



तकनीकी पत्रिका विषय-सूची

CURRENT CONTENT

(Technical Journals)
(A Monthly Current Awareness Service from Technical Journals)

Vol.07 No.12, December, 2023

The Central Library, IBM, Nagpur is subscribing the technical journals and also receiving them on complimentary basis on various subjects like Geology, Mining, Mineral Economics etc. These Technical Journals make up an important collection of latest scientific information. The library is rendering Reference Service to its users from these technical Journals (Article Indexing is one of them). Central Library, IBM provides Current Content Service from these technical journals in the name of "GEM" since 2006 on half yearly basis in print form. To expand this service to the IBM Offices all over India i.e. H.Q., Zonal & Regional Offices and to take a call of time, the Controller General, IBM desired to make this service online on monthly basis. The library staff made efforts to make it successful. This is the 12th issue of Volume-7 for this service named "तकनीकी पत्रिका विषय – सूची" (Current Content- A Monthly Current Awareness Service from Technical Journals) Vol.07 No.12, December, 2023.

It will be highly appreciated if the valuable feedback is reciprocated. If some article as per content list is found to be of use by the reader the same may be requested and the library will send the scanned copy of the article to the interested reader.

Mrs R S Wakode Assistant Library & Information Officer library@ibm.gov.in 0712-2562847

$\underline{I} \; \underline{N} \; \underline{D} \; \underline{E} \; \underline{X}$

<u>s</u>	<u>.No</u>	<u>Title</u>	Page No
1)	Iron & Steel Review	3-4
2)	Journal of the Geological Society of India	5-8
3)	Minerals & Metals Review	9-10
4)	Mining Engineers' Journal	11-12

Iron & Steel Review, Vol.67 No.06, November 2023

Features

Editor & Publisher:

Santosh Mahanti

Directors:

Sabita Mahanti Abhishek Mahanti

Director & Content Strategist:

Editorial:

Megha Ghosh

Sales & Marketing: Shyamalendu Baneriee Angan Chatterjee Sanjana Tiwari

Design & Layout:

Dipak Adhikari Sambaran Karmakar

Editorial & Corporate Office:

Merlin Links, Block 5E/5F, 5th Floor 166B, S. P. Mukherjee Road Kolkata - 700 026 Phone: 91-6292241782/6292241783/ 033-2463 8088

Fax: 91-033-2465-3790 E-mail: contact@isrinfomedia.in Website: www.isrinfomedia.com

Registered Office:

10, Chowringhee Road Kolkata - 700 013

Subscription Rate

Domestic

Print Copy

₹ 12,000 (Yearly) ₹ 1,000 (Single Copy)

Digital Copy

₹ 8,500 (Yearly)

Overseas

Print Copy \$ 1,600 (Yearly)

€ 1,250 (Yearly) Digital Copy

\$ 800 (Yearly)

€ 500 (Yearly)

- Shipping Charge ₹ 1200 (Yearly)
- 5 % GST on advertisement as applicable

Owned & Printed by Santosh Mahanti at M/s. Kalpana Offset Private Limited 123, Tarak Pramanick Road, Kolkata 700 006

and published by him from 10. Chowringhee Road Kolkata - 700 013, India.

Reproduction of matter published here, in whole or in parts, is prohibited without written permission from the publisher

The publisher and printer do not accept any responsibility for statements, data and opinions expressed by the author



Cover Courtesy: Tenova India

Scan QR Code for Visiting Our Website

Cover Story

Tenova a Worldwide Partner for Metals and Mining

Special Feature

Indian Steel Industry Decarbonisation - Availability and Usage of Scrap

National Trends

58

SMS India Pvt. Ltd. is Certified as a Great Workplace by the Great Place to Work® Institute, India

Global Trends

62

SMS group and PT Gunung Raja Paksi Tbk Sign MoU to Drive Green Steel Development Initiatives in Indonesia

