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Kazi Nazrul University, Asansol, students on industrial visit to CSIR-NML, Jamshedpur

CSIR-NML

20th April, 2022

Students of Kazi Nazrul University, Asansol, visited the CSIR-National Metallurgical Laboratory (CSIR-NML) in Jamshedpur as part of the Centre's CSIR Integrated Skill Initiative. The visiting team comprised 18 students from the Metallurgical Engineering department of Kazi Nazrul University and two professors.



The two-day programme was aimed at making students aware of the state-of-the-art facilities and infrastructure that CSIR-NML offers and also about the various categories of skill training conducted by CSIR-NML.

The visit is expected to improve the students' industry-oriented views and encourage them to take up research as a career choice so that they can contribute to the nation through metallurgical innovations.

Students were given an overview of various kinds of collaborative research being carried out in the main research divisions of CSIR-NML, including Metal Extraction and Recycling (MER) Division, Materials Engineering (MTE) Division, Advanced Materials and Processes (AMP) Division, Analytical and Applied Chemistry (AAC) Division and Minerals Processing (MNP) Division.

CSIR-NML has been implementing CSIR Integrated Skill Initiative since 2017. The initiative attempts to utilise CSIR knowledgebase and infrastructure for organising training programmes in various categories (industrial, professional and societal) for contributing

towards the national skill mission and also to promote entrepreneurship through skilling and training. A film highlighting CSIR-NML's glorious journey since its inception in 1950 was screened at the inaugural session of the program,,e.

The welcome address was delivered by S. Sivaprasad, chief scientist and head HRG, CSIR-NML, Who welcomed the students and talked about the organisational structure of CSIR-NML. He highlighted the primary research divisions and the supporting divisions and gave an idea of various research activities carried out in the fields of Corrosion Science, Materials Characterization, Advanced Materials and Non-destructive Testing and Evaluation. He advised the students to utilise this opportunity and participate in active interaction with scientists of the research organisation.

Mita Tarafder, chief scientist and head, Knowledge Resource and Information Technology (KRIT) Division, CSIR-NML encouraged the students to develop an innovative mindset and come up with great research ideas that can address the current national issues such as waste management and unemployment.

Ujjain: Various aspects of Indian National Calendar to be discussed at national seminar

CSIR-NPL

20th April, 2022

Ujjain (Madhya Pradesh): A two-day seminar and exhibition on the “National Calendar of India” will be held simultaneously at Ujjain and Dongla (Mahidpur) on April 22-23 April. According to the organisers, the ‘Indian National Calendar’ is a scientific expression of India’s identity and was Constitutionally adopted by the Parliament in 1957. This was a clear sign of the restoration of our identity soon after we gained independence. However, sadly, it did not catch any attention in the minds of the people.



To promote and popularise the calendar, the organisers have also carried out six curtain-raisers preceding the main event. The curtain raisers were held at CSIR-NPL, New Delhi on March 22; Indian Institute of Astrophysics, Bengaluru on March 29; SN Bose National Centre for Basic Sciences, Kolkata on April 5; at IIT, Guwahati on April 6; at Mumbai University, Mumbai on April 11 and at the Central University of Jammu on April 12.

It was pointed out by the organising committee that the indigenous knowledge of Indian thought was scientifically and culturally suppressed during centuries of colonial rule in the name of modern thought. After independence, India started defining many national identities like national bird, national flag, national flower, etc.

On the same lines, the nation came up with a national calendar, which is called ‘National Calendar of India’. The calendar was prepared by the Calendar Reform Committee which included Dr Meghnad Saha (chairman), Prof NC Lahiri (secretary), Prof AC Banerjee, Dr KL

Daftari, JS Karandikar, Prof RV Vaidya and Pandit Gorakh Prasad. The calendar, which stands on the firm foundation of astronomy, was passed in 1957 through an Act of Parliament and came into force from March 22, 1957 and was implemented on Chaitra 01, 1879. Presently we are in the year 1944. Being the most scientific and accurate calendar in the world, India's national calendar is a recognition of our self-respect and self-confidence.

This programme is being organised in collaboration with many scientific, educational and social organisations like Vigyan Bharati, the Ministry of Culture, Department of Science and Technology, Ministry of Earth Sciences, Council of Scientific and Industrial Research, Madhya Pradesh Council of Science and Technology, IUCAA Pune, IIA Bangalore, IIT Indore, Vikram University Ujjain, Maharishi Panini Sanskrit Vishwavidyalaya Ujjain and Rashtriya Dindarsika Prachar Manch Aurangabad under 'Azadi Ka Amrit Mahotsav'.

