



# CSIR-NML NEWSLETTER DECEMBER- 2020

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JANUARY 19, 2021

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CSIR-NML, JAMSHEDPUR  
RESEARCH PLANNING & BUSINESS DIVISION



CSIR-National Metallurgical Laboratory  
(1950-2020)

*70 years of unalloyed excellence*

*70 years of unalloyed excellence*

(1950-2020)

CSIR-National Metallurgical Laboratory (1950-2020)

# SUMMARY OF SIGNIFICANT ACTIVITIES

*For the period December,2020, CSIR-National Metallurgical Laboratory*

## 1. Technology Development (New Product/Process Technologies)

Nil

## 2. Agreement(s) Signed

S. No.	Title	Client/Sponsor
1.	Joint research work for the development of MSME in the areas of mutual interest (Sponsored)	Indo Danish Tool Room, Jamshedpur
2.	Co-operation and promotion of R&D in area of mutual interest between for Indian Air Force (Umbrella Agreement)	Indian Air Force



### IAF, CSIR-NML SIGN MOU FOR RESEARCH IN MATERIAL SCIENCE, ENGINEERING

TUESDAY, DECEMBER 08, 2020 BY INDIAN DEFENCE NEWS



The IAF delegation, during a visit to CSIR-NML, Jamshedpur stressed on the requirement of improving the reliability and serviceability of its legacy assets. The Chief of the Air Staff Air Chief Marshal RKS Bhadauria getting down after flying the TEJAS MK-1 Initial Operational Clearance IOC fighter aircraft with No.45 Squadron Flying Daggers at Sulur

**KOLKATA:** The CSIR-National Metallurgical Laboratory, Jamshedpur on Monday signed an MoU with the Indian Air Force on research and development in material science and engineering.

"Discussions were held on the areas of prime national interest in the field of materials, metals, corrosion science and other allied engineering domains with an aim to decide on aspects of collaborations between IAF and CSIR-NML," a release by the research organisation said.

The IAF delegation, during a visit to CSIR-NML, Jamshedpur stressed on the requirement of improving the reliability and serviceability of its legacy assets, with emphasis on material informatics, substitution, life extension and indigenisation, it added.

# THE AVENUE MAIL

JAMSHEDPUR • TUESDAY, DECEMBER 8, 2020 • VOL : 28 NO : 164 • www.avenuemail.in • RS.2/- • PAGES - 12

## NML signs MoU with Indian Air Force

### Mail News Service

Jamshedpur, Dec 7 : National Metallurgical Laboratory (CSIR-NML) and Indian Air Force (IAF) on Monday signed a MoU in the field of Research and Development ( R&D). A top level IAF delegation led by Air Marshal Vibhas Pande VSM, Air Officer in charge Maintenance along with senior officials of NML signed the agreement.

"During the visit, discussions were held on the areas of prime national interest in the field of materials, metals, corrosion science and other



allied engineering domains with an aim to decide on aspects of collaborations between IAF and CSIR-NML," said an official of NML. The IAF delegation stressed upon the require-

ment of improving the reliability and serviceability of their legacy assets, with emphasis on material informatics, substitution, life extension and indigenisation. The importance of

refurbishment, reclamation, simulation of material behaviour and increasing the envelope of operations were brought out. The need for HR development through training, work-

shops and knowledge exchange were highlighted.

During the visit, the IAF team visited the R&D facilities of CSIR-NML, discussions and delibera-

tions were held on various issues, and interactive technical presentations were made by both organizations. The visit culminated in the signing of MoU for cooperation in activities of interest to IAF and within the domain expertise of CSIR-NML.

The National Metallurgical Laboratory, Jamshedpur is the third in the Council of Scientific and Industrial Research (CSIR) family of 38 laboratories. The laboratory was formally inaugurated and dedicated to the nation on the November 26, 1950 by Pandit Jawaharlal Nehru. (W-pb)

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

S. No.	Title
1.	Temperature and strain measurement in a tube mould by fiber-optic measurement method.
Inventors: Tarun Kumar Das, Chandan Dutta, Alok Kumar, Sarmishtha Palit Sagar Assignee: CSIR & Tata Steel Limited	

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

- **A Smart Sensing System for Cold Drawn High-End Wires**

The objectives of the project were: → Upgradation of the developed FlawGuard™ to a smart sensing system for real-time monitoring and decision making on the quality of the wires based on the severity and occurrence of defects of respective drawing line through internet. → In-line galvanized coating thickness measurement of high end drawn wires → Performance evaluation of the developed system at a wire drawing line in a wiremill. → Commercialization of the system Major outputs and applications: I. FlawGuard will be used to detect surface and subsurface defects viz. transverse cracks, weld joint, craw feet etc. in cold drawn wires at high speed.





II. Zincometer will be used for the Zinc weight measurement of GI wire lines; both pad wiping (commercial) and Nitrogen wiping lines. Commercial galvanized lines are not equipped with any Zinc control sensing devices.

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

- **Scientists-Science Teachers Conclave (17th December 2020)**

More than 180 science teachers participated in the conclave.






CSIR Virtual Laboratory for Students  
Scientists Science Teachers Conclave (SST 2020)  
Theme: Visualizing Science  
Organized by  
CSIR-NML, Jamshedpur  
17th December 2020  
Venue: On-Line

**Technical Programme Schedule**  
**17 Dec, 2020: (15:30– 18:00Hrs.)**

Visualizing Physics	Visualizing Maths	Visualizing Chemistry
<b>Chairperson:</b> <b>Dr S Sivaprasad</b> Chief Scientist, CSIR-NML	<b>Chairperson:</b> <b>Dr Mita Tarafder</b> Chief Scientist, CSIR-NML	<b>Chairperson:</b> <b>Dr A K Mohanty</b> Principal Scientist, CSIR-NML

- **Intellectual Property Rights (IPR) Webinar by NML-Intellectual Property Facilitation Centre (IPFC) (16th December and 22nd December 2020)**

NML-IPFC hosted two webinars on Intellectual Property Rights (IPR), organized on virtual platform by MSME-DI, Ranchi, Ministry of MSME, Govt. of India in association with NML-IPFC and Indo Danish Tool Room (IDTR), Jamshedpur.