भारतीय खान INDIAN BUREAUDF MIKES

contact@isrinfomedia.in | L&T to Leverage

Digital zation 2 6 DEC 2023

& Automation, Fueling Its केंद्रीय पुस्तकाल्खा ecade of

T. Kumaresan

President and Head - Minerals & Metals Strategic Business Group Larsen &

Company News

74

Mukand Limited Signs PDA for 43.75 MW AC Group Captive Solar Plant with Tata Power Renewable Energy Limited

Focus

78

Future Steel for Automotive: **Brief Development**

Market/Product

86

EMG Systems: The Art of Quality Assurance in **Galvanised Steel Production** for Automotive Grades

Steel Market

94

Iron & Steel Performance for September 2023

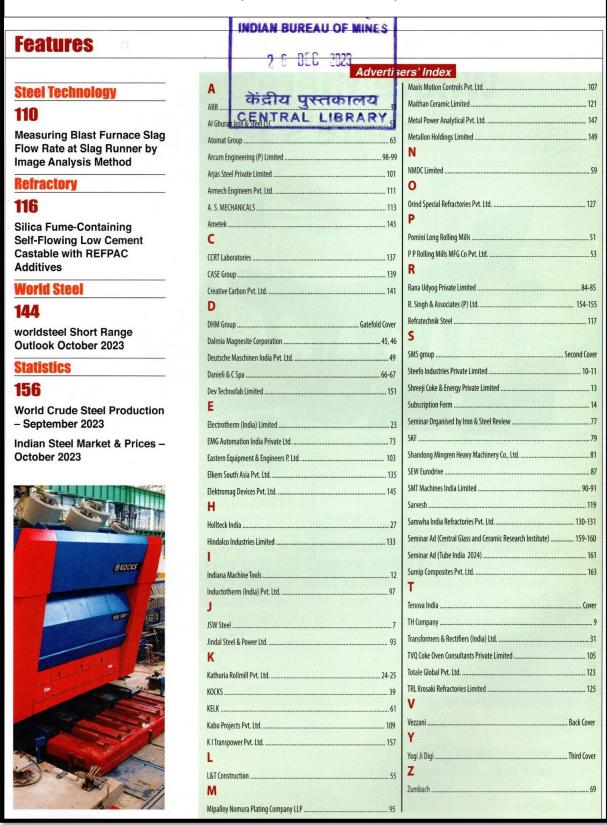
Steel Market & Performance

106

Performance of the Indian Steel Industry in April-October - Summary **Highlights**



Iron & Steel Review, Vol.67 No.06, November 2023



Journal of the Geological Society of India, Vol.99 No.11, November 2023

THE GEOLOGICAL SOCIETY OF INDIA

(Abstracted/Indexed in AGI's Bibliography and Index of Geology, Chemical Abstracts, Current Contents, GEOBASE, GEoRef, Mineralogical Abstracts, GeoArchive, Thomson ISI database (SCIE, CC/PC & ES))

	भारतीय खान ब्यूरी	
	INDIAN BUREAU OF MINES	
CONTENTS	-	
	2 6 DEC 2023	1
EDWEDDI I		
EDITORIAL	केंद्रीय पञ्च	
	CENTRAL	
	LIBRARY	1487
SEARCH ARTICLES		
mboidea Rafinesque, 1	(815) from the Dwarka Basin,	
nplications.		
		1491
st Dharwar Craton. Ir	ndia.	
		1508
ones Using Multiple In	stegrated Approaches Along Bafliaz –	
r.	ategrated Approaches Along Damaz	
/AR		1511
-Himalaya in the Hari	idwar-Kotdwar Region, India:	
gment Variability.	armi Itota war Itogram, Indian	
Malik		1521
sing Multi-criteria Dec	ision Analysis in Humid	
ang ivanit criteria 2 co.		
		1532
Recharge – A Remote S	Sensing and GIS-Based Study on	
	3 3	
ADISESHU		1539
sion-making Techniqu	es in Flood Susceptibility Manning.	
TUL BARMAN, RAMESH CH	HANDRA JOSHI and RAM SAKAL YADAVA	1549
		1563
	Diagonatic Evalution of Dans	
rmal Maturity on the I	Diagenetic Evolution of Fore	
rmal Maturity on the I j Basin, India.	Diagenetic Evolution of Fore	
j Basin, India.	Diagenetic Evolution of Fore	1577
	EDITORIAL SEARCH ARTICLES mboidea Rafinesque, Inplications. st Dharwar Craton, Inc. Depes Using Multiple Inc. Har	2 6 DEC 2023 EDITORIAL केंद्रीय पुरतकालय CENTRAL LIBRARY SEARCH ARTICLES mboidea Rafinesque, 1815) from the Dwarka Basin, nplications. st Dharwar Craton, India. opes Using Multiple Integrated Approaches Along Bafliaz – r. MAR. Himalaya in the Haridwar-Kotdwar Region, India:

Journal of the Geological Society of India, Vol.99 No.11, November 2023

Site, Rajasthan Prashasti Bhandari and Sangeeta Choudhary	
Subsurface Geophysics and Hydrogeology at the Gun	Vaik, Gulab Prasad and Prachi Gupta
FRADEEP K. INAIK, KAMALESH C. IVIONDAL, FRABIR K. IV	VAIK, GULAB I KASAD dild I KACHI GUFIA
Flood Vulnerability Assessment Across Alaknanda Riv	ver Basin using GIS-based Combined Analysis of
Geomorphometric Approach and MCDM-AHP.	
KULDEEP SINGH RAUTELA, DILIP KUMAR, B.G. BANDARU	J GOUTHAM RAVEEJ GANDHI, AJAY KUMAR and
AMII KUMAR DUBET	
	was the training
NEW	S AND NOTES
Proceedings of the Annual General Meeting of the Ge	
at the Wadia Institute of Himalayan Geology, Dehr	
K.V. Krishnamurthy	
Report on the Extraordinary General Body Meeting (EGM) of Fellows/Members of the Geological Society
of India held on 23rd September, 2023.	
P. Krishnamurthy and N. Rajendran	
Report on Workshop on "Geothermal Energy Resource	ces of India: Present Status and Way Forward" at
CSIR-National Geophysical Research Institute, Hy	
	SAROLKAR, AYAN DUTTA, SANDEEP KUMAR PRAJAPATI and
Amar Prakashrao Dudhate	
•	ect, Gondpipri Mafic-ultramafic Complex, Central India.
M. Lachhana Dora	
Landuse-landcover Mapping and Modelling using Pol	llen and Isotopic Data in Different Ecological Regions
of the Monsoon (LEM), International School and	
Anjali Trivedi, Trina Bose, Anupam Nag and Navya	Reghu
32nd Mineral Development Awareness Program-2023 h	by the Society of Geoscientists and Allied Technologists
(SGAT), Bhubaneswar, Odisha.	
TRILOCHAN MOHANTA, SUJIT MOHANTY and J.N. DAS.	भारतीय खान ब्यूरो
The second secon	INDIAN BUREAU OF MINES
No. 7	INDIAN BUREAU OF MINES
33.5	ם כ חבר מחמם
N. C.	2 6 DEC 2023
	2 6 DEC 2023
A REEL	
EEE1	१६ DEC २९२३ केंद्रीय पुस्तकालय CENTRAL LIBRARY

Cover

Geological map of Dwarka Basin, Gujarat, western India (modified after Jain, 2014) showing 18 fossil bearing localities. For details see pages 1491-1507

ADDRESS OF EDITOR

All papers intended for publication and also related correspondence should be addressed to:

G.M. Bhat, Editor-in-Chief, Department of Geology, University of Jammu, Jammu - 180 006, India

Email: bhatgm@jugaa.com; Editor_JGSI@geosocindia.org; Mobile: 91-9419200120;

Website: http://www.geosocindia.org.