This information was given during a press conference here on Tuesday on behalf of the organising committee.

Director General of Madhya Pradesh Council of Science and Technology Prof Anil Kothari, Prof Akhilesh Kumar Pandey (vice-chancellor, Vikram University), Dr Dilip Soni (registrar, Maharishi Sanskrit and Vedic University), Prof Pramod Kumar Verma (president, Vigyan Bharti, Malwa province), Dr Arvind C Ranade (scientist F, DST Vigyan Prasar) and Prajatantra Gangele (organising secretary, Vigyan Bharti, Malwa province) addressed the press conference.

CSIR-NEERI

20th April, 2022

Dr Ambedkar introduced multi-pronged approach to water management: Expert

LOKMAT NEWS NETWORK
NAGPUR, APRIL 19

Former vice-chancellor of Dr B R Ambedkar University of Social Sciences Mhow Prof C D Naik said Dr Ambedkar evolved a new water and power policy to utilise the water resources of the country to the best advantage of everybody.

He was speaking as the chief guest at CSIR-NEERI to mark the 131st birth anniversary of Dr Babasaheb Ambedkar on Tuesday.

The topic of his lecture was 'Dr. Ambedkar's Vision on Water Management'.

He further said Dr Ambedkar was instrumental in evolving multipurpose approach for water resources development on the basis of river valley



Former vice-chancellor of Dr B R Ambedkar University of Social Sciences Mhow Prof C D Naik giving a lecture on Dr Babasaheb Ambedkar to mark his 131st birth anniversary while director of CSIR-NEERI Dr Atul Vaidya, senior principal scientist Prakash Kumbhare and another dignitary look on.

basin and introduction of the concept of river valley authority which are summarily nowadays termed as Integrated Water Resources Management. Prof Naik informed that Dr Ambedkar was directly involved in framing the objectives and strategy of

economic planning, water and electricity policy. He emphasised on the vision of Dr Ambedkar to protect all basic life sustaining natural resources for equal distribution and accessibility to all the citizens.

Dr. Atul Vaidya, Director, CSIR-NEERI

recalled the significant contributions of Dr. Ambedkar in economic planning and water policy.

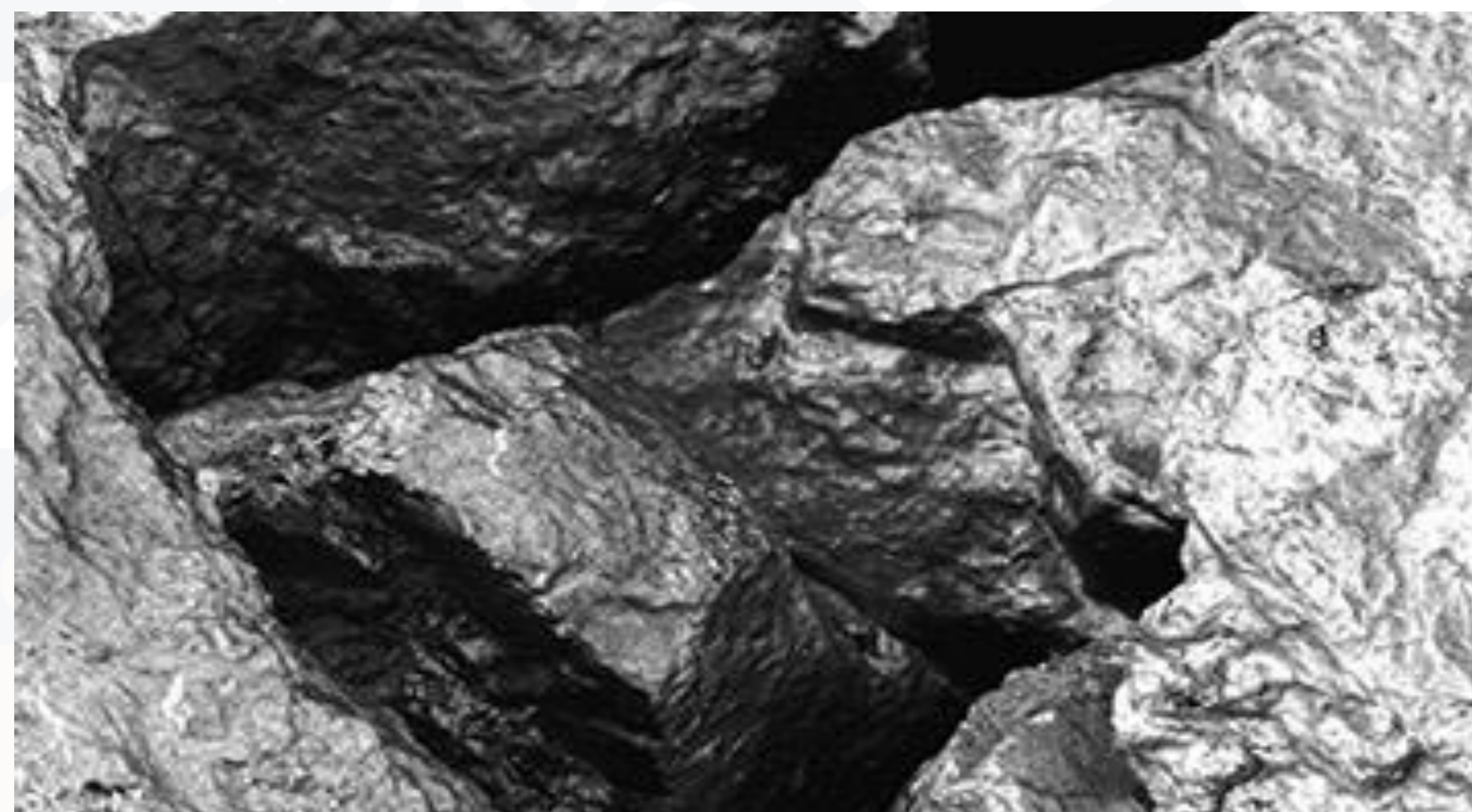
He highlighted the views of Dr. Ambedkar relevant for environmental sustainability. Chief scientist and head, of Chemical and Hazardous Waste

