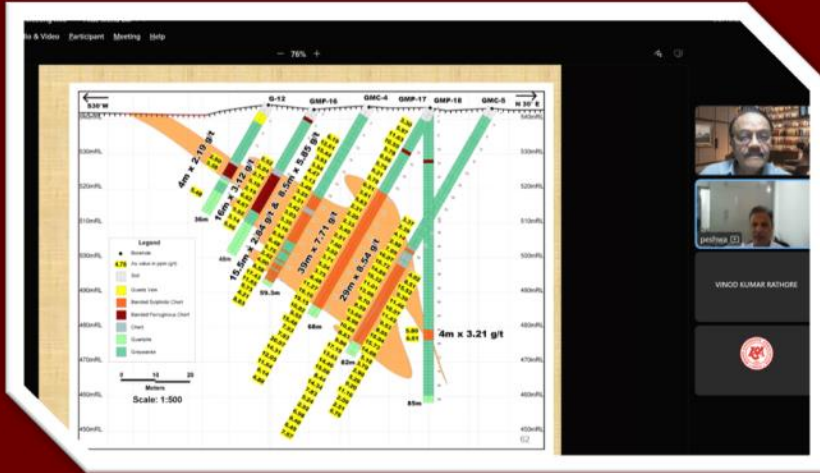
- ❖ Mineral Resources & Reserves- Classification & Reporting
- ❖ General Management
- ❖ Mining Plan & FMCP
- ❖ Forest Clearances



# DAY 4



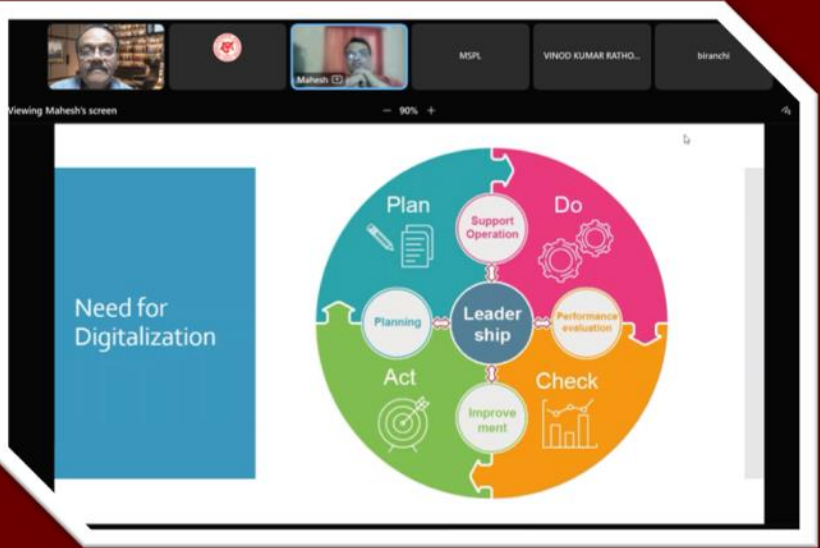
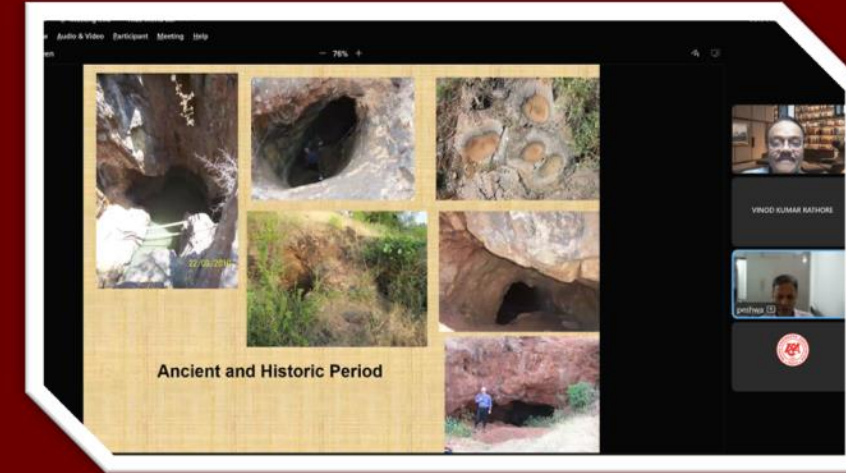




