



तकनीकी पत्रिका विषय-सूची ***CURRENT CONTENT***

(Technical Journals)

(A Monthly Current Awareness Service from Technical Journals)

Vol. 08 No. 06, June, 2024

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 combined 6th issue of Volume-8 for this service named "तकनीकी पत्रिका विषय – सूची" (Current Content- A Monthly Current Awareness Service from Technical Journals) Vol. 08 No.06, June, 2024.

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

I N D E X

<u>S.No</u>	<u>Title</u>	<u>Page No</u>
1)	Down to Earth	3-4
2)	Iron & Steel Review	5-6
3)	Journal of the Geological Society of India	7-8
4)	Minerals & Metals Review	9-10
4)	Mining Engineers' Journal	11

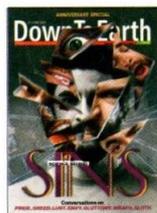
32nd ANNIVERSARY

DownToEarth

Founded in 1992 to arm you with knowledge critical to shaping a better world

FOUNDER EDITOR Anil Agarwal
EDITOR Sunita Narain
MANAGING EDITOR Richard Mahapatra
CHIEF COPY EDITOR Snigdha Das
ASSOCIATE EDITORS Aditya Misra, Rajit Sengupta
SENIOR CREATIVE DIRECTOR Ajit Bajaj
SUPPLEMENT EDITOR Souparno Banerjee
CHIEF CARTOONIST Sorit Gupta
REPORTING TEAM Shagun, Akshit Sangomla, Pulaha Roy, Rohini Krishnamurthy, Zumbish, Seema Prasad, Himanshu N
SUB EDITOR Dakshinai Palicha
WEB EDITORS Rajat Ghai, Preetha Banerjee, Nandita Banerji
DESIGN TEAM Chaitanya Chandan (Art Editor), Ritika Bohra (Assistant Art Editor), Tarun Sehgal (Senior Designer), Yogendra Anand (Illustrator), Vineel Tripathi (Graphic Designer), Shri Krishan
PHOTO EDITOR Vikas Choudhary
PRODUCTION Rakesh Shrivastava, Gundhar Das
TECH SUPPORT Rajendra Rawat, Jaidev Sharma
MULTIMEDIA Joel Michael, Sunny Gautam, Midhun Vijayan, Shreya KA, Prabhat Kumar, Dhruval Parekh
INFORMATION AND RESEARCH SUPPORT Kiran Pandey, Susan Chacko, Madhumita Paul, Sheeja Nair, Lalit Maurya, Dayanidhi Mishra
CONSULTING EDITORS Anumita Roychowdhury, Vibha Varshney

Vol 33, No 1; Total No of Pages: 68
 Editorial, subscriptions and advertisements:
 Society for Environmental Communications,
 41, Tughlakabad Institutional Area, New Delhi 110 062,
 Phone: 91-11-40616000, 29955124,
 29956110, 29956394, 29956399 | Fax: 91-11-29955879,
 Email: editor@downtoearth.org.in
 © 2024 Society for Environmental Communications.
 All rights reserved throughout the world. Reproduction
 in any manner is prohibited. Printed and published by
 Richard Mahapatra on behalf of Society for Environmental
 Communications. Printed at International Print-o-Pac
 Limited, B-204, 205, Okhla Industrial Area, Phase I,
 New Delhi-110020, India, and published at
 41, Tughlakabad Institutional Area, New Delhi 110 062.
To subscribe, sms 'dte Subscribe' to 56070
or visit www.downtoearth.org.in/subscribe
FOR ADVERTISEMENTS Jyoti Ghosh
 jghosh@cseindia.org
FOR SUBSCRIPTIONS
 K C R Raja, raja@cseindia.org



Cover design:
Ajit Bajaj
Cover illustration:
Yogendra Anand
 Down To Earth does not endorse the content of advertisements printed in the magazine. All disputes are subject to the exclusive jurisdiction of competent courts and forums in Delhi/ New Delhi only.

