



तकनीकी पत्रिका विषय-सूची

CURRENT CONTENT

(Technical Journals)

(A Monthly Current Awareness Service from Technical Journals)

Vol. 09 No. 06, June, 2025

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 6th issue of Volume-9 for this service named "तकनीकी पत्रिका विषय - सूची" (**Current Content- A Monthly Current Awareness Service from Technical Journals**) Vol. 09 No.06, June, 2025.

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)	Current Science	3-8
2)	Down to Earth	9-13
3)	Iron & Steel Review	14-16
4)	Journal of the Geological Society of India	17-21
4)	Minerals & Metals Review	22-23

Current Science, Vol. 128 No. 9, May 2025

CURRENT SCIENCE

Volume 128 Number 9

12 JUN 2025

10 May 2025



Innovative Approaches to Science and Math in India

Exploring the Indian Beamline at KEK: A research journey

Cyclonic storm ASNA unique in the Arabian Sea

Current Science Association  Indian Academy of Sciences

CURRENT SCIENCE

Volume 128 Number 9

10 May 2025

858 **Highlights of the Issue**

GUEST EDITORIAL

- 859 **Causes and concerns arising from recent earthquakes**
Kalachand Sain

NEWS

- 861 **Indian Academy of Sciences, Bengaluru – 90th Annual Meeting**
Arjun R. Krishnan

- 865 **Recombinant bovine enzyme destroys biofilm shield of emerging ‘superbug’ pathogen**
Yousuf Khan

- 866 **Corrigendum: Reproductive interventions for revitalising the sustainable production of Malabar labeo, *Labeo Dussumieri*, an indigenous candidate for aquaculture diversification**
B. L. Chandana, C. P. Abhilash, K. R. Saikrishnan, Charan Ravi, Uttam Kumar Sarkar and V. S. Basheer
[*Curr. Sci.*, 2025, 128(6), 599–607]

SCIENTIFIC CORRESPONDENCE



- 867 **Mixed farming of catfish and carps: a model for higher productivity and income**
Md. Aklakur, Udipta Roy, Md. Imran Shah, Kamlesh Kumar, Md Amjad and Vikash Kumar

- 872 **Occurrence of Leucism in *Xylophis perroteti* (Serpentes: Pareidae: Xylophiinae) in Nilgiris, Western Ghats, India**
Palanisamy Santhoshkumar, Ravikumar Cleamant Kumar Kiran and Samson Arockianathan



GENERAL ARTICLES

- 874 **Rethinking science and mathematics pedagogy in Indian higher education**
Aahana Ganguly, Divya Uma, Proteep Mallik, Sravanti Uppaluri and Tulsi Srinivasan

- 880 **Indian beamline at Photon Factory, high-energy accelerator research organization (KEK), Tsukuba, Japan**
Poonam Yadav and Sebastian C. Peter

REVIEW ARTICLE

- 885 **Plant growth promoting bacteria as source of secondary metabolites: an emergent principle in plant science**
Amandeep Singh Sidhu, Charanjit Singh Aulakh, Sukhveer Singh Bhullar, Harmanjot Kaur, Gulab Pandove, Amanpreet Singh and Anuj Choudhary

RESEARCH ARTICLES

- 899 **Automatic extraction of economically important forest tree species using deep learning and image processing techniques**
Anju Bajpai, A. O. Varghese, T. P. Girish Kumar and G. Sreenivasan

भारतीय खान ब्यू
INDIAN BUREAU OF MINES
12 JUN 2025
केन्द्रीय पुस्तकालय
CENTRAL LIBRARY

908 **Structural, thermal, dielectric and modulus studies on magnesium-doped tamarind seed polysaccharide based biopolymer electrolytes**
P. V. N. M. Kaushik, N. Krishna Jyothi, M. Gnana Kiran, Mahantappa S. Jogad and K. Vijaya Kumar

915 **Long-term rainfall trend analysis for six homogeneous monsoon regions of India**
Meenakshi Ramola, Prabhaskar K. Mishra, Purna C. Nayak and Aradhana Thakur

RESEARCH COMMUNICATIONS

927 **Gold, silver and platinum mineralisation in radioactive quartz-pebble conglomerate of Phuljhari Formation of Dhanjori basin along Chatanipani-Bhadalodih-Jajagora tract, East Singhbhum district, Jharkhand, India**
Ashim Jana, Parvej Alam, V. R. Akhila, Debashis Bhattacharya and Kalyan Chakrabarti

935 **Energy intake and expenditure as determinants of foraging decision in alfalfa pollinating carpenter bee *Chalicodoma cephalotes* Smith**
D. P. Abrol

940 **Observational aspects of cyclonic storm 'ASNA' – a rare tropical cyclone over the Arabian Sea during peak southwest monsoon months**
Santosh Singh, Satya Prakash and M. Mohapatra



946 **Grey pineapple mealybug, *Dysmicoccus neobrevipes* Beardsley (Pseudococcidae: Hemiptera): an emerging pest of tuberoses in India**
D. M. Firake, Sunil Joshi, P. Naveen Kumar, T. N. Saha, V. S. Raju Dantuluri and K. V. Prasad



◀ COVER. Research question/proposal generated through plot observation. Blue-banded bee aggregate observed near Azim Premji University (old campus), Bengaluru. Lynx spider (highlighted in red oval) preying on the bee. Photo credit: Prerana Waran. See page 874.