New critical minerals research could lead to local manufacturing boost

CSIR-IMMT

19th April, 2022

The new Lynas Rare Earths Processing Facility in Kalgoorlie, WA has recently received Environmental Approval, which will enable the manufacture of many high-tech products. Additionally, newly funded research at the University of South Australia could further transform the way rare earth elements and other vital battery metals are recovered from the earth, enabling efficient extraction with decreased environmental footprint.



Dr Richmond Asamoah from UniSA's Future Industry Institute is developing new ways to safely extract critical minerals from downstream ore processing, tailings reprocessing, and wastewater treatments. He is also developing mechanisms to safely recycle spent products from scrap batteries and magnets. "Rare earth minerals and battery metals are vital for the economic wellbeing of the world's major and emerging economies, yet their supply is not reliable due to geological scarcity, geopolitical issues, and trade policy," Asamoah said.

"Accumulated mining wastes, from a range of primary commodities, are becoming an increasingly valuable source of metals, but there is often a lack viable extraction technologies. Our research will apply new technologies to evaluate their capabilities to both extract minerals from low grade process and mineral tailings streams, together with recyclable spent batteries and magnets."

The project will test two patented metal recovery processes – resin in pulp and resin in moist mix (InnovEco Australia) – to extract target metals from low grade ores, fine minerals and

wastes such as tailings. These methods can also be used for process water treatment. Funded by the Australia-India Strategic Research Fund, Asamoah said that the research will deliver significant benefits to both countries.

“We’re not only talking about environmental benefits, but also economical and sustainable technologies that both countries can use to extract rare earth and battery minerals from current mining operations,” he said.

“Rare earth elements contribute nearly \$200 billion to the Indian economy, yet despite India having the world’s fifth largest reserves of critical metals, they mostly import their rare earth needs from China. This project hopes to enable Australia to export rare earth minerals to India, as an alternative to China, as well as to empower India to establish eco-technologies to extract minerals and metals within their own borders.”

According to Asamoah, the research will build Australia’s and India’s capacity for processing critical minerals and create more eco-efficient opportunities for economic growth, education, employment and investment.

This international research collaboration includes the Council of Scientific and Industrial Research – Institute of Minerals and Materials Technology (CSIR – IMMT), Kalinga Institute of Industrial Technology (KIIT), and Indian Institute of Technology (IIT) as research partners, together with InnovEco Australia and Care of Our Environment (COOE) as translation partners.