What are emotions? How does the brain control them? Did they play a role in human evolution or are they an after-effect? With the 'seven deadly sins' as a starting point, **ROHINI KRISHNAMURTHY** speaks to experts from across the world to explore the latest research on human emotions



CONVERSATIONS

JESSICA L TRACY | P8

A professor of psychology at the University of British Columbia, Canada, Tracy works on moral thinking and emotions. Her book, *Take Pride*, explores how pride has shaped our minds and culture



DANIEL SZNYCER | P10

An assistant professor at the department of psychology, Oklahoma State University, US, Sznycer studies cross-cultural evidence on shame, pride, compassion and envy, and their role in altruism, social exclusion and conflict



PRIDE

GREED

MARCEL ZEELENBERG | P14

A professor of economic psychology at Tilburg University, Netherlands, Zeelenberg studies the role of emotions and motivational factors in decision-making. His laboratory devised a scale to measure greed



RAHUL OKA | P18

An associate research professor at the University of Notre Dame, US, and an economic anthropologist, Oka's research interests include development of socio-economic systems, and evolution of inequality and conflict



KARLIJN HOYER | P22

A postdoctoral researcher at the University of Amsterdam, Netherlands, Hoyer has worked on greed, bringing out the complexities of the emotion



DownToEarth

Founded in 1992 to arm you with knowledge critical to shaping a better world

FOUNDER EDITOR Anil Agarwal

EDITOR Sunita Narain

MANAGING EDITOR Richard Mahapatra

CHIEF COPY EDITOR Snigdha Das

ASSOCIATE EDITORS Aditya Misra, Rajit Sengupta

SENIOR CREATIVE DIRECTOR Ajit Bajaj

SUPPLEMENT EDITOR Souparno Banerjee

CHIEF CARTOONIST Sorit Gupta

REPORTING TEAM Shagun, Akshit Sangomla, Pulaha Roy, Rohini Krishnamurthy, Zumbish, Seema Prasad, Himanshu N

SENIOR SUB EDITOR Dakshiani Palicha

WEB EDITORS Rajat Ghai, Preetha Banerjee, Nandita Banerji

DESIGN TEAM Chaitanya Chandan (Art Editor), Ritika Bohra (Assistant Art Editor), Tarun Sehgal (Senior Designer), Yogendra Anand (Illustrator), Vineef Tripathi (Graphic Designer), Shri Krishan

PHOTO EDITOR Vikas Choudhary

PRODUCTION Rakesh Shrivastava, Gundhar Das

TECH SUPPORT Rajendra Rawat, Jaidev Sharma

MULTIMEDIA Joel Michael, Sunny Gautam, Midhun Vijayan, Shreya KA, Prabhat Kumar, Dhruval Parekh

INFORMATION AND RESEARCH SUPPORT Kiran Pandey, Susan Chacko, Madhumita Paul, Sheeja Nair, Lalit Maurya, Dayanidhi Mishra

CONSULTING EDITORS Anumita Roychowdhury, Vibha Varshney

Vol 33, No 2; Total No of Pages: 60

Editorial, subscriptions and advertisements:
Society for Environmental Communications,
41, Tughlakabad Institutional Area, New Delhi 110 062.

Phone: 91-11-40616000, 29955124,
29956110, 29956394, 29956399 | Fax: 91-11-29955879.
Email: editor@downtoearth.org.in

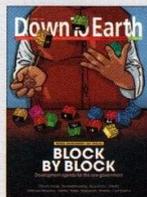
© 2024 Society for Environmental Communications. All rights reserved throughout the world. Reproduction in any manner is prohibited. Printed and published by Richard Mahapatra on behalf of Society for Environmental Communications. Printed at International Print-o-Pac Limited, B-204, 205, Okhla Industrial Area, Phase I,

New Delhi-110020, India, and published at
41, Tughlakabad Institutional Area, New Delhi 110 062.