1486

Journal of the Geological Society of India, Vol.99 No.12, December 2023

THE GEOLOGICAL SOCIETY OF INDIA

(Abstracted/Indexed in AGI's Bibliography and Index of Geology, Chemical Abstracts, Current Contents, GEOBASE, GEoRef, Mineralogical Abstracts, GeoArchive, Thomson ISI database (SCIE, CC/PC & ES))

Vol. 99 **DECEMBER 2023** CONTENTS EDITORIAL Coronene - A Potential Powerful Tool for Reconstructing Ancient Fire Records and Its Significance in a Geological Context. RYOSUKE SAITO 1639 RESEARCH ARTICLES Origin and Tectonic Implications of I-type Granites, North Delhi Fold Belt, NW, India: Insights from Whole Rock Geochemistry and Mineral Compositions. NAVEEN KUMAR KANYAN, NARESH KUMAR, SWATI RANA, NAVEEN KUMAR AND A. KRISHNAKANTA SINGH 1641 Semi-automated Rock Layer Recognition from Borehole Log Data Using Combined Wavelet and Fourier Transform: A Case Study in the KG basin, India. BAPPA MUKHERIFE and KALACHAND SAIN 1659 Evaluation of Spatio-temporal Variability of a Flood Using the Hydrological Process of Flood Frequency in Ghagra River Basin, India. RAHUL VERMA and SURESH CHAND RAI Numerical Analysis of a Tunnel Passing through Jointed Rockmass HARSHAL VERMA, ARUNAVA RAY, RAJESH RAI, BAPPADITYA MANNA and T. N. SINGH 1683 Landslide Occurrences under Diverse Landuse/cover in Lower Kosi Watershed, Central Himalaya. Statistical and Geochemical Evaluation of Fluoride-rich Groundwater from North Coastal Part of Odisha. Utsav Das, Soumya Ranjan Hota, Rosalin Das and Rabindra Nath Hota 1705 The Occurrence of Rare Liesegang Rings in the Neoproterozoic Upper Bhander Sandstone, Vindhyan Supergroup, Rajasthan M.A. Quasim, Sreepat Jain, Shaikh Asjad and Faiz Ahmad 1716 Decadal Variations in Area under Different Soil Erosion Classes using RUSLE and GIS: Case Studies of River Basins from Western and Eastern Arunachal Pradesh. M. Vese, P. Mishra, W. R. Singh, P. Lowang, S. Assumi, A. Bandyopadhyay and A. Bhadra 1725 Delineation of Saline/Fresh Water Interface and Mapping Ground-water Potential Zones using Spatial Resistivity Models in Bichpuri Block Agra, District UP, Indiaa. Anirudh Singh, Birendra Pratap and S.K. Singh

Journal of the Geological Society of India, Vol.99 No.12, December 2023

Ваохні Р	JU, CHONG PENG, RUIYING ZHANG, DEWEI KONG, CREMILDA SAMUEL JOFRISSE, LINFU XUE and
	of 226Ra, 232Th and 40K activity from the Soil Samples of Ganderbal and Budgam Districts and Kashmir, India.
	HIM, SAVIDH KHAN, ASHA RANI, KM ABIDA, ROHIT MEHRA and SANSAR CHAND
	NEWS AND NOTES
GSA Connec	cts 2023: Annual Convention of the Geological Society of America, Pittsburgh, USA.
K.V. Kris	SHNAMURTHY
	pa Jayananda, Recipient of JC Bose National Fellowship.
	UDEV
	avour in Antarctic Geoscience.
RASIK RA	VINDRA
Recent Trene Tridib Ku	ds and Techniques in the Study of Brittle Deformation: Implications in Upper Crustal Fluid Flow UMAR MONDAL
Samudra Ma	anthan 2023: National Oceanography Scholars' Meet.
	ATHAK and RAHUL DWIVEDI
Conventiona	l, Renewable Energy Sources and Climate Change Perspective for Energy Security in India.
POOJA TIV	vari, Deveshwar Prakash Mishra, Samaya S. Humane, Mohammad Firoze Quamar, 1 Thakur, Sumedh K. Humane, Ayushi Mishra and Mitra Rajak
	Organic Sulphur (SHOS) in Tertiary coals of North-East India. DRA NATH
	n the Five-day National Training Programme on "Earth Observation Data Analytics for
Disaster	Management Focusing on Flood and Drought".
SURAJIT G	hosh, Jayesh Mukherjee, Anuva Chowdhury, Kounik De Sarkar, Avinandan Taron, Biplab Biswas ih Ghosh
	भारतीय खान ब्यूरो
	INDIAN BUREAU OF MINES
	-50 0000
	2 C BEC 2923
	2 C DEC 2023
2001 2401	२ ३ ३६६ २९२३ केंद्रीय पुस्तकालय