Indexed in CURRENT CONTENTS/GEOTitles/CHEMICAL ABSTRACTS/IndMED/SCOPUS/WEB OF SCIENCE/JSTOR

Current Science, Vol. 128 No. 10, May 2025

CURRENT SCIENCE

Volume 128 Number 10

25 May 2025



Nala lividipes: a key player in **Fungivory Ecology**

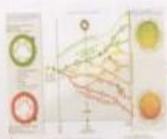
Building a sustainable future: water security in India

Features of the Eastern Dharwar Craton

Current Science Association Indian Academy of Sciences

CURRENT SCIENCE

भारतीय खान ब्यूरो
INDIAN BUREAU OF MINES
12 JUN 2025
केंद्रीय पुस्तकालय
CENTRAL LIBRARY



962 Highlights of the Issue

EDITORIAL

963 Chemistry, a big data science
N. Sathyamurthy, V. Ramamurthy

NEWS

965 mRNA: a revolutionary path in medicine
V. Shree Yazhini

COMMENTARY

966 High-value farming for periurban areas: sweetcorn a viable option
Preeti Sharma, Kiran, Narender Singh, Kuldeep, Ramesh Kumar and M. C. Kamboj

GENERAL ARTICLE

969 Climate resilient development for sustainable water security for India
Sharad K. Jain, Manabendra Saharia, S. Murty Bhallamudi and Ligy Philip

RESEARCH ARTICLES

987 Soil moisture estimation from Landsat-8 imagery using triangle method in Imphal-Irri river catchment, Manipur, India
Ngangom Robertson and Oinam Bakimchandra

999 Antioxidant activities and biochemical analysis of *Capsicum annum* L. varieties at different ripening stages
Pooja Oli, Purnima Rawat, Shailaja Punetha and Shivani Shukla

1006 A report of *Sulcolithos variabilis* trace-fossils in India
V. S. Parihar, Abhimanyu Singh, V. K. Meghwal and Anshul Harsh

1012 Assessing the impact of the pile-driven signal on the selected marine species from Indian waters
N. X. Elizabeth Shani, Nimmi R. Nair and R. Sajeew

1019 Preserving breeding habitats in socio-ecological systems: insights from the stenotopic toad species *Duttaphrynus hololius*
Saneesh Cherapurath Soman, Anil Sarsavan and S. R. Ganesh



1026 The magma-mixed granitoid system, Eastern Dharwar Craton, India: evidences from the mafic enclaves and syn-plutonic dykes from Madugulapalli
J. Nagamma, Ch. Ashok and J. Ratnakar

RESEARCH COMMUNICATION

1039 Utility of synthetic datasets to refine the particular matter source profiles for chemical mass balance analysis
V. A. Rejivas, A. Praveen and T. Ajitha



1042 Morphological deformities in Bengal whipray, *Brevitrygon imbricata* (Bloch and Schneider, 1801) and Arabian carpetshark, *Chiloscyllium arabicum* (Gubanov, 1980) from Ratnagiri, west coast of India
Mahesh Shetkar, Swapnaja Mohite, Krishna Patil and Harshvardhan Shetye

1046 **Record of *Ramivena zhengi* (Rider, 1998) (Hemiptera: Heteroptera: Pentatomidae) from India**
Amartya Pal and Swetapadma Dash

1050 **Fungivory by *Nala lividipes*: understanding its ecological impact on powdery mildew**
Niraj Guleria, Mudagaddde G. Deeksha, R. S. Chandel, Lham Dorjee and Nitika Saini



◀ COVER. *Nala lividipes* feeding on *Golovinomyces cichoracearum* infected Dahlia. See page 1050.

Indexed in CURRENT CONTENTS/GEOTitles/CHEMICAL ABSTRACTS/IndMED/SCOPUS/
WEB OF SCIENCE/JSTOR

DOWN TO EARTH, Vol. 34 No. 01, May 2025



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 Sorli Gupta
REPORTING TEAM Shagun, Akshil Sangomla, Pulaha Roy, Rohini Krishnamurthy, Himanshu N
SENIOR SUB EDITOR Dakshini Palicha
WEB EDITORS Rajat Ghai, Preetha Banerjee, Nandita Banerji, Pratyaksh Srivastava
DESIGN TEAM Chaitanya Chandan (Art Editor), Ritika Bohra (Assistant Art Editor), Tarun Sehgal (Senior Designer), Yogendra Anand (Illustrator), Vineet Tripathi (Graphic Designer), Shri Krishan
PHOTO EDITOR Vikas Choudhary
PRODUCTION Rakesh Srivastava, Gundhar Das
TECH SUPPORT Rajendra Rowat, Jaidev Sharma
MULTIMEDIA Joel Michael, Sunny Gautam, Midhun Vijayan, Shreya KA, Prabhat Kumar, Dhruvat Parekh, Surangya Kaur, Danishmond Khan
INFORMATION AND RESEARCH SUPPORT Kiran Pandey, Susan Chacko, Madhumita Paul, Lalit Maurya, Dayanidhi Mishra
CONSULTING EDITORS Anumita Roychowdhury, Vibha Vorshney

Vol 34, No 1: 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, 29956124,
 29956110, 29956394, 29956399 | Fax: 91-11-29955879,
 Email: editor@downtoearth.org.in
 © 2025 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.



भारत सरकार द्वारा
 भारतीय खनन विभाग
 INDIAN BUREAU OF MINES

23 JUN 2025

केंद्रीय पुस्तकालय
 CENTRAL LIBRARY
 33RD ANNIVERSARY

Sunita Narain on
 Down To Earth and its
 responsibility towards
 the planet



06

10

13

18

22

24



06

10

13

18

22

24

28

32

36

40

44

48

52

56

60

AS IF A WHOLE CONTINENT OF HUMAN HISTORY IS GETTING SUBMERGED

How will future languages sound, or look? A take by Ganesh Narayan Devy, a scholar and linguist, and author of the book *India: a Linguistic Civilization*



THE PENS HAVE NOT TIRED

Ranendra, author of the Hindi novel *Global Gaon ka Devta*, reflects on how literature continues to stand by nature



RESURRECTION OF A METAPHOR

Poet, essayist and literary critic Ashok Vajpeyi, on the anger and worries of today's poets and writers towards environmental crises



OF POETRY OF EARTH

Chitti Annapurna, professor at University of Madras, Chennai, on the contribution of Telugu poets in environmental writings

LANGUAGE OF HUNGER, ECO-COLONISATION
Poet Kedar Mishra on how devastation of nature and plight of humans have shaped Odia literature

LITERATURE, A TOOL TO FIGHT CLIMATE EMERGENCY
Kenneth Toah Nsah is an expert in comparative literature and environmental humanities. Nsah narrates the role of social sciences and humanities in addressing climate change