To subscribe, sms 'dte Subscribe' to 56070
or visit www.downtoearth.org.in/subscribe

FOR ADVERTISEMENTS Jyoti Ghosh
jghosh@cseindia.org

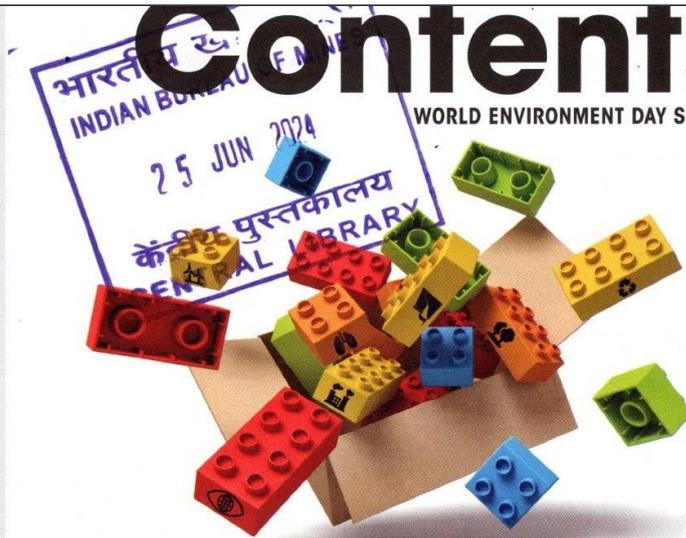
FOR SUBSCRIPTIONS
KC R Raja, raja@cseindia.org



◀ **Cover design:** Ajit Bajaj
Cover Illustration:
Yogendra Anand

Contents

WORLD ENVIRONMENT DAY SPECIAL



AGENDA FOR NEW GOVERNMENT

08

CLIMATE CHANGE

Align India's economic development with climate realities

12

RENEWABLE ENERGY

Assess barriers in energy transition, build demand-driven markets

18

AIR POLLUTION

Strengthen metrics, compliance of National Clean Air Programme

22

INDUSTRY

Address issues that hamper environmental performance

28

WATER AND SANITATION

Sustain success of flagship missions, prepare for a warming world

34

HABITAT

Improve thermal comfort, liveability in cities

40

WASTE

Disincentivise dumping, invest in behavioural change

44

BIODIVERSITY

Time to focus on conservation of biological resources

48

MOBILITY

Need a clean, affordable and efficient public transport

52

FOOD SYSTEMS

Curtail pesticide misuse, labelling lapses, antibiotic resistance

58

CIVIL LINES

Make agriculture profitable again to revive rural economy

Down To Earth does not endorse the content of advertisements printed in the magazine. All disputes are subject to the exclusive jurisdiction of competent courts and forums in Delhi/New Delhi only.

Features

Editor & Publisher:
Santosh Mahanti

Directors:
Sabita Mahanti
Abhishek Mahanti

Director & Content Strategist:
Kritika Mahanti

Editorial:
Megha Ghosh

Sales & Marketing:
Shyamalendu Banerjee
Angan Chatterjee
Sanjana Tiwari

Design & Layout:
Dipak Adhikari
Samaran 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:
YD Group



Scan QR Code for
Visiting Our Website

Articles/write-ups
may be forwarded to:
contact@isrinfomedia.in

Special Feature (Q&A)

16

“Today, YD Group is the leading Flat Steel equipment supplier in the industry”



Navneet Singh Gill
Managing Director
YOGI JI DIGI

Special Feature

21

Discreet Techniques of Cold Rolling Ultra-Thin Strip

Interview

42

“We want to continue expanding our regional presence in India”



Dawn Brooks
Managing Director
Hitachi High-Tech
Analytical Science

National Trends

44

TRL Krosaki Refractories Limited Names Prasanta Kumar Naik as the Managing Director

Global Trends

60

Angang Guangzhou Automotive Steel Orders a Hot Dip Galvanising Line from SMS group

Obituary

71

Danieli Group Chairman Gianpietro Benedetti Passes Away at 81

Focus

72

worldsteel Short Range Outlook April 2024

Refratechnik India - Customer Meet

90

“With our technologically sound products and unique way of offering customer services, we are confident of winning over our competitors”