Road construction using Steel slag

ఉక్కులాంబి రోడ్డు

- కర్మాగార వ్యర్థాలతో కంకర ● రహదారుల నిర్మాణంలో వినియోగం
- ప్రయోగాత్మకంగా సూరత్ సమీపంలో 1.2 కిలోమీటర్ల రోడ్డు ఇప్పటికే సిద్ధం
- సీఆర్ఆర్ఐ సాంకేతిక పరిజ్ఞానం ● పర్యావరణ హితం, మరింత మన్నిక



హాజీరా వద్ద ఉక్కు కంకరతో వేస్తున్న రోడ్డు

రహదారుల నిర్మాణంలో ఉపయోగించే కంకర ఉత్పత్తిలో.. కాలుష్య సమస్య ఎక్కువ. పైపెచ్చు దాని కోసం కొండలను కరిగించాలి. ఫలితంగా జీవవైవిధ్యం దెబ్బతింటుంది.

కట్టెదాలు పటిష్టంగా ఉండాలని ఉక్కును ఉపయోగిస్తారు. కానీ, ఉక్కు ఉత్పత్తిలో వస్తున్న వ్యర్థాలు.. దేశవ్యాప్తంగా ఉన్న కర్మాగారాల్లో కొండల్లా పేరుకుపోయాయి. వీటితో గాలి, నీరు, భూమి.. అంతటా కాలుష్యం ఏర్పడుతోంది.

విడివిడిగా చూస్తే ఈ రెండూ వేర్వేరు సమస్యలు. కానీ ఈ సమస్యలనే పరిష్కార మార్గంగా భావించారు కేంద్ర రహదారి పరిశోధన సంస్థ (సీఆర్ఆర్ఐ) శాస్త్రవేత్తలు. ఉక్కు కర్మాగారాల నుంచి వెలువడే వ్యర్థాలనే రహదారుల నిర్మాణంలో వాడొచ్చని ఆలోచించారు. దాదాపు మూడు సంవత్సరాల సుదీర్ఘ పరిశోధనల అనంతరం తాము అనుకున్నది సాధించారు. ఉక్కు వ్యర్థాలను కంకరగా మార్చారు. అలా తయారుచేసిన 'ఉక్కు కంకర'తో ప్రయోగాత్మకంగా గుజరాత్లోని సూరత్ సమీపంలో హాజీరా ఓడరేవు వద్ద 1.2 కిలోమీటర్ల మేర అరు చదుసల రహదారి నిర్మించారు. ఇందులో శుద్ధి చేసిన ఉక్కు వ్యర్థాలను లక్ష టన్నుల మేర వాడారు. ఇలా దేశంలోనే మొట్టమొదటి 'ఉక్కు రోడ్డు' నిర్మితమైంది.



హాజీరా ఓడరేవు సమీపంలో వ్యర్థాలను రోడ్డు, (అంతర చిత్రంలో) నిర్మాణంలో వాడిన ఉక్కుకంకర

అక్కడే ఎందుకు?

ఏదైనా రహదారి నిర్మించేటప్పుడు దానిమీదుగా ఎంత బరువైన, ఎన్ని వాహనాలు వెళ్లాయన్నదాన్ని బట్టి ఆ రహదారి నిర్మాణ ప్రమాణాలను ఇండియన్ రోడ్ కాంగ్రెస్ నిర్దేశిస్తుంది. ఉక్కు కంకరను వాడటం ఇదే తొలిసారి. హాజీరా ఓడరేవు నుంచి ప్రతిరోజూ 30-40 టన్నుల బరువుండే 1000-1200 ట్రైకల్లు వెళ్లాయి. అందుకే ఎక్కువ బరువును తట్టుకుంటుందో లేదో చూడాలని ఆభ్యుదయ నిర్మించారు. మామూలుగానైతే అక్కడి రహదారి మందం 600-700 మిల్లీమీటర్లు ఉండాలి. కానీ, ఉక్కు రోడ్డు మందాన్ని 30% తగ్గించారు. అయినా ఈ రహదారి బ్రహ్మాండంగా నిలబడి.. శాస్త్రవేత్తల అంచనాలను అందుకుంది.