## ❖ Environmental Clearances

## ❖ Geological Exploration

## ❖ Digitalization in Mines

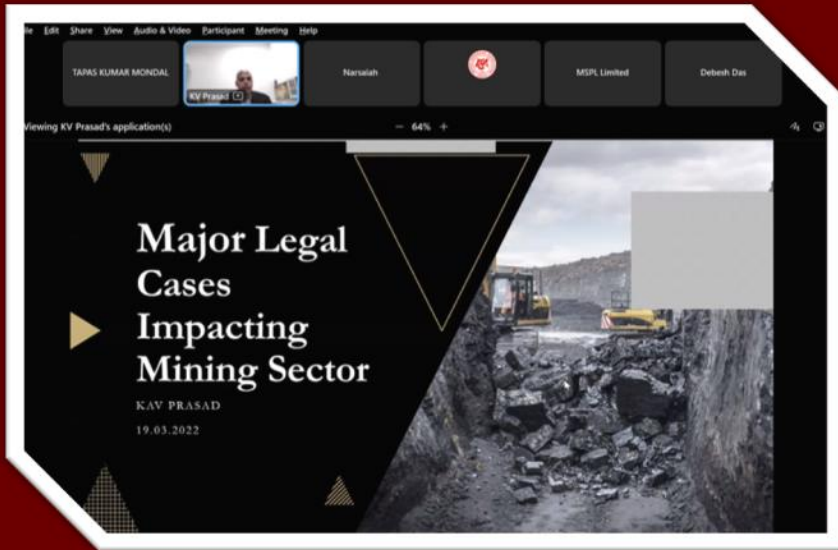


**DAY 5**

### 9. Validity of Environmental Clearance

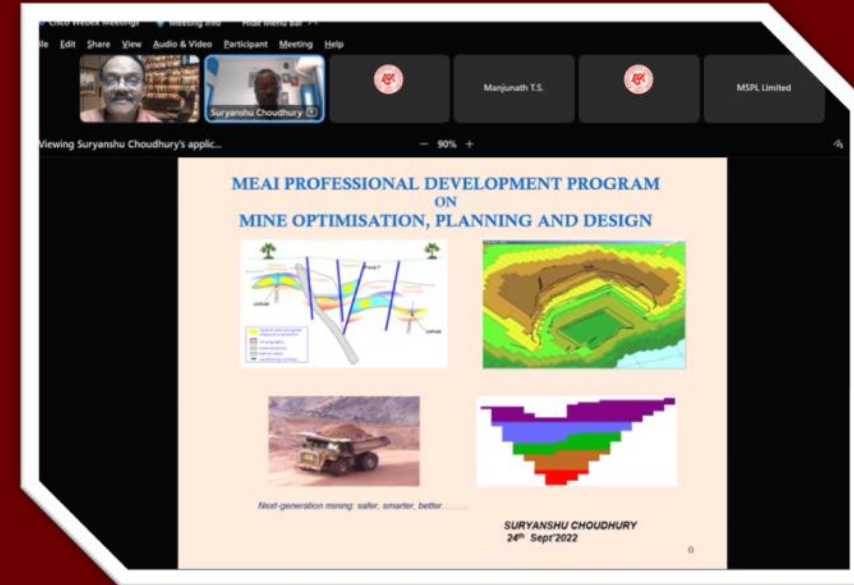
• Delayed filing for extension after validity period of EC –

Delay	Procedure
Within thirty days after the validity period of EC	Referred to concerned EAC or SEAC and based on their recommendations, the delay shall be condoned at the level of the Joint Secretary in the MoEF&CC or Member Secretary, SEAC, as the case may be.
> thirty days after the validity period of EC but < ninety days after such validity period.	based on the recommendations of the EAC or SEAC, the delay shall be condoned with the approval of the Minister in charge of Environment, Forest and Climate Change or Chairman, as the case may be.
> ninety days after the validity period of EC.	No condonation for delay shall be granted for any application for extension filed