Dr. Marco May,
Managing Director
Refratechnik Steel
GmbH

Company News

94

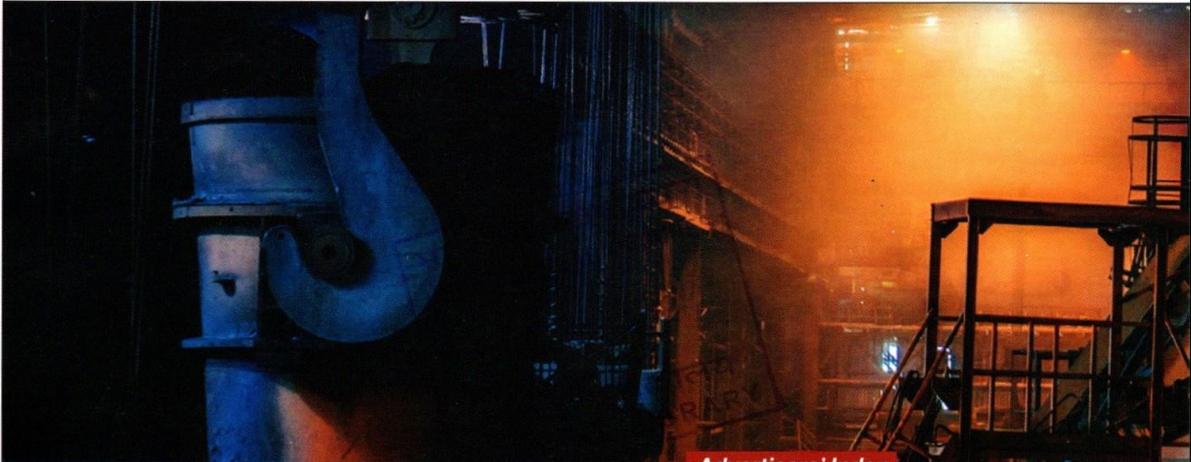
John Cockerill Metals Extends its Product Portfolio to Iron and Steel Making in Support of the Steel Value Chain's Decarbonization Efforts



Iron & Steel Review, Vol.67 No.12, May 2024

MAY 2024

Features



Advertisers' Index

Steel Market

98

Iron & Steel Performance for March 2024

Steel Market & Performance

106

Performance of the Indian Steel Industry in April 2024 – Summary Highlights

Steel Technology

109

Endless Hot Rolled Coil (eHRC) from Arvedi ESP – A New Standard in Rolled Materials

Refractory

144

A New Approach to Make No Cement Castable

Statistics

166

World Crude Steel Production – March 2024

Indian Steel Market & Prices – April 2024

A

ABB	41
Arjas Steel Private Limited	45
Atomat Group	61

C

Cyrus Vibration Machines India Private Limited	14
Cosmo Powertech Pvt. Ltd.	47
Creative Carbon Pvt. Ltd.	129

D

Dalmia Magnesite Corporation	33
Danieli & C Spa	64-65

E

Electrotherm (India) Limited	15
EMG Automation India Private Ltd.	37
Eastern Equipment & Engineers P. Ltd.	77
Elektromag Devices Pvt. Ltd.	83

H

Hollteck India	25
H&K Rolling Mill Engineers Pvt. Ltd.	165

I

Indiana Machine Tools	12
ifm electronic India Private Limited	20
Inductotherm (India) Pvt. Ltd.	59
ISR Seminar Ad	137

J

JSW Steel	7
Jindal Steel & Power Ltd.	53

K

KELK	Back Cover
Kathuria Rollmill Pvt. Ltd.	22-23
K I Transpower Pvt. Ltd.	75
Khemka Refractories Private Limited	107

M

Megatherm Induction Ltd.	Gatefold Cover
Mipalloy Nomura Plating Company LLP	99
Maxis Motion Controls Pvt. Ltd.	131

N

NMDC Limited	55
--------------------	----

O

Orind Special Refractories Pvt. Ltd.	153
---	-----

P

Primetals Technologies.....	29
Pyrotech Workspace Solutions	39
P P Rolling Mills MFG Co Pvt. Ltd.	48-49, 93, 133
Pomini Long Rolling Mills	121

R

Refratechnik	51
Rana Udyog Private Limited	80-81
R. Singh & Associates (P) Ltd.	127