పేరుకుపోతున్న ఉక్కు వ్యర్థాలు

దేశంలోని వివిధ ఉక్కు కర్మాగారాల నుంచి ఏటా 1.9 కోట్ల టన్నుల వ్యర్థాలు ఉత్పత్తి అవుతున్నాయి. 2030 నాటికి ఇవి 5 కోట్ల టన్నులకు చేరుకుంటాయని అంచనా. విశాఖ ఉక్కు కర్మాగారంలోనూ ఇప్పటికే 40 లక్షల టన్నుల వ్యర్థాలున్నాయి. వీటన్నింటినీ ఇప్పటివరకూ మనవ్యర్థాలుగా భావించి పదిలేస్తున్నారు. విశాఖ ఉక్కు కర్మాగారం సీఆర్ఆర్ఐతో కలిసి పనిచేసేందుకు ముందుకొచ్చింది. పేట్రవరిలో సీఆర్ఆర్ఐ బృందం విశాఖ వచ్చింది.



ఉక్కు కర్మాగారాల్లో పేరుకుపోతున్న వ్యర్థాలు

ఉక్కు కంకర తయారీ ఇలా..

ఉక్కు కర్మాగారాల్లో ముడి పదార్థాన్ని 1500-1600 డిగ్రీల సెంటీగ్రేడ్ ఉష్ణోగ్రత వద్ద మండించినప్పుడు ఉక్కుతో పాటు, వ్యర్థాలు ఉత్పత్తి అవుతాయి. వీటిని శుద్ధి చేసి, వివిధ పరిమాణాల్లో కంకర రూపంలోకి మారుస్తారు. ఇప్పటికే ఉక్కు వ్యర్థాలన్నీ పొడిరూపంలోనే వస్తున్నాయి గానీ, ఇకపై కేంద్ర ఉక్కు మంత్రిత్వ శాఖ ఈ వ్యర్థాలను నిర్దిష్ట పరిమాణాల్లో (3 నుంచి 20 మిల్లీమీటర్ల వరకూ) కంకర రాళ్లలా వచ్చేలా మార్గదర్శకాలు ఇవ్వనుంది.

ఖర్చు తక్కువ, మన్నిక ఎక్కువ

రోడ్డు నిర్మాణంలో ఉక్కు కంకర వినియోగంతో ఖర్చు 30-40% తగ్గుతుంది. సాధారణ రహదారుల కన్నా ఉక్కు రహదారులు ఎక్కువ బరువును తట్టుకుంటాయి. ఉక్కు రోడ్లమీద వాహనాలు జారిపోయే సమస్య ఏమీ ఉండదు. తారురోడ్ల కంటే వీటిపై వాహనాల గ్రేమ్ మరింత ఎక్కువ. వీటి మన్నిక కూడా మామూలు రోడ్ల కంటే ఎక్కువ.

భవిష్యత్తులో అన్ని రోడ్లకూ ఇదే

- సతీష్ పాండే, ప్రాజెక్టు రీడర్, సీఆర్ఆర్ఐ ముఖ్య శాస్త్రవేత్త
'ఇప్పటివరకూ ప్రపంచం మొత్తమ్మీద ఆది కొద్ది దేశాల్లో మాత్రమే, ఆది సాక్షి కంగానే ఉక్కు వ్యర్థాలను రహదారి నిర్మాణంలో వాడుతున్నారు. ఆస్ట్రేలియా, యూకే, అమెరికా, జపాన్ లో ఇలా వేసినా, మనలా రోడ్డు మందాన్ని తగ్గించలేదు. పర్యావరణ కోణంలో చూసినా, నాణ్యత విషయంలోనైనా ఈ రహదారులదే భవిష్యత్తు. త్వరలోనే ఈ సాంకేతిక పరిజ్ఞానాన్ని ఉపరితల రవాణా, రహదారుల మంత్రిత్వశాఖకు బదిలీ చేస్తాం. ఆపై, భవిష్యత్తులో నిర్మించబోయే రోడ్లన్నీ దాదాపు ఉక్కు కంకరతోనే వేయొచ్చు.'



- ఈనాడు, ప్రత్యేక విభాగం

सिम्फर की वैज्ञानिक डॉ वी अंगुसेल्वी के सहयोग से तैयार हुआ कोयले से बना दैनिक भास्कर का मास्टहेड