Geological map showing geology and tectonics of Indian subcontinent (modified after Jain and Banerjeee, 2020). For details see pages 1641-1658.

ADDRESS OF EDITOR

All papers intended for publication and also related correspondence should be addressed to:

G.M. Bhat, Editor-in-Chief, Department of Geology, University of Jammu, Jammu - 180 006, India.

Email: bhatgm@jugaa.com; Editor_JGSI@geosocindia.org; Mobile: 91-9419200120;

Website: http://www.geosocindia.org.

1638

Minerals & Metals Review, Vol.49 No.10, October 2023

c ontents





05 Market Reports

18 Policy View

MMDR Amendment Bill 2023: Fostering private sector engagement for critical mineral exploration

Coal Min advocates swift clearances for underground mining

25 Mining Equipment

Prospects soar for mining equipment market as it eyes \$135 bn valuation by 2028

Indian mining equipment market looks positive, given the scope in underground, surface mining India's mining equipment market: A path to

prosperity & tech advancement

Li mining equipment market analysis by 2032

34 Mining

Best practices, new technologies in mining is key to meeting Sustainable Development Goals

36 In Conversation

ACE has consistently embraced innovation to achieve excellence

43 Steel

ICRA raises FY2024 steel demand growth forecast to 9-10%

44 Base Metals

Non-ferrous metal industry's profit margins to remain under pressure amid weak global environment

Fitch Ratings revises global metals and mining price assumptions

भारतीय <mark>खान</mark> NDIAN BUREAU OF MINE

2 6 DEC 2023

कंद्रीय पुस्<mark>तकालय</mark> CENTRAL LIBRARY

46 Opinion

Our top takeaways from the Coal Forum 2023

48 Digitisation

Digitalisation trends in the mining industry

50 Spotlight

Metso to significantly increase its manufacturing capacity in India

53 Company Profile

Goodluck India plans to increase its sway in defence and aerospace markets

54 EV Update

GreenCell Mobility & VECV join forces to accelerate sustainable EV journey

55 Sustainability

World heading for 2.5C global warming, warns report

58 Product Profile

Putzmeister expands its stationary concrete pump range - introduces BSA 1407 D Classic

59 Events

Coal Forum 2023 panel: Decarbonisation in real time in Australia

GIFA, METEC, THERMPROCESS & NEWCAST trade fairs return to Düsseldorf

Argentina extends invitation to Indian firms for lithium mining investment

Cummins India launches "REDEFINE 2023" to inspire next generation of business leaders

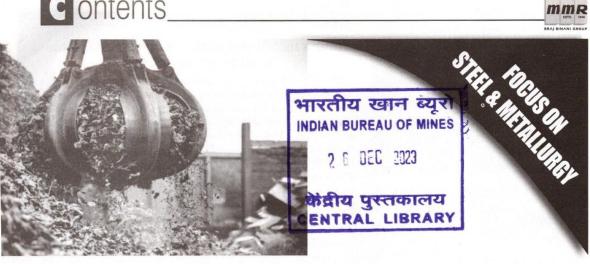
bb Statistics

Minerals & Metals Review - October 2023 4

Minerals & Metals Review, Vol.49 No.11, November 2023







Market Reports

Steel & Metallurgy

Green transformation: clear bonus for steel scrap

Technology for achieving high calcium recovery (>25%) in liquid steel

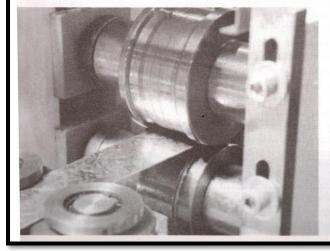
In Conversation

"ArcelorMittal Nippon Steel India Gains Competitive Edge through Strategic Integration of Beneficiation, Pipeline, and Pelletization Assets"