S

SMS group	Second Cover
Steefo Industries Private Limited	10-11
Shreeji Coke & Energy Private Limited	13
SKF	35
Shyam Steel Industries Limited	57
SEW Eurodrive	69
SMT Machines India Limited	88-89
Sarvesh Refractories Pvt. Ltd.	101
Subscription Form	117
Seminar Ad (Tube India 2024)	122
Seminar Ad (MET & HTS 2024)	141
Sino-Global	147
Samwha India Refractories Pvt. Ltd.	160-161
Seminar Ad (MMMM 2024)	167

T

TH Company	9
Transformers & Rectifiers (India) Ltd.	19
TVQ Coke Oven Consultants Private Limited	85
TRL Krosaki Refractories Limited	105
Totale Global Pvt. Ltd.	149

V

Vezzani	67
---------------	----

Y

Yogi Ji Digi	Front Cover, Third Cover
--------------------	--------------------------

Journal of the Geological Society of India, Vol.100 No.06,
June 2024

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. 100

JUNE 2024

No. 6

CONTENTS

EDITORIAL

Water Stress in Bengaluru, Silicon City.

SUBHAJYOTI DAS

767

RESEARCH ARTICLES

Aftershocks of the 2 April 2024 Mw 7.4 Hualin, Taiwan Earthquake.

REKAPALLI RAJESH and HARSH K. GUPTA

773

Defining the Active Faults and the associated Geotechnical Properties using MASW Technique in Dehradun district and its Adjoining Regions, India.

P. SIVASANKAR, K. SATISH KUMAR, GURU DAYAL SINGH, K. SWAPNA SRI, PRABHA PANDEY, ANAND K. PANDEY and D. SRINAGESH

777

Linear Model for Pore Pressure Predication in Gas Hydrate-bearing Sand Formation of Krishna-Godavari Basin (India) – A Case Study.

PRADEEP KUMAR YADAV and UMA SHANKAR

787

High-resolution Oxygen and Carbon Isotopic Records of a Modern and a Fossil Coral from the Lakshadweep Archipelago.

SANTOSH K. BEJA, WASEEM RAZA, S. MASOOD AHMAD, SHAKEEL AHMED and BARNITA BANERJEE

800

Spatial and Temporal Analysis of Standardized Groundwater Index (SGI): A Case Study of Bihar, India.

DEEPAK KUMAR and SHOMYA KUMARI

807

Land Use and Land Cover Dynamics and Precipitation Trend of Lower Vellar basin, Tamil Nadu, India and its Impact on 2015 Flood.

SUBBULAKSHMI, M. and SACHIKANTA NANDA

818

Spatial Vulnerability Investigation by Morphotectonic Analysis of the Mandakini River Basin near Kedarnath, Uttarakhand, India using SRTM DEM in a GIS Platform and GPS Data.

SIBA SUNDAR SAHU and NILADRI BHATTACHARJEE

827

Estimation of Compression Index of Cohesive-Frictional Soil in Southwest Delhi District Using Statistical Correlations.

SHASHWATA CHATTERJEE, PARBIN SULTANA, JAYALEKSHMI, S. and ROHIT RALLI

841

DRASTIC-FS Model for Assessment of Groundwater Vulnerability in Alluvial Region between Mahi and Narmada Rivers, India.

MUKESH A. MODI and N.J. SHRIMALI

852

765

Journal of the Geological Society of India, Vol.100 No.06, June 2024

Delineation of Shale Gas Play from Non-Pay Zones Using Elastic and Mechanical Properties of Organic-rich Shales, Southern Punjab Platform, Pakistan. PERVEIZ KHALID, IRFAN RAZA and MUHAMMAD IRFAN EHSAN	863
Spatio-temporal Change in the Glaciers of Astore Basin (North-Western Himalaya), between 2016 and 2021 using Sentinel-2 Satellite Data. RAHMAN GUL, SAAD KHAN, SIDDIQUE ULLAH BAIG and SIDRA BIBI	873
Sedimentology and Sequence Stratigraphy of the Late Permian Wargal Limestone: Implication for Reservoir Potential in the Salt Range, Pakistan. MUHAMMAD RIAZ, SHAHID GHAZI and MUHAMMAD WAQAS	887