चीफ साइंटिस्ट
डॉ. गौतम बनर्जी



सी. प्रिंसिपल साइंटिस्ट
डॉ. वी अंगुसेल्वी

दैनिक भास्कर के धनबाद संस्करण के रविवार 17 अप्रैल का मास्टहेड कोयले से बना है। देश में पहली बार किसी अखबार का मास्टहेड कोयला से तैयार किया गया है। इसे देख एकबार तो यकीन ही नहीं किया जा सकता कि अखबार में कोयले से लिखा भी जा सकता है। यह संभव हुआ देश के अग्रणी वैज्ञानिक संस्थान सीएसआईआर सिम्फर (केंद्रीय खनन एवं ईंधन अनुसंधान संस्थान) के सहयोग से। चीफ साइंटिस्ट डॉ. गौतम बनर्जी का इसमें अहम योगदान रहा। सीनियर प्रिंसिपल साइंटिस्ट डॉ. वी अंगुसेल्वी ने दैनिक भास्कर के मास्टहेड को कोयला से बनाया है। डॉ. सेल्वी कोयला से आभूषण बनाने के लिए पहले से ही जानी जाती हैं। दैनिक भास्कर के अनुरोध पर उन्होंने कोयला को अखबार के बगज पर लगाने लायक बनाने के लिए लैब में प्रयोग शुरू किया। लंबे शोध के बाद कागज पर लगने वाले कोयले के छोटे टुकड़ों को तैयार किया। ग्रामीण इलाकों की महिलाओं में कौशल विकास को बढ़ावा देने के लिए सीएसआईआर सिम्फर द्वारा महिलाओं को कोल आर्ट एवं क्राफ्ट का प्रशिक्षण दिया जाता रहा है। इसी पहल के तहत ग्रामीण परिवेश की छात्राओं को लैब में तैयार कोयले को अखबार के कागज पर लगाने के लिए अपन टीम के साथ खुद प्रशिक्षित किया। डॉ अंगुसेल्वी को देखरेख में लगातार 10 दिनों तक काम करते हुए इन छात्राओं ने कोयले से मास्टहेड को तैयार किया। इस वयले की यह विशेषता है कि वजन में हल्का है और इससे हाथों में कालिख नहीं लगती। सिम्फर के इस सहयोग से दैनिक भास्कर का ऐतिहासिक अंक प्रकाशित हुआ है।



मास्टहेड तैयार करने वाली टीम में शाहबाज खान, अनुराग आर्या, अचिनारा यादव, अनुश्री कनार, रीना पुष्पा लकड़ा, प्रेसी रजवार, प्रिया कुमारी, श्वेता कुमारी, मोंगिर चटर्जी, अनीता कुमारी, नेहा कुमारी, सिमरजीत कौर, सतपाल कौर, समरप्रीत कौर, विष्णुप्रिया बाउरी, किरण कुमारी, नरेश दास और दुर्गा मंडा शामिल।

Awareness lacking about technology applications, StartUp avenues: Dr Jitendra

CSIR-NBRI

16th April, 2022

NEW DELHI, April 16 : Union Minister of State (Independent Charge) Science & Technology; Minister of State (Independent Charge) Earth Sciences; MoS PMO, Personnel, Public Grievances, Pensions, Atomic Energy and Space, Dr Jitendra Singh today said that every sector in India today is dependent on Science and Technology, but what is lacking is awareness about suitable technology applications for sector-specific problems and the StartUp avenues.



In an exclusive media interview, Dr Jitendra Singh said, many of the Ministries and Departments of the Central Government can avail of scientific applications and solutions for the specific problems in a very cost-effective manner. He reiterated that Prime Minister Narendra Modi always stressed on an integral approach rather than working in silos to bring in “Ease of Living” for the common man.

Dr Jitendra Singh said, taking a cue from Modi’s out-of-box approach, in the recent past all the seven different Departments and Ministries related to Science, namely, Science & Technology, Biotechnology, Council of Scientific and Industrial Research(CSIR), Earth Sciences, India Meteorological Department(IMD), Atomic Energy and Space held brainstorming sessions with each of the Line Ministries like Agriculture, Jal Shakti, Railways, Health, Highways, etc.

Dr Jitendra Singh informed that so far over 200 proposals/requirements were received from 38 Line Ministries/Departments for Scientific Applications and Technological Support &

Solutions. He said, concerned Science Ministries and Departments are on the job applying different scientific solutions for sectors like agriculture, land mapping, dairy, food, education, skill, railways, roads, Jal Shakti, power, coal and sewage cleaning to name a few. He said, building on from previous such meetings, Joint Working Groups are being set up between Science Departments and Line Ministries to speed up identification of the scientific applications for proposals and problems of Line Ministries.

