



CSIR-NML NEWSLETTER SEPTEMBER- 2021

OCTOBER 23, 2021

**CSIR-NML, JAMSHEDPUR
RESEARCH PLANNING & BUSINESS
DEVELOPMENT DIVISION**

SUMMARY OF SIGNIFICANT ACTIVITIES

For the period September,2021, CSIR-National Metallurgical Laboratory

1. Technology Development (New Product/Process Technologies)

Nil

2. Agreement(s) Signed

S.No.	Title	Client/Sponsor
1.	Information Non-Disclosure Agreement	E Reclaim Services Pvt. Ltd., Rajasthan

3. Patent(s)/Copyright(s) Filed

S.No.	Title
1.	A Process for Producing Thicker-section Abrasion-resistant Steel and a Product Thereof Inventors: Gaurav Kumar Bansal, Snehashish Tripathy, Avanish Kumar Chandan, V. Rajinikanth, Vikas Chandra Srivastava, S. Ghosh Chowdhury Notification No: NML/PAT 0610/2021/IN Funding Project: SSP 1225 (Development of > 6 mm thicker section abrasion resistance grade steel with relatively higher coiling temperature) Assignee: CSIR & TATA Steel
2.	Title: A process to recover Lithium and Manganese metal from the effluent and black cathodic material of Li-bearing spent battery Ref No: NML/PAT 0611/2021/IN Inventors: Manis Kumar Jha, Ranjeet Kumar Singh, Pankaj Kumar Choubey*, Archana Kumari*, and Rekha Panda* Assignee: CSIR

4. S&T services that have created a national/visible impact

- Root cause analysis of failure of runner of unit #1 M/s NHPC Limited

The generating unit#1 of Kishanganga power station of M/s NHPC Limited was put into commercial run . Frequently, the runner faced breakage problems especially from the root of the bucket. one such Pelton bucket attached to the runner of unit#1 was failed and subsequently the bucket was sent to CSIR-NML for failure investigation. The investigations included : a) Visual observation and photography b) Chemical analysis c) Mechanical property evaluation: Hardness test and Charpy V-notch impact test, Tensile test, Fatigue Test d) Microstructural analysis: Optical Microscopy (OM), Scanning Electron Microscopy(SEM), Energy Dispersive X-Ray Spectroscopy (EDS) e) Fractography f) X-Ray Diffraction (XRD) analysis and g) Data analysis. The recommendations were handed over to the Party.

5. Details of important Workshop(s)/Symposia(s)/Conference(s)/Training Course(s)/ Meeting(s) Organized

- Societal Skill training programs:

1. Multidisciplinary Materials Technology Training (Diploma and Graduate Students & Job Aspirants; 14-Sep to 13th Oct 2021; 11 Trainees); 2. Applied Chemistry in Metallurgy (Diploma and Graduate students; 20th -22nd Sep 2021; 54 Trainees); 3. Scientists and Science Teachers Conclave (School Teachers; 24th Sep 2021; 45 Trainees) 4. Industrial Training on Metallurgy (Diploma and Graduate students; 27th Sep 2021 to 30th Oct 2021; 250 Trainees)"

6. Details of any New Facilitie(s)

- Annealing and Run Out Table Simulator with Process Sensor

7. Details of any outstanding Honor(s)/Award(s) received by the staff

- CSIR-NML received CSIR- Technology Award 2021 in the category of Business Development and Technology Marketing 2021 by Honorable Vice President of India - Mr. M. Venkaiah Naidu during CSIR Foundation day celebrations on 26th Sep 2021 at New Delhi. The dignitaries present in the function included Honorable S&T and ES Minister -Mr. Jitendra Singh; Principal Scientific Advisor -Govt. of India- Prof. K. Vijayraghvan; and Secretary DSIR & Director General, CSIR- Dr. Shekhar C. Mande.





- Ms. Rukshana Parween, Project Assistance received Young Scientist award 2019 at 8th Bihar Science Conference 2019, for the paper Entitled "Recycling of various Electrical and Electronic cables to get valuable metals and Materials" authored by Rukshana Parween, Pankaj Kumar Choubey, Archana Kumari and Manis Kumar Jha.

- Dr. Sanjay Kumar, Sr. Principal Scientist has been awarded with a commemorative medal for his contributions in enhancing international recognition of the University of Miskolc, by his high quality educational and research activities.





8. Any other items considered to be significant

- Dr. Madhusudhan Reddy, Director-DMRL delivered a talk (virtual platform) on "Materials for Defence Applications" at CSIR-NML on 26th September 2021.



- **Invited lecture by Staff**

Dr (Mrs) Mita Tarafder, Chief Scientist & Head, KRIT Division delivered the keynote lecture in the 54th Engineers Day celebrations (160th birthday of Sir M Visvesvaraya) by the Institute of Engineers (India) , Jamshedpur Local Center.



- **CSIR-Foundation Day Celebrations**

The occasion was celebrated at a large scale. The foundation day lecture was delivered by Dr. Madhusudhan Reddy, Director-DMRL on "Materials for Defence Applications" in the

main function (virtual platform). Staff superannuated during last year and staff that completed 25 years of service was felicitated during the event. Tree plantation program also took place on the occasion.