NEWS AND NOTES

Preliminary Meeting for Evolving a Comprehensive Database on Deccan Volcanic Province. RAJESH MUKHERJEE	901
Report on the Training Course on Geospatial Technology for Natural Resources Management Sponsored by the Directorate of Environment and Climate Change (DoECC), Government of Kerala GIRISH GOPINATH ACHU A.L. and RANI VARGHESE	903
Deformation Mechanisms, Processes and Fabric Analysis in Earth Materials from the Global to the Nano scale – Methods and Applications– A Report of the IASGT Workshop-2024 held at IIT Kharagpur, India. VISHNU, C.S.	905
Geochronology and Isotope Geochemistry of Uranium Deposits of India. U.K. PANDEY.	907

OBITUARY

H.M. Ramachandra (1954-2024) - A Gem of a Geologist and a Perfect Gentleman. N.R. RAMESH	909
John Alfred Talent (1932 - 2024) OM BHARGAVA	911

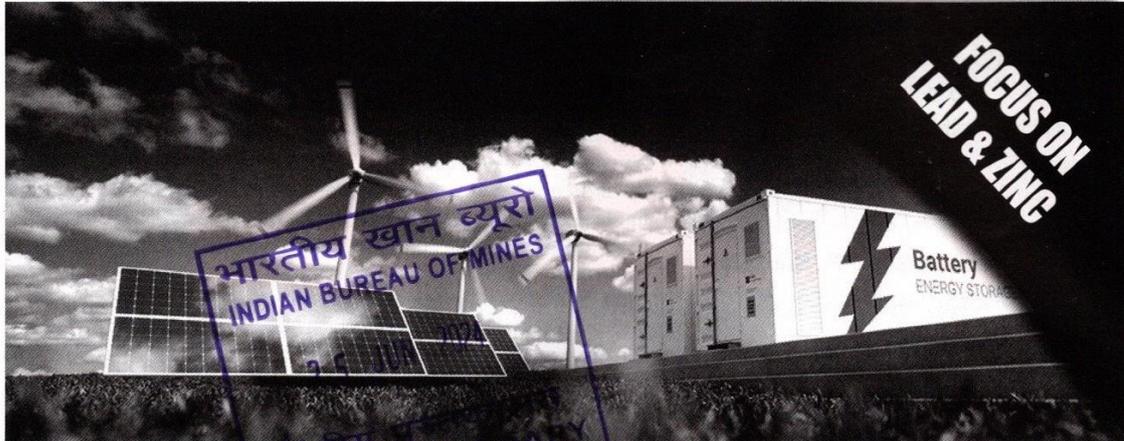
Cover

Geological map of the study region shows MASW sites (red colour lines) at identified fault/thrust locations such as Markanda Thrust, Rajban Fault, Bata Fault, Santaurgarh Thrust, Bhauwala Thrust, Majhaun Fault. Sections A and B (blue colour lines) are the geological cross sections at Markanda Thrust (Fig. 2) and Rajban Fault (Fig. 3). The figure also indicates the ages of formation at MASW locations (Thakur and Pandey, 2004 a, b; Thakur et al., 2007; Singh, 2013).. For details see pages 777-786

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: <https://www.geosocindia.com>