CONSERVATION AS A LITERARY LEITMOTIF
Writer, journalist and scholar Arup Kumar Dutta on realistic adventure novels and how they can shape children's perceptions about environmental and conservation issues

POETRY AND POLITICAL ECOLOGY IN PALESTINE
Book editor Chhavi Mathur on the attempt by Palestinian poets and writers to reassert their relationship with the war-ravaged ecology and landscape

NATURAL EPICS
A Annamalai, director, National Gandhi Museum in Delhi, on language's umbilical cord relationship with nature

FARM FOLKLORE
Babulal Dahiya, a litterateur and expert in folk traditions, on oral storytelling that documents farm practices

A LOT DIES WITH LANGUAGE
What happens to the environment when a language dies? Anvita Abbi, scholar of minority languages, offers an answer

ODES TO MIGRATION
By poets Shahbaz Rizvi, Poonam Arora, Kedar Mishra and Nilim Kumar

MUNSHI IN POLICY
Literature is more relevant now than ever, as the world gets isolated because of machinated realities, writes Swasti Pachauri, a public policy expert

FROZEN IN TIME
Rameswar Kumar Singh, author of the novel *32,000 Saal Pehle*, highlights the urgent need for contemporary literature to break the silence on environmental collapse

REBIRTH OF COEXISTENCE
Educator, filmmaker and writer Neera Jalchhatri on the portrayal of nature in cinematic screen

DOWN TO EARTH, Vol. 34 No. 02, June 2025



1-15 JUNE, 2025

Down To Earth

FORTNIGHTLY ON POLITICS, ECONOMY, ENVIRONMENT AND HEALTH

Subscriber copy, not for resale

₹89.00

WORLD ENVIRONMENT DAY SPECIAL
INDIAN BUREAU OF MINES

23 JUN 2025

केंद्रीय पुस्तकालय
CENTRAL LIBRARY

PLAN BEE

As the population of natural pollinators dwindles, farmers pick up the brush to hand-pollinate crops or turn to beekeepers for assisted pollination



SEED BANKS
Native crop varieties need support to thrive

P38

LIFE EXPECTANCY
Five decades of steady rise interrupted

P44

Down To Earth

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

23 JUN 2025
केन्द्रीय पुस्तकालय
CENTRAL LIBRARY

Contents

WORLD ENVIRONMENT DAY SPECIAL

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 Gupto
REPORTING TEAM Shagun, Akshil Sangomla, Pulaha Roy, Rohini Krishnamurthy, Himanshu Nitnaware
SENIOR SUB EDITOR Dakshiani Palicha
WEB EDITORS Rajat Ghai, Preetha Banerjee, Nandita Banerji, Pratyaksh Srivastava
DESIGN TEAM Chaitanya Chandan (Art Editor), Ritika Bohra (Assistant Art Editor), Tarun Sehgal (Senior Designer), Yogendra Anand (Illustrator), Vineet Irupathi (Graphic Designer), Shri Krishan
PHOTO EDITOR Vikas Choudhary
PRODUCTION Rakesh Shrivastava, Gundhar Das
TECH SUPPORT Rajendra Rawat, Jaidev Sharma
MULTIMEDIA Joel Michael, Sunny Gautam, Shreya K.A, Dhruval Parekh, Surangya Kaur, Danishmand Khan
INFORMATION AND RESEARCH SUPPORT Kiran Pandey, Susan Chacko, Madhumita Paul, Lalit Mourya, Dayanidhi Mishra
CONSULTING EDITORS Anumita Roychowdhury, Vibha Varshney



COVER STORY

Vol 34, 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
 © 2025 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 Vibha Press Pvt. Ltd. C-66/3, Okhla Industrial Area, Phase-II, New Delhi - 110 020, India, and published at 41, Tughlakabad Institutional Area, New Delhi 110 062.
 To subscribe, sms 'die Subscribe' to 56070 or visit www.downtoearth.org.in/subscribe
FOR ADVERTISEMENTS Jyoti Ghosh jghosh@cseindia.org
FOR SUBSCRIPTIONS KCR Raja, raja@cseindia.org



Cover design: Ajit Bajaj
 Cover photo: Vikas Choudhary

- 20 Emergence of artificial pollination measures across India triggers new ecological concern
- 08 Digest
- Madhya Pradesh women strive to reduce menstrual waste
- 12 Stockholm Convention
- New exemptions for use of four banned persistent organic pollutants raise doubts on future of treaty
- 16 Human-animal conflict
- Uttarakhand villages oppose plan to open new ecotourism zone near the Jim Corbett Tiger Reserve
- 38 Analysis
- Strengthen technical, policy support for seed banks to boost food security
- 44 Factsheet
- India's average lifespan drops by 0.2 years for children born in 2017-21



- 46 Patently absurd
- India's first gene-edited rice varieties may entail huge costs
- 50 Opinion
- Metric to rank development of countries within ecological limits
- 54 Food
- Leaves of Chinese knotweed are a great souring agent
- 58 Civil Lines
- COVID-19 knocked India's rising life expectancy streak