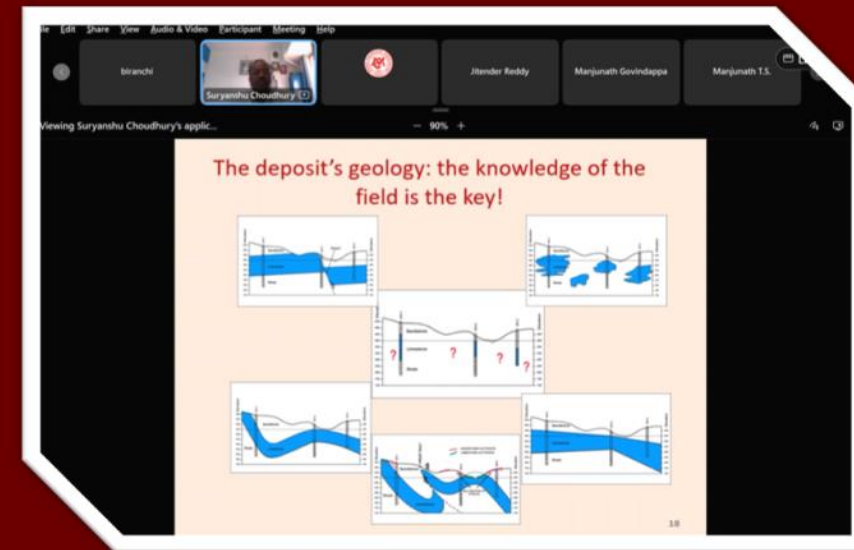
DAY 6

## ❖ Major Legal Cases Impacting Mining Sector



## ❖ MCDR

## ❖ OpenPit Optimization, Mine Planning & Scheduling





# DAY 7

### Technological Revolution in Mining

#### Mining Truck Turntables



Australian Turntables Company

### Technological Revolution in Mining

#### Ropecon Conveyor System



## Technological Revolution in Mining

### GAS BAGS



Gas Bag before Inflation



Inflated Bag


### Technological Revolution

#### IMPLOSION



# Technological Revolution In mining

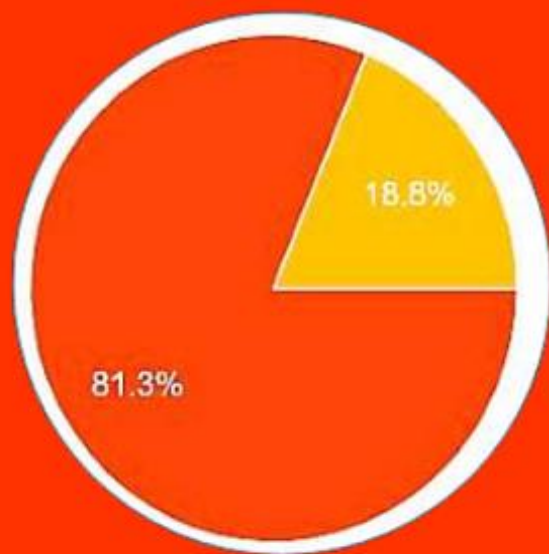
### DIGITAL TAILING DAMS - MODEL



Descartes Labs applies interferometric techniques to complex SAR data to estimate surface deformation for mining areas and tailings dams. The shades of blue indicate areas that have sustained phase shifts suggesting surface deformation of up to 25cm during a period of three years



# MEAI PROFESSIONAL DEVELOPMENT PROGRAM – MPDP-II

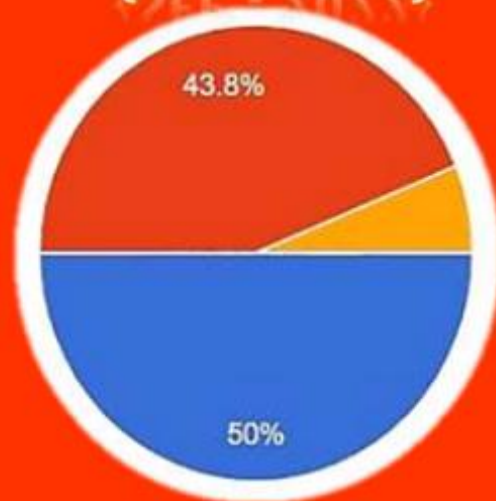


## On Faculties

- 1. ★ ★ ★ ★ ★ - 81.3%
- 2. ★ ★ ★ ★ - 18.8%
- 3. ★ ★ ★ - 0%
- 4. ★ ★ - 0%
- 5. ★ - 0%