- **Hindi Week Celebrations**

The Hindi week was celebrated during 7th - 14th September 2021. A number of events were organized to mark the occasion viz. Poetry recitation, Hindi Song program, "Charcha-Paricharcha" in hindi .

9. Scientific & Technical Services rendered

During this period the following industrial houses viz. Central Mine Planning & Design Ltd., Asansol , Eastern Coalfields Limited, Burdwan , M/s Vedanta Limited, Odisha , M/s. Delhi Metro Rail Corporation Ltd , M/s. DMSRDE DRDO, Kanpur , M/s. Hindustan Traders, Odisha , M/s. JSW Steel Limited, Bellary , M/s. Rashmi Industries, Odisha , M/s. ACC Ltd., Maharashtra , M/s. ACC Ltd., West Bengal , M/s. Allied Instruments & Thermocouples, JSR , M/s. Aravali Power Company Pvt. Ltd., Jhajar , M/s. Arun & Co., Ghaziabad , M/s. Astha ferrotech Pvt. Ltd., Jamshedpur , M/s. Bharat Coking Coal Ltd., Jharkhand , M/s. Chandigarh Test House, Punjab , M/s. CIEPT, Balassore , M/s. CIEPT, Bhubaneswar , M/s. CIPET, Bhopal , M/s. CIPET, Raipur , M/s. CIPET, Ranchi , M/s. CIPET, Jaipur , M/s. CIPET, Vijayawada , M/s. DB Power Limited, Chhattisgarh , M/s. Eastern Coalfields Ltd., Bardhaman , M/s. Excel Surveyors Pvt. Ltd., Kolkata , M/s. Gainwell Commosales Pvt Ltd., Asansol , M/s. Gaurav Chauhan, Gorakhpur , M/s. Gaurav Scientific & Chemicals, Raipur , M/s. Gems Projects Pvt. Ltd., Ranchi , M/s. Gram Tarang Technical Vocat. Edu. Tra.P , M/s. Hampi Chemicals, Karnataka , M/s. Hindustan Traders, Odisha , M/s. Inspectorate Griffith India Pvt. Ltd. , M/s. Jhajar Power Limited, Haryana , M/s. Kalyani Steels Limited, Karnataka , M/s. Kancara Resources Pvt. Ltd., Jamshedpur , M/s. Kishore International, Delhi , M/s. KSM Laboratory Glass

Works, Chennai , M/s.Madhya Pradesh Power Generation Co Ltd. , M/s.Mahabal Enviro Engineering Pvt. Ltd., , M/s.Microtech Testing and Research Lab , M/s.Monis Grosam Engineering Lab,Jodhpur, Bhabha Atomic Research Centre, Mumbai, M/s.NTPC Limited, Berali UP , M/s.NTPC Limited, Bihar , M/s.NTPC Limited, Daduri , M/s.NTPC Limited, Singrauli , M/s.NTPC Limited, Sonebhadra , M/s.NTPC Limited,Uttar Pradesh , M/s.Orissa Metaliks Pvt. Ltd., Mednipur , M/s.Oswal Engg.& Chemicals Comp.,Jamshedpur , M/s.Prasanna Kumar Panigrahi, Odisha , M/s.Quality Council of India, New Delhi , M/s.Rashmi Metaliks Limited, Mednipur , M/s.Rosa Power Supply Co Ltd.UP , M/s.Sandeep International, Gobindgarh , M/s.Shree ganesh Engineering Works, Delhi , M/s.Shree Raj Metalloys Pvt. Ltd., Kolkata , M/s.Sri Shyam Associates, Jamshedpur , M/s.Tata Steel Limited, Ramgarh , M/s.Torrent Power Ltd., Ahmedabad , M/s.UltraTech Cement Ltd., Rewa , M/s.Usha Martin Limited, Ranchi , M/s.V S Enterprises, Hospet , M/s.Vandana Global Ltd., Chhatisgarh , M/s.Vedanta Limited,Odisha , M/s.Virgo Uap Pharma Pvt. Ltd., Gujarat , M/s.Wabco India Ltd., Jamshedpur , M/s.NATIONAL ALUMINIUM COMPANY LIMITED,Odisha , Mahanadi Coalfields Ltd., odisha , NRDC, New Delhi , Ramkrishna Forgings Ltd., Kharswan , Tata steel Limited, Jamshedpur , Western Coalfileds Ltd, Nagpur , **received technical and scientific support from NML in the area of chemical analysis and physical test of their raw materials and finished products.**

10. ECF Details

External Cash Flow (ECF) Status During: 2021-9-1 TO 2021-9-30

Category	TOTAL (Figures in Rs. Lakh)
Sponsored R&D	123.48868
Grant-in-Aid R&D	1
R&D Consultancy	0
Technical Services	48.10085
Collaborative/ Cooperative R&D	11.9554
Premia/Royalty	0
TOTAL	184.54493



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