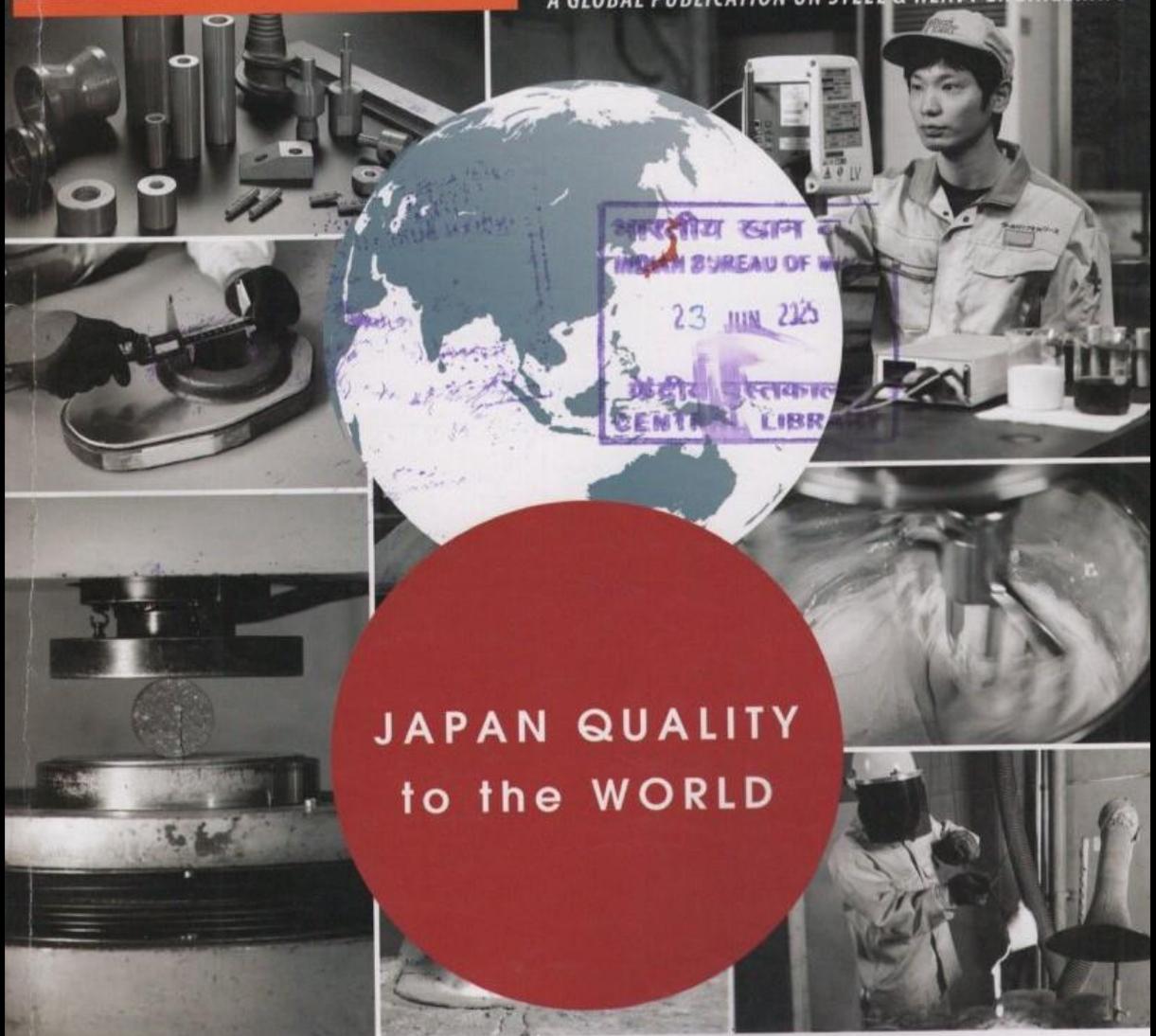
Down To Earth does not endorse the content of advertisements printed in the magazine. All disputes are subject to the exclusive jurisdiction of competent courts and forums in Delhi/New Delhi only.

IRON & STEEL REVIEW, Vol. 68 No. 12, May 2025

ISSN 0578-7661 • Vol. 68 No. 12 • May 2025 • ₹ 1000

IRON & STEEL REVIEW

A GLOBAL PUBLICATION ON STEEL & HEAVY ENGINEERING



No Refractories, No Life
150th Anniversary



SHINAGAWA



A PUBLICATION OF ISR INFOMEDIA PRIVATE LIMITED
MAHANTI MEDIA GROUP



May 2025

23 JUN 2025

Features

Editor & Publisher:
Santosh Mahanti

Director & Associate Editor:
Abhishek Mahanti

Directors:
Sabita Mahanti

Director & Content Strategist:
Kritika Mahanti

Editorial:
Megha Ghosh

Sales & Marketing:
Shyamalendu Banerjee
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

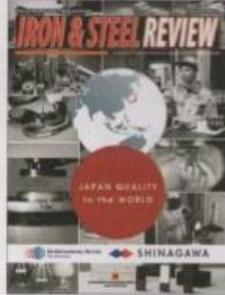
- Domestic**
Print Copy
₹ 12,000 (Yearly)
₹ 1,000 (Single Copy)
Digital Copy
₹ 12,000 (Yearly)
- Overseas**
Print Copy
\$ 1,600 (Yearly)
€ 1,250 (Yearly)
Digital Copy
\$ 1,600 (Yearly)
€ 1,250 (Yearly)
- Shipping Charge ₹ 1200 (Yearly)
 - 5% GST on Print Advertisement as Applicable
 - 18% GST on Digital Advertisement & Subscription 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.

केंद्रीय पुस्तकालय
CENTRAL LIBRARY



Cover: Shinagawa Refractories Co., Ltd.



Scan QR Code for Visiting Our Website

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

To Subscribe Scan QR Code

EHIM LPI

Special Feature

21
Iron Ore Beneficiation and Pelletisation

Interview

36
"IFGL market dominance is built on three core principles: Technological Innovation, Strategic Expansion, and Talent Development"



Arasu Shanmugam
Director & CEO-India
IFGL

"We are fully committed to supporting current and upcoming projects from the very beginning and steering them in the right direction"