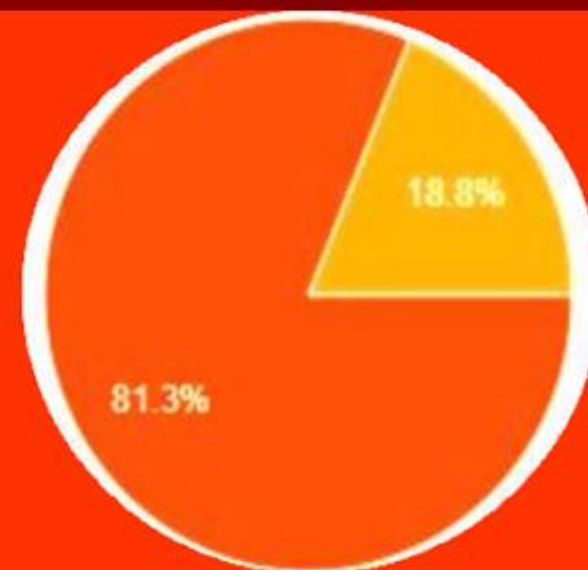
## FEEDBACK

On MPDP – II COURSE  
BY PARTICIPANTS  
{SEP - 2022}



## On Course Content

- Outstanding: 50.0 %
- Excellent: 43.8 %
- V Good: 06.2 %



## ASSESSMENT

- 1. ★ ★ ★ ★ ★ - 81.3%
- 2. ★ ★ ★ ★ - 18.8%
- 3. ★ ★ ★ - 0%
- 4. ★ ★ - 0%
- 5. ★ - 0%