"BKT Tires: Leading the way in off-highway tire innovation"

Steel

Smart Steel: Steel with new sustainable DNA



41 Sustainability Corner

Decarbonising metals and mining: Three key strategies to win the emissions battle

Cutting down CO, emission in iron & steel sector, an important pathway toward decarbonization

Metal industry in the global scenario and environmental sustainability



Labour Focus

How the Green Transformation impacts the labor market in the metallurgical industry

Wire & Tubes

Wires & tubes backbone of Indian economy

59 Events

Successful Premiere of GIFA and METEC INDONESIA 2023

Statistics

Mining Engineers' Journal, Vol.25 No.04, November 2023

Engineers

INDIAN BUREAU OF MINES

2 C DEC 2023

केंद्रीय पुरत्तकालय CENTRAL LIBRARY



Official Publication of

Mining Engineers' Association of India

MONTHLY November - 2023 Vol. 25 No. 4



S N Mathu

Vice President- I D.B. Sundara Ramam

Vice President - II Dhananjaya G. Reddy

Vice President - III Laxman Singh Shekhawat

Secretary General M. Narsaiah

Jt.Secretary.cum.Treasurer B. Sahoo

Ex-officio Council Members K. Madhusudhana, Sanjay Kumar Pattnaik

Council Members (Elected)

Amish Kumar Makadiya; A.K. Garg; Dr. T.N. Venugopal; Cyriac Joseph;
Rachappa M Saradagi; A Avudaiyappan; Kumar Mohan Singh;
Ravi Chandran Raj; Mohan Nilaram Rahangdale; Santosh Kumar Adhikari;
Ankan Mitra; B.L. Kotriwala; P.C. Bakliwal; S.S. Rathore; S.K. Vashisth;
P.V. Krishnaiah Yadav; G.R. Magesh; M. Palanikumaresan;
Sabyasachi Mohanty; R.S. Raghuwanshi; Sunil Kumar Singh;
K. P. Palanikumarekan; R.S. Kraghamar, B. Surandar Mohan; K. Prabhakara Reddy; Dr. Kripamoy Sarkar; B. Surender Mohan; Mittapally Satish Kumar; K. Venkataramana; Dr. P.C. Purohit; Prem Raj Dave; Bipin Kumar Giri; Ajay Kumar Goyal

Representatives of Life Institutional Members

Mirza Mohammad Abdulla (MOIL); Vinay Kumar (NMDC) Venkateshwar Reddy (SCCL); Dr. H.Y. Desai (MSPL) L. Kulshreshtha (GMDC)

Prof. Sushil Bhandari; Deepak Vidyarthi; V. Laxminarayana; Gajula Lakshminarayana; K. Laxminarayana

Co-opted Members

Prof. B.B. Dhar; B.R.V. Susheel Kumar; L.S. Shekhawat; Ajay Kumar Jain; A.B. Panigrahi

Special invitees

A.R. Vijay Singh, Dr. N.K. Nanda, Dr. Abani Ranjan Samal

Permanent Invitees

All former Presidents, Hony. Secretaries/ Secretary Generals

Editor MEJ Dr P.V. Rao

Mining Engineers' Journal, Vol. 25, No. 4

this issue contains...