Dr. Thorsten Mehlhorn
President & CSO
HerkulesGroup

National Trends

46
SMS group to Supply the Paul Wurth 6.25-m Stamp Charging Oven to IISCO Steel Plant

Global Trends

62
Primetals Technologies Wins an Order for Thick-Slab Continuous Caster

Focus

84
Odisha's Ambitious Steel Push: Targeting 130 Million Tonnes by 2030

Company News

94
SMS group Continues Positive Development and Improves Operating Results

Steel Market

106
Indian Steel Sector : An Overview

Steel Market & Performance

112
Performance of the Indian Steel Industry in April 2025

Steel Technology

116
Minimization of Plate Warpage in Online Roller Quenching through Process Optimization at SPP-RSP

Refractory

136
Energy Efficient & Environment Friendly Refractory Solutions for A Coal Based DRI



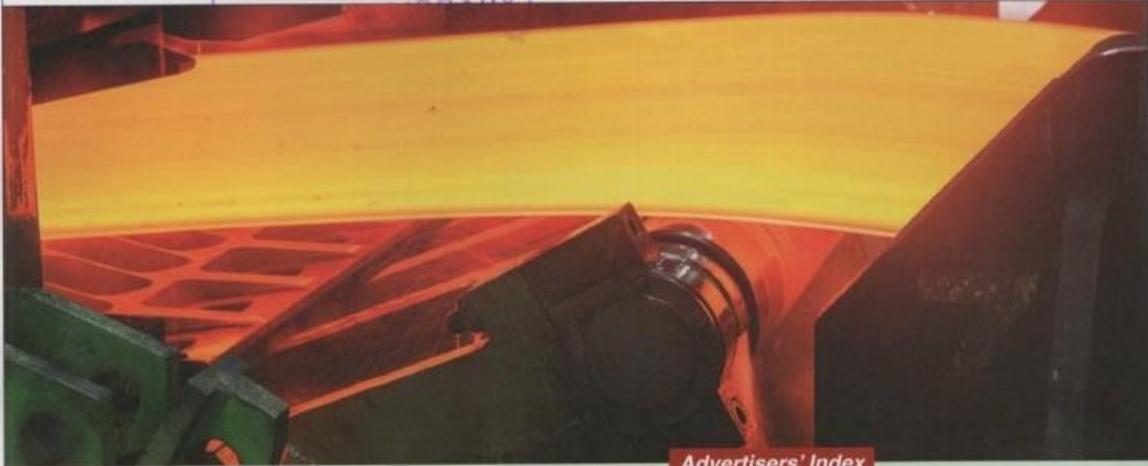
Contd...

May 2025

23 JUN 2025

Features

केंद्रीय पुस्तकालय



Advertisers' Index

Statistics

152

World Crude Steel Production – March 2025

Indian Steel Market & Prices – April 2025



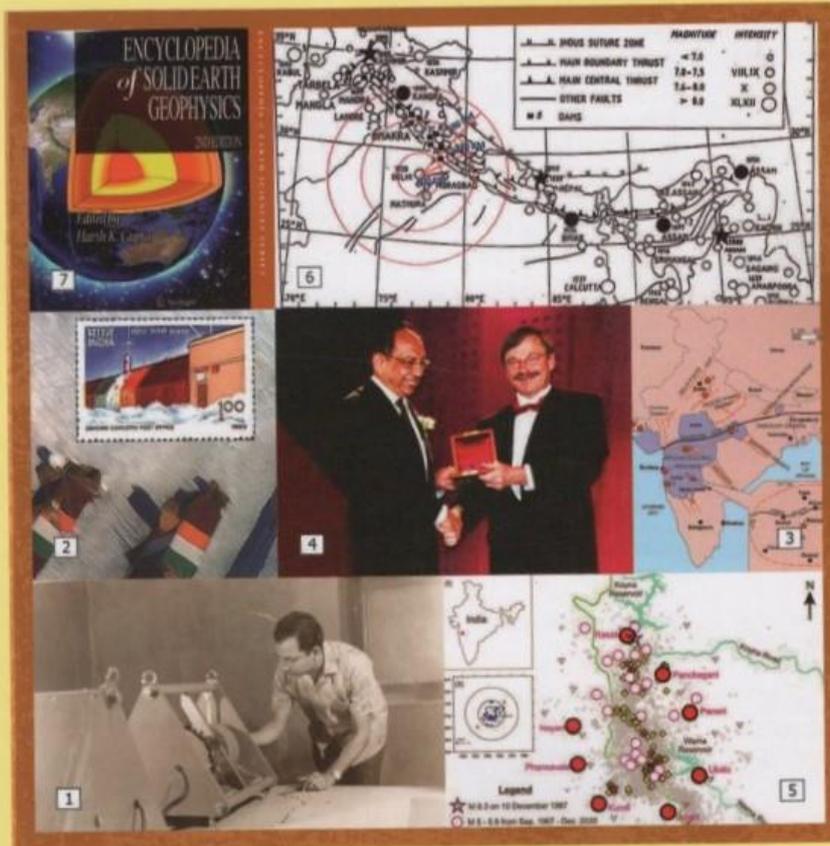
A	Atomat Group	61	N	NMDC Limited	45
	Arjas Steel Private Limited	125	O	Orind Special Refractories Pvt. Ltd.	147
	Arcum Engineering (P) Limited	128-129	P	P.P. Rolling Mills MFG Co Pvt. Ltd.	48-49, 115, 159
B	Bectochem Lodge	55		POMINI Long Rolling Mills	69
C	Colorshine	51	R	REVPOWER Private Limited	32-33
	CTC Impex (India) Pvt. Ltd.	85		Rana Udyog Private Limited	72-73
	Creative Carbon Pvt. Ltd.	119		Ringspann	99
	Concast India	123		R. Singh & Associates (P) Ltd.	113
	CASE Group	133		Refratechnik	153
D	Danieli Corus India Pvt. Ltd.	53	S	Shinagawa Refractories Co., Ltd.	Cover
	Danieli & C Spa	64-65		SMS group	9
	Dalmia Magnesite Corporation	83		Shreeji Coke & Energy Private Limited ..	13
E	Electrotherm (India) Limited	17, 163		Steefo Industries Private Limited	14-15
	EMG Automation India Private Ltd.	57		Seminar (ICR 2025)	28
	Eastern Equipment & Engineers P. Ltd.	91		Shyam Steel Industries Limited	59
	Elektromag Devices Pvt. Ltd.	107		SEW Eurodrive	75
H	Henan Iron and Steel Yixing Metallurgical Energy Engineering Co., Ltd. 18-19			Sino-Global	80, 81
	Hindalco	35		Seminar (IME 2025)	96
	H&K Rolling Mill Engineers Pvt. Ltd.	155		Sarvesh Refractories Pvt. Ltd.	139
I	IFGL	Second Cover, Inner Gatefold Cover		SKF	141
	ISR Seminar 2025	12		Sammha India Refractories Pvt. Ltd.	144-145
	ifm electronic India Private Limited	16		Seminar (ISME 2025)	161
	ISR Subscription AD	20		Seminar (GSSE 2025)	162
J	JSW Steel	7	T	Trasteel International SA	6
	Jindal Steel & Power	77		TH Company	11
K	Kathuria Rollmill Pvt. Ltd.	22, 23, 25, 27		Transformers & Rectifiers (India) Ltd.	29
	K I Transpower Pvt. Ltd.	109		TVQ Coke Oven Consultants (P) Ltd.	89
L	L&T	93		Timken	105
M	Mipalloy Nomura Plating Company LLP	Back Cover		Totale Global Pvt. Ltd.	149
	Maagath Precision Equipment Limited	111	V	Vezzani	67
	Maxis Motion Controls Pvt. Ltd.	157		VELCO	151
				Vishva Vishal Refractory Limited	160
			Y	Yogi Ji Digi	Third Cover