Contents



- 05 Market Reports**
- 17 Policy View**
EU's CBAM sparks global interest in carbon border levies
- 18 Lead & Zinc**
Infra, housing, construction & EV to propel the growth of lead & zinc industry
Rise of electro-galvanizing steel fuels electric parts market growth
Lead acid battery market set to surge: Projected to reach \$75 bn by 2031
New global battery energy storage systems capacity doubles in 2023
- 34 Steel**
Mixed impact on steel producers from energy transition
- 36 Aluminium**
EU carbon levy on primary aluminium will be ineffective and drive up prices
- 39 Lithium**
Surging rollout of EVs to accelerate demand for lithium
- 41 Graphite**
Graphite, the mainstay of end-user inds like electronics, metallurgy & EVs
- 45 Techno Trends**
Which technologies will enable a cleaner steel industry?
JSW Steel selects SMS group for blast furnace technology at Dolvi works
- 48 Mining Equipment**
Domestic mining & construction equipm inds volumes likely to dip 12-15% YoY in FY2025
- 51 Automotive Focus**
FY25 Auto Outlook: Growth rate to moderate in personal mobility segments; CVs to be affected by elections
- 52 Company Profile**
SECO/WARWICK increases manufacturing capacity in India
- 53 Product Profile**
ABB India launches energy efficient motor ranges
- 54 Events**
SMS group participation at the 2024 SEASIS Travelling Technical Seminar
VAL organises 'AutoEdge' conclave, shares AI range for auto industry
Record trade fairs face economic challenges: Key technologies wire, cable, tube and pipe remain system-criticaly
- 60 Statistics**

Contents

mmr
ESTD. 1948
BRAJ SINANI GROUP

09 Market Reports

23 Policy View

'India's steel demand to surge by 10 per cent or higher'

24 Stainless Steel

Global stainless steel market set for 6.7% CAGR growth through 2030

Stainless Steel: A strategic ally in India's fight against corrosion

30 Steel

Indian steel market braces for surge in hot-rolled coil imports

Green Steel: Challenging the status quo

35 Specialty Steel

Stainless & speciality steel, the twin segments to drive India's economic growth

39 Raw Material

Overview of market share of Ni, Mo in stainless steel

Molybdenum oxide prices surge on tight supply

42 Applications

Global sanitary SS valves mkt set for 5.5% CAGR growth thru 2030

45 Aluminium

Primary Al cos to post operating margin growth of over 25% this fiscal

High costs for India's aluminium sector carbon neutrality

47 Base Metals

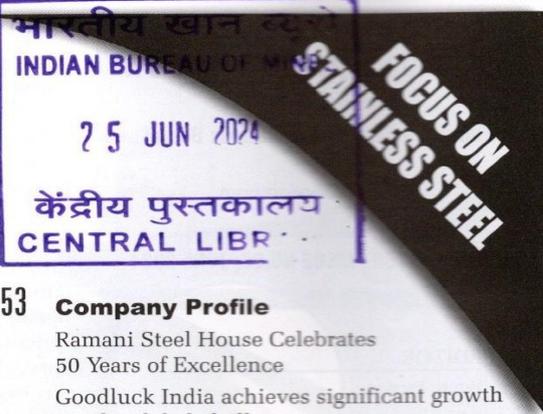
Sharp uptick in non-ferrous metals prices, benign input costs to boost operating margin

48 Minerals Update

India needs to raise local output of critical minerals for energy security

51 Spotlight

Jindal Stainless well geared to stay in pole position



53 Company Profile

Ramani Steel House Celebrates 50 Years of Excellence

Goodluck India achieves significant growth amidst global challenges

Vibhor Steel: Investing in future to strengthen market leadership

59 Comex Focus

LME open to considering new ferrochrome, SS scrap futures contracts: BIR

60 Sustainability Corner

World heading for a 3-degree C warming trajectory, as political headwinds slow the energy transition

Aluminium Stewardship Initiative certifies VAL for sustainable sourcing of raw materials

65 Rare Earths

More critical minerals investment required to meet energy transition demand

69 Heat Treatment

EcoTitanium selects SECO/WARWICK solutions to expand production capacity

70 Product Profile

Outokumpu, Tetra Pak in JV unveil low-emission stainless steel

71 Events

Explore the future of metalcasting at METAL CHINA and Diecasting China 2024

72 Statistics

Mining Engineers' Journal

Official Publication of
Mining Engineers' Association of India



Vol. 25

No. 11

MONTHLY

June - 2024



President
S.N. Mathur

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. 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)

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

this issue contains...

President's Message	5
Editor's Desk	7
News from the Mineral World	9
A Unified Framework: Harmonizing National Mineral (Minor) Taxation for Equitable Development - Dr. C.H. Rao	15
NACRI News	23
MEAI News	33
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.