The Minister informed that for Jal Shakti Ministry, state-of-the-art Heli-borne survey technology was launched last year for groundwater management, developed by CSIR-NGRI Hyderabad. He said, to start with, the States of Rajasthan, Gujarat, Punjab and Haryana are being taken up for this latest heli-borne survey and expressed hope that this technology will play an important role in positively contributing to Prime Minister Narendra Modi's Vision and Mission of "Har Ghar Nal Se Jal". Mechanised sewage cleaning system developed by CSIR for wider dissemination will help in achieving the target of Swachh Bharat Mission, he added.

Dr Jitendra Singh said, Drone technology is being applied in agriculture for irrigation, spraying of pesticides and manuring the field thus bringing savings to farmers input costs. Similarly Space technology is being increasingly applied for telemedicine, drought mapping in agriculture and in Railways for rectifying unmanned crossings and for prevention of possible accidents. The Minister said, he has instructed the scientists and officers in various departments for use of Artificial-Intelligence and Robotics in medicine and surgery. He also referred to UV technology developed by CSIR installed in Parliament and now being extended to Railways to mitigate the spread of COVID-19 virus.

In reply to a question, Dr Jitendra Singh said, each of the States and Union Territories has been asked to identify the areas where technological interventions can help in resolving diverse problems to enable ease of living for common man. He said, for instance the UT Government of Jammu & Kashmir will be assisted through the latest snow clearing technology of the Dal Lake, while Puducherry and Tamil Nadu are being assisted in

restoration and renovation of sea-beach. He said, Aroma Mission in Jammu and Kashmir and promotion of Leh Berry in Ladakh are all happening due to suitable scientific interventions and creating lakhs of job opportunities, besides promoting local sustainable start-ups.

Dr Jitendra Singh said that after the unlocking of the Space Sector for private players, Innovative Start-Ups are coming in a big way to explore the untapped potential. He said, more than 50 Start-ups are working in the Space Sector and about 10 of them are having funding of over Rs 50 crore or more individually. The Minister was happy to note that apart from NAVIC based applications, Start-ups are also working on software solutions for debris management in Space having global ramifications. Similarly in the area of Atomic Energy, Joint ventures with PSUs will help in augmenting energy demand through nuclear power plants.

‘Quality of drinking water better now’

CSIR-NEERI

16th April, 2022

Patna: The recent initiatives of the state government to provide potable water to every household has started bearing fruits. People residing even in areas contaminated with arsenic, fluoride and iron are getting clean water these days.

State PHED secretary Jitendra Srivastava said the issue of quality in water and meagre coverage of piped water supply prompted the government to devise its ambitious ‘Har Ghar Nal Ka Jal’ scheme in 2016. Along with it, a detailed diagnostic process was undertaken for mapping the magnitude of chemical contamination in groundwater and subsequently the treatment technologies were scrutinized to see their efficiency in ensuring safe and potable water supply, he said.

“Furthermore, durability and user-friendly technology of water treatment, operational criteria of water treatment plants and reject management protocols were finalized and standardized by engaging expert agencies like CSIR-NEERI, Nagpur and UNICEF. Contractors were directed to sign MoUs with CSIR-approved technology Water Treatment Plant (WTP) manufacturing agencies,” Srivastava said.

He pointed out that only 4,742 wards in 14 districts (4.1%) suffer from arsenic contamination and 3,791 wards in 11 districts (3.3%) suffer from arsenic problem. Besides, 21,739 wards in 11 districts (18.96%) face iron contamination. However, by the end of the last financial year (2021-22), the work on providing safe and potable water has been completed in 4,487 of 4,742 wards affected with arsenic, 3,780 out of 3,791 wards affected with fluoride contamination and 21,250 of 21,739 wards affected with contamination of iron.

PHED engineer-in-chief D S Mishra said the department has strengthened its water quality monitoring and surveillance system. “Today, there is a state level NABL- accredited water

quality testing lab at Patna, 38 district water quality testing labs, 75 sub-divisional water quality testing labs and nine mobile labs. The department is going in for NABL accreditation of its district labs also. The lab officials have been asked to test water samples of arsenic and fluoride-affected areas every month and of iron affected areas quarterly,” he said.

Mishra added efforts to integrate the community through the system of Jal Chaupals and social audits are bringing in the much-needed transparency and community control over this extremely vital resource. “The simultaneous execution of the Jal Jeevan Hariyali programme will also take care of the issue of groundwater sustainability. In the days to come, this will enable Bihar to be counted among the leading states in the water sector,” he said.



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