Journal of The Geological Society of India

Vol.101

JUNE 2025

No. 6



23 JUN 2025
केंद्रीय पुस्तकालय
CENTRAL LIBRARY

**JOURNAL
of
THE GEOLOGICAL SOCIETY OF INDIA**

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

Vol. 101

JUNE 2025

No. 6

SPECIAL ISSUE

Recent Advances in Geosciences

Guest Editor

AJAY MANGLIK

CONTENTS

Recent Advances in Geosciences – Preface. AJAY MANGLIK	725
Prof. Harsh K. Gupta - A Profile. AJAY MANGLIK	726
Recent Advance in Geosciences: An Introduction. AJAY MANGLIK and G.M. BHAT	728

RESEARCH ARTICLES

Harsh Gupta and International Science: A Not Unreliable Memoir TOM BEER	731
Imaging Earth's Deep Mantle Structure at the Global Scale: Progress and Goals for the Future BARBARA ROMANOWICZ	736
Insights into Dynamics of Earthquake Preparation Process in Water Reservoir-Triggered Seismic Zones BEATA ORLECKA-SIKORA, HELENA CIECHOWSKA and ADERSON FARIAS DO NASCIMENTO	742
New Insights into Recurrent Reservoir Triggered Seismicity in Koyna Region, India from Scientific Deep Drilling Studies – A Review SUKANTA ROY, DEEPIYOTI GOSWAMI, VYASULU V. AKKIRAJU, ANUP K. SUTAR, SUNIL ROHILLA, C.S. VISHNU and HIMANSHU CHAUBE	748
Travel-Time Corrections for Seismic Event Locations JOHANNES SCHWEITZER	754

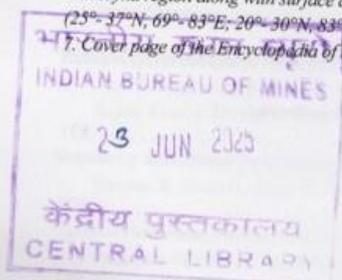
Magnitude-Independent Early Estimate of Earthquake Fatalities for Emergency Response: A Discussion YAN LIU, ZITAO WANG, and ZHONGLIANG WU	759
Bayesian Assessment of the Maximum Possible Earthquake Magnitude m_{max} ANDRZEJ KUKO	764
Seismic Tomography as a Versatile Tool for Multi-Scale Sub-Surface Imaging: Some Examples from Active Plate Margins and Stable Continental Region O.P. MISHRA	770
Recent Large Earthquakes in the Eastern Himalaya and its Foredeep Region: Seismotectonic Appraisal J.R. KAYAL and DEVAJIT HAZARIKA	776
Lessons on Seismotectonics and Damage from the Mw 7.8 Gorkha, Nepal Earthquake of 2015 B.K. RASTOGI	782
Seismology and Earthquake Preparedness in Gujarat: Advancements after the 2001 Bhuj Earthquake PALLABEE CHOUDHURY, SUMER CHOPRA and G. SRIJAYANTHI	787
Evidence of Deep Crustal Fluids Facilitating Intraplate Earthquake Generation Beneath the Seismically Active Kachchh Rift Zone in Gujarat, India PRANTIK MANDAL	793
Bole Beds and Shallow Earthquake Swarms in Deccan Traps, India R K CHADHA and KUSUMITA ARORA	798
Is the 1697 Sadiya Earthquake Large or Great?: A Critical Appraisal through on-Fault Paleoseismology ARJUN PANDEY and R. JAYANGONDAPERUMAL	804
Coseismic Electromagnetic Signals as Pseudo-Seismograms for Mapping of Upper Crustal Seismic Velocity Structure: An Example from the Ganga Basin Using Magnetotelluric Time Series of the 3 November 2023 Western Nepal Earthquake AJAY MANGLIK and SANDEEP GUPTA	809
Patterns of Seismo-Electromagnetic Signatures of Moderate Earthquakes in Diverse Tectonic Settings KUSUMITA ARORA and RAHUL PRAJAPATI	815
Crustal Thickness Variation across the Jammu and Kashmir Region from Teleseismic Receiver Function Analysis G. M. BHAT, SHIV JYOTI PANDEY, SHIVETA PURI, NEHA RAINA and SOWRAV SAIKIA	821
Supra-subduction Zone Arc Magmatism along the Indus Suture Zone (ISZ), Western Ladakh: Implications from Clinopyroxene Chemistry of the Thasgam Ophiolitic Slice IRFAN MAQBOOL BHAT, HIREDYA CHAUHAN and TALAT AHMAD	827
Tectonic Deformation in the NW Himalaya from Continuous GPS Measurements ADITYA MOHANTY, RAJEEV KUMAR YADAV, SHUBHAM K RAJEWAR, JOSHI K CATHERINE, BIKRAM SINGH BALLI, SAROJ KUMAR MONDAL, YUDHBIR SINGH, DWIJENDRA NATH PANDEY and VINEET KUMAR GAHALAUT	832
Seismicity and Strain Rate Variation in Northeast India BRIJESH K. BANSAL, ANUP K. SUTAR and MITHILA VERMA	838
Surface-consistent Seismic Hazard and Holistic Microzonation vis-à-vis Socio-economic Risk and Damage Potential Studies of Northeast India and Bhutan SANKAR KUMAR NATH, JYOTHULA MADAN and SHASHI PRAKASH SHARMA	844
Seismic Response of the Hi-Net Sites in Japan to Incident Teleseismic P-Waves from the 2008 Wenchuan Earthquake SIMANCHAL PADHY	850