President's Message	5
Editor's Desk	7
News from the Mineral World	9
Meticulous mining in Manganese deposits of Keonjhar & Sundergarh District, Odisha - KL Janghel and Dr. MD Patel	17
R&D in Commercial column flotation modifications, and Regrind ball mill flow sheet design modifications. An innovative way to reduce Carbon footprint. - Sivarao Kshirasagara	23
MEAI News	29
Conferences, Seminars, Workshops etc.	38

Correspondence Address

MEAI National Headquarters

Contact: Secretary General,

Mining Engineers' Association of India

F-608 & 609, Raghavaratna Towers, 'A' Block, VI Floor, Chirag Ali Lane, Abids, Hyderabad - 500 001. Ph.: 040-66339625, 23200510

> E-mail: meai1957@gmail.com website: www.meai.org

The Views expressed by the authors in these pages are not necessarily those of Publisher / Editor / MEAI. Reproduction in whole or in part is strictly prohibited without written permission from the publisher.

November 2023

Mining Engineers' Journal, Vol.25 No.05, December 2023

Engineers' Journal

INDIAN BUREAU OF MINES

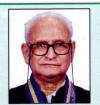
2 6 DEC 1323





Mining Engineers' Association of India

Vol. 25 No. 5 MONTHLY December - 2023



President S.N. Mathur

Vice President- I D.B. Sundara Ramam Vice President - II Vice President - III
Dhananjaya G. Reddy Laxman Singh Shekhawat

Secretary General M. Narsaiah Jt.Secretary.cum.Treasurer B. Sahoo

Ex-officio Council Members K. Madhusudhana, Sanjay Kumar Pattnaik

Council Members (Elected)

Amish Kumar Makadiya; A.K. Garg; Dr. T.N. Venugopal; Cyriac Joseph; Rachappa M Saradagi; A Avudaiyappan; Kumar Mohan Singh; Ravi Chandran Raj; Mohan Nilaram Rahangdale; Santosh Kumar Adhikari; Ankan Mitra; B.L. Kotriwala; P.C. Bakliwal; S.S. Rathore; S.K. Vashisth; P.V. Krishnaiah Yadav; G.R. Magesh; M. Palanikumaresan; Sabyasachi Mohanty; R.S. Raghuwanshi; Sunil Kumar Singh; K. Prabhakara Reddy; Dr. Kripamoy Sarkar; B. Surender Mohan; Mittapally Satish Kumar; K. Venkataramana; Dr. P.C. Purohit; Prem Raj Dave; Bipin Kumar Giri; Ajay Kumar Goyal

Representatives of Life Institutional Members

Mirza Mohammad Abdulla (MOIL); Vinay Kumar (MMDC); Venkateshwar Reddy (SCCL); Dr. H.Y. Desai (MSPL); L. Kulshreshtha (GMDC)

Nominated Members

Prof. Sushil Bhandari; Deepak Vidyarthi; V. Laxminarayana; Gajula Lakshminarayana; K. Laxminarayana

Co-opted Members

Prof. B.B. Dhar; B.R.V. Susheel Kumar; L.S. Shekhawat; Ajay Kumar Jain; A.B. Panigrahi

Special invitees

A.R. Vijay Singh, Dr. N.K. Nanda, Dr. Abani Ranjan Samal

Permanent Invitees

All former Presidents, Hony. Secretaries/ Secretary Generals

Editor MEJ Dr P.V. Rao

Mining Engineers' Journal, Vol. 25, No. 5

this issue contains...

President's Message	ţ
Editor's Desk	1
MEAI News	9
Indian Mining Day 2023 Celebrations	17
Conferences, Seminars, Workshops etc.	40

Correspondence Address

MEAI National Headquarters

Contact: Secretary General,
Mining Engineers' Association of India
F-608 & 609, Raghavaratna Towers, 'A' Block, VI Floor,
Chirag Ali Lane, Abids, Hyderabad - 500 001.
Ph.: 040-66339625, 23200510

E-mail: meai1957@gmail.com website: www.meai.org

The Views expressed by the authors in these pages are not necessarily those of Publisher / Editor / MEAI. Reproduction in whole or in part is strictly prohibited without written permission from the publisher.

December 2023