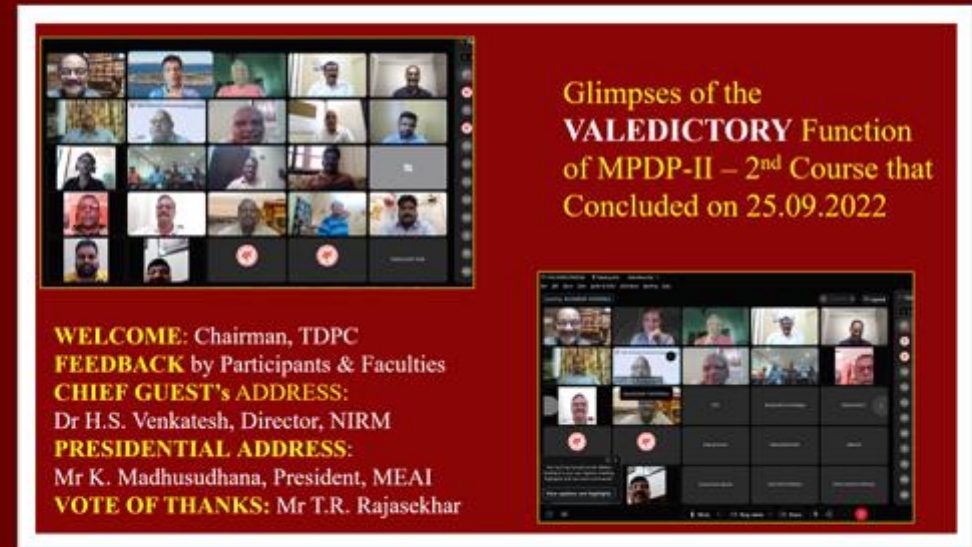
## FACULTIES – MPDP-II



## TDPC MEMBERS

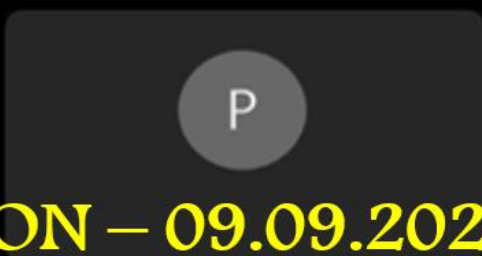
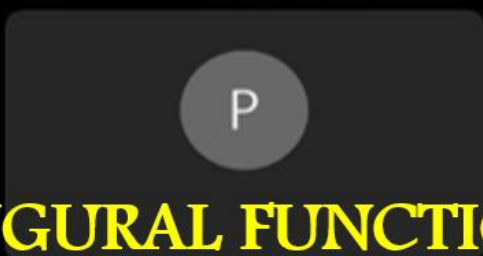
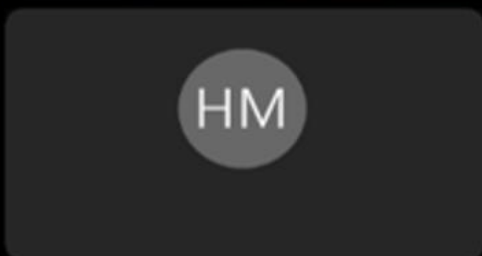
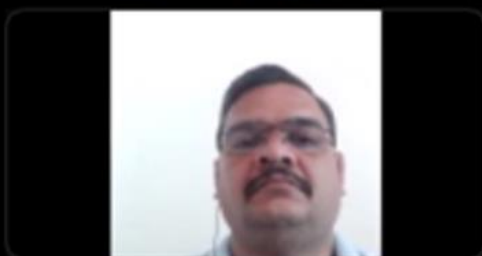


## INAUGURAL FUNCTION



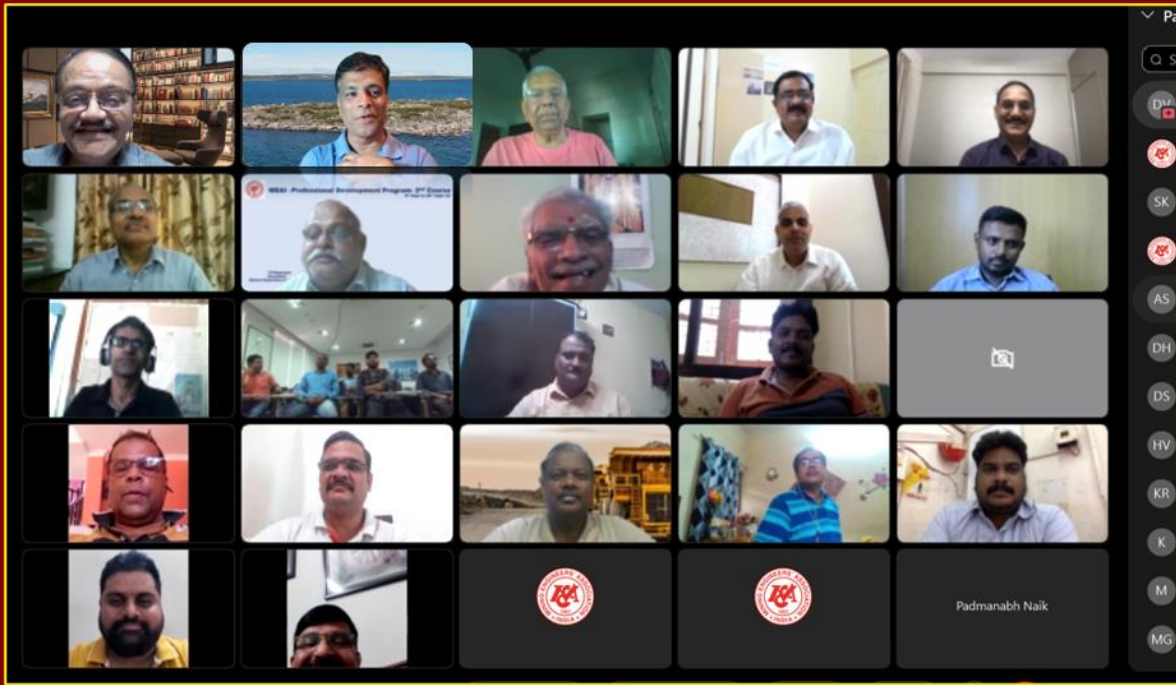
## VALEDICTORY FUNCTION





# MPDP-II ~ INAUGURAL FUNCTION – 09.09.2022





# Glimpses of the **VALEDICTORY** Function of MPDP-II – 2<sup>nd</sup> Course that Concluded on 25.09.2022

**WELCOME:** Chairman, TDPC  
**FEEDBACK** by Participants & Faculties  
**CHIEF GUEST's ADDRESS:**  
Dr H.S. Venkatesh, Director, NIRM  
**PRESIDENTIAL ADDRESS:**  
Mr K. Madhusudhana, President, MEAI  
**VOTE OF THANKS:** Mr T.R. Rajasekhar