How to Win at Seismic Roulette VLADIMIR G. KOSSOBOKOV	23 JUN 2025 केंद्रीय पुस्तकालय CENTRAL LIBRARY	855
Earthquake Scenarios and Mega-mock Drills in the Himalaya KANCHAN A. SABNIS		861
Tsunami Modeling for a Possible Tsunamigenic Earthquake from the 1762 Arakan Source Region and its Effect Along the South andaman Coast ARUNA KUMARI KONDARATHI, VIKAS GHADAMODE, ANAND K PANDEY and KIRTI SRIVASTAVA		866
Estimation of Near-Surface Seismic Characterisation from the Supertech Twin Towers Demolition at Noida City, National Capital Region of Delhi, India PRAKASH KUMAR, BISWAJIT MANDAL, BIJAYANANDA DALAI, KOLLI LAXMINARAYANA, P. KARUPPANNAN, N. PREM KUMAR, SATENDRA SINGH and GINKALA TEJASWI		872
A Multi-Year Signal of Earth's Interior Dynamics MIOARA MANDEA		878
Evidence for Rapid Low Latitude Waves at the Surface of the Core from Flow Models Derived from Geomagnetic Observatory and Satellite Observations KATHY WHALER		884
Models of Present and Past Geomagnetic Core Field Evolution MONIKA KORTE, SANJA PANOVSKA, MAXIMILIAN A. SCHANNER, AHMED N. MAHGOUB and MARTIN ROTHER		890
Electromagnetic Pulsations GURBAX S. LAKHINA, BRUCE T. TSURUTANI and RAJKUMAR HAJRA		896
Geomagnetic Observations in India NANDINI NAGARAJAN, N. PHANI CHANDRASEKHAR and L. MANJULA		902
Long-term Variation of the Heliospheric Magnetic Field Strength Indicated by Geomagnetic Field Variations Recorded at Alibag Observatory ARCHANA BHATTACHARYYA and CHHAVI JAIN		908
Rajahmundry Basalts, East Coast of India: Intra-canyon Flows or In-situ Eruptions? K.V. SUBBARAO, J.N. WALSH, SHEN-SU SUN, A.M. DAYAL and K. GOPALAN		913
Palaeoproterozoic Lamproite Pulses from the Eastern Dharwar Craton, Southern India: Some Geodynamic Implications DEBOJIT TALUKDAR, N.V. CHALAPATHI RAO, J. AMAL DEV, J.K. TOMSON, ALOK KUMAR and ASHUTOSH PANDEY		919
Singhbhum-An Unusually Warm and Decratonised Global Craton OM PRAKASH PANDEY and SUJEET KUMAR DWIVEDI		925
An Overview of Magnetotelluric Studies in the Seismogenic Zones of the Indian Subcontinent PRASANTA K. PATRO and S. DHAMODHARAN		931
Present-Day Sea Level Rise and Causes: The Role of Space Observations ANNY CAZENAVE		937
Sustainable Coastal Zone Management in India SHAILESH NAYAK		942
Developments in the Concept of Continental Shelf under UNCLOS S. RAJAN		947

Coccolithophores From the Indian Sector of the Southern Ocean: A Synthesis of Ecology, Diversity, and Biogeochemical Role SHRAMIK M. PATIL and RAHUL MOHAN	951
Climate–Tectonic Response Between Intermontane Kangra Basin and Pull–apart Chamba Basin Across the Dhauladhar Range in Northwest Himalaya V.C. THAKUR and M. JOSHI	957
Speleothems as Key Proxy for Understanding Indian Monsoon Variability in the Core Monsoon Zone of India SONU JAGLAN, PRIYANTAN GUPTA, ARUN KAUSHIK, ANIL K. GUPTA and SOM DUTT	962
Palaeoclimate Dynamics in Kashmir Valley: Loess Palaeosols and shifts in Mineral Magnetism during MIS 3 ASIF ALI, HEMA ACHYUTHAN, S. J. SANGODE, M. JAISWAL and RAYEES AHMAD SHAH	968
Impact of Climate Change on Water Resources in India V.M. TIWARI and N. SRINIVASA RAO	974
Groundwater Recharge Modeling to Develop Predictive Groundwater Flow Models S. N. RAI and AJAY MANGLIK	978
Scaling Laws and Fractal Geometry: Insights into Geophysical Data Interpretations MAHAK SINGH CHAUHAN, ABHEY RAM BANSAL and V.P. DIMRI	983
Regional Gravity Field Computation Using Finite Element Method and Imaging of Complex Geological Structures K. MALLICK and A. VASANTHI	990
Recent Geothermal Investigations in the Ladakh Himalaya, India: Implications for Future Geothermal Energy Exploration AYAN DUTTA, LABANI RAY, NISHU CHOPRA, SANDEEP KUMAR PRAJAPATI, ESWARA RAO SIDAGAM, NAGARAJU PODUGU, AMAR PRAKASHRAO DUDHATE, SASI KUMAR UDDANDAM and ADITYA RAJ.	995

Cover

A collage of photos/figures showing some of the significant contributions/recognition related to Prof. Harsh Gupta. 1. Benioff short-period and Press-Ewing long-period sensors at the seismological observatory of CSIR-NGRI, Hyderabad. 2. The first Indian Scientific Research Station, Dakshin Gangotri, Antarctica, and the postal stamp. 3. Latur earthquake of 30 September 1993 (star) along with other significant seismicity (circles) in the stable continental region of India. 4. Prof. Gupta receiving the 2008 AGU Waldo E. Smith Medal of the American Geophysical Union (AGU) from Prof. Timothy Grove, the then President of AGU. 5. Seismicity in the Koyana region along with surface and borehole seismic stations. 6. Recent damaging earthquakes in the Himalaya and its vicinity (25°–37°N, 69°–83°E; 20°–30°N, 83°–100°E). Circles around Delhi indicate epicentral distances of 100, 300 and 500 km from Delhi. 7. Cover page of the Encyclopedia of Solid Earth Geophysics, 2nd Edition [Gupta, H.K. (Ed.), 2021].



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.org>

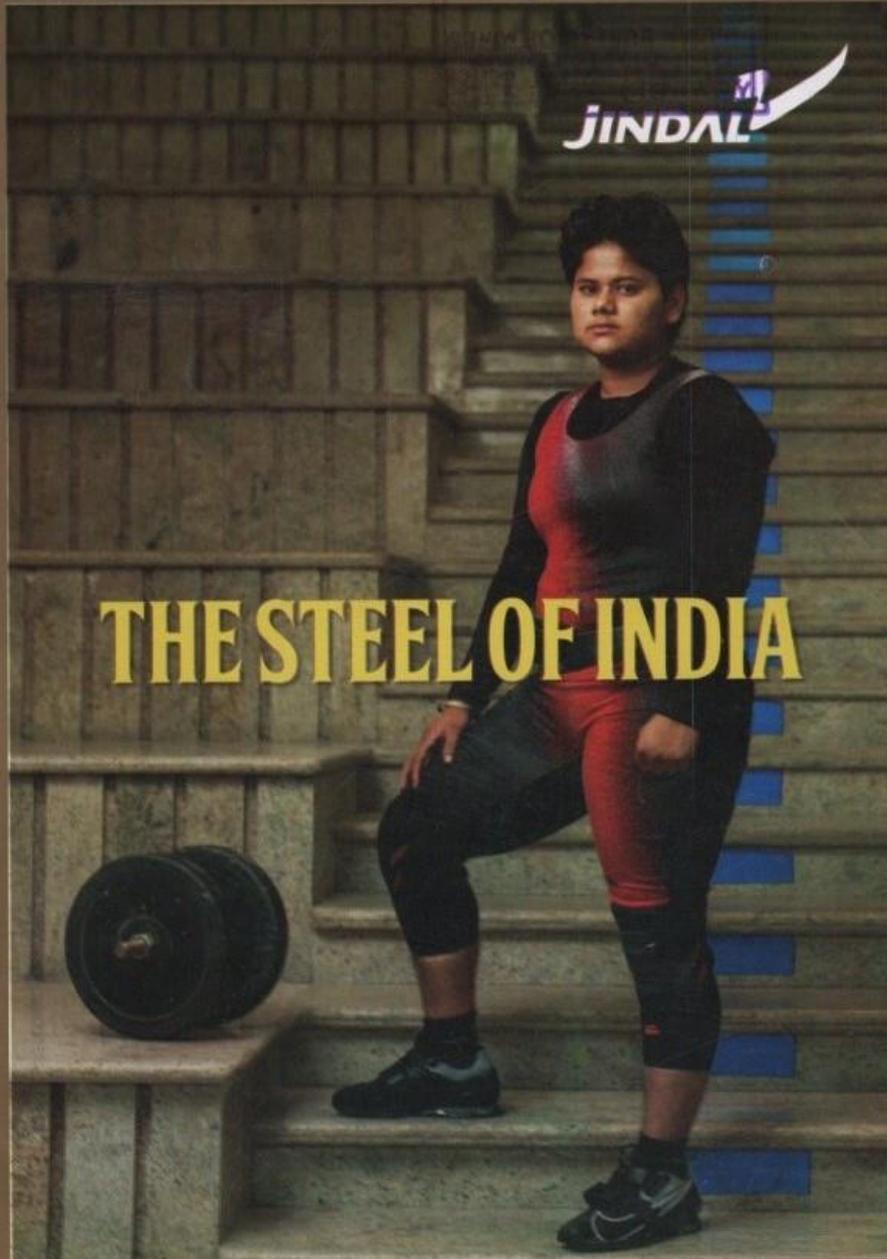
Minerals & Metals Review, Vol. 51 No. 06, June 2025



BRAJ BINANI GROUP

Minerals & Metals Review

VOLUME NO.51 ISSUE NO.06, JUNE 2025
Price Rs. 400



Contents



भारतीय खान ब्यू
INDIAN BUREAU OF MINES
30 JUN 2025
केंद्रीय पुस्तकालय
CENTRAL LIBRARY

**FOCUS ON
STAINLESS STEEL**

09 Market Reports

23 Policy View

India's stainless steel sector calls for National Policy support at GSSE 2025

Laws for the People, Not Against Them: Why Simplicity in Legislation Matters

Safeguarding India's Stainless Steel Utensils Industry: A Case for Balanced Implementation of QCO

SSUM Agitated Over BIS 'Marking Fee', Urges Industry-Friendly Policies

34 In Conversation

Stainless Steel is the Metal of Progress—And India is Shaping It Boldly

36 Stainless Steel

India's steel revolution: The unstoppable rise of stainless

India's stainless steel output rises 13% amid global market turmoil

Stainless steel a vital cog in India's manufacturing industry

Stainless steel industry urges govt action to shield domestic producers from import surge

46 Raw Material

Nickel: looking for a route back to safety

Stainless steel nickel molybdenum alloys market driving industrialization

52 Applications

Stainless steel pipes & tubes market to hit \$112 bn by 2034 driven by infrastructure

Global ultra-thin stainless steel sheets market projected to reach USD 15.8 bn by 2034

57 Recycling

Stainless steel recycling: Powering India's sustainable future

58 Ferro Alloys

A Key Growth Driver: India's Ferro-Alloy Industry Scaling New Heights Amidst Challenges

63 Perspective

Impact of Bhushan Steel - JSW Supreme Court verdict

65 Company Profile

Jindal Stainless, a robust steel major synonymous with innovation, quality

69 Product Profile

Outokumpu pioneers SS metal powder in additive mfg for aerospace & aviation inds applications

70 Spotlight

Safeguarding the future: TAKRAF Group's integrated approach to Dry Stack Tailings

72 Statistics