## Webinar on Intellectual Property Rights (IPR)

under the scheme "Building Awareness on IPR for MSMEs"

<ul style="list-style-type: none"> <li>❖ Introduction of IPR</li> <li>❖ Relevance of Industrial Design &amp; Trademark for the development of MSMEs</li> <li>❖ Credit Linked Capital Subsidy - Technology Upgradation Scheme (CLCS-TUS)</li> </ul>	<table border="1" style="background-color: #0056b3; color: white; width: 100%;"> <tr><th style="background-color: #0056b3; color: white;">Date &amp; Time</th></tr> <tr><td style="background-color: #0056b3; color: white;">22<sup>nd</sup> December, 2020</td></tr> <tr><td style="background-color: #0056b3; color: white;">03 PM – 05 PM</td></tr> </table>	Date & Time	22 <sup>nd</sup> December, 2020	03 PM – 05 PM
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03 PM – 05 PM				

**Panel Speakers**

<b>Mr. P K Gupta, IEDS</b> Director (I/c) MSME-DI Ranchi	<b>Dr. I. Chattoraj</b> Director NML, Jamshedpur	<b>Mr. Anand Dayal</b> Managing Director IDTR, Jamshedpur	<b>Dr. S. K. Pal</b> Convenor, NML-IPFC, Jamshedpur
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[You are kindly invited to join in the Webinar](#)

**Organiser : MSME- Development Institute, Ranchi, Ministry of MSME, Govt of India**  
**In Association with : Indo Danish Tool Room, Jamshedpur &**  
**CSIR- National Metallurgical Laboratory, Jamshedpur**

[Webinar Link](#)

Please contact: Sudip Paul: 9748690035/ S.K.Pal: 9798370253/P Swain: 8709478033





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[Webinar Link](#)

For more details, please contact: Sudip Paul: 9748690035/ S.K.Pal: 9798370253/P Swain: 8709478033

- **India International Science Festival: Science for Self-Reliant India and Global Welfare (17th December 2020)**

Press Information Bureau-Ranchi, Field Outreach Bureau-Gumla in association with CSIR-CIMFR, Dhanbad and CSIR-NML, Jamshedpur organized the webinar on virtual platform. The event was a part of India International Science Festival 2020 (Theme: Self-reliance and





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FRIDAY, 18 DEC, 2020  
Pg-12, Year-10, Issue-223  
(RN) No. 384ENG / 2012 / 44137

# Morning India

## Experts brainstorm on 'Science for Self-Reliant India'

MLNEWS SERVICE

**JAMSHEDPUR:** Field Outreach Bureau, Gumla in association with CSIR-CIMFR Dhanbad and CSIR-NML Jamshedpur organised a webinar on the topic "India International Science Festival: Science for Self-Reliant India and Global Welfare".

The webinar was attended by senior experts from the field of science and technology. It was discussed that India has contributed in the field of science and technology since ancient times. It was India which gave zero to the world which brought huge development in the field of Mathematics. In the medieval times, India's development in Science was slowed down but now it is our effort that India should become self-reliant and think about global welfare.

Arimardan Singh, additional director general of the PIB-ROB Ranchi said in his welcome note that the India International Science Festival was started in 2015 with the mission to bring Science to the common people and provide solutions to them. This year the theme is to become self-reliant and work towards global welfare. It is a matter of pride for us that such a big festival is being organised in virtual mode and it is a golden opportunity for students, teachers and other people who have an interest in Science to get benefited by it.

Indranil Chatterjee, director CSIR-NML Jamshedpur said that India had a glorious past in science. India gave 'zero' to the world along with the first modern numeral system to the first quadratic equation and so on. India had made tremendous progress in the field of Civil Engineering and Architecture, progress can be seen through beautiful temples and monuments like the Taj Mahal which are a living embodiment of our glorious past. During the medieval times, religion caused a slowdown to the advancement in science but between 1820 to 1920, scientists like SN Bose,



Meghnad Saha, Shrinivas Ramujan and others made tremendous contributions in the field of science. Pradeep K. Singh, Director, CSIR-CIMFR Dhanbad said that the mission of this festival is to bring maximum number of people to the field of science. If India has to become a developed nation, she has to make progress in the field of science and the youth especially should

know about our rich history. During last year's festival, children participated in the program and greatly benefited from it as their interest was ignited in science. He said that special steps have been taken at CSIR-CIMFR to enable students take interest in science. He further said that in the coming years, India will definitely make progress in the field of technology and Science.

Sagarasad Kuttan, Organising Secretary, Vijnana Bharati, Jharkhand and West Bengal said that the aim of the Science Festival is to attract common people to science. Just the way we Indians look forward to our festival, this festival is being organised so that people look forward to science in technology and special provisions are made for students and women scientists to take interest.

### Industrial Training under CSIR Integrated Skill Initiative (7th - 11th December 2020)

CSIR-NML, Jamshedpur organized Industrial Training on "Metallurgical Furnaces" for Diploma students under CSIR Integrated Skill Initiative.

# THE AVENUE MAIL

JAMSHEDPUR • SUNDAY, DECEMBER 13, 2020 • VOL : 28 NO : 169 • www.avenuemail.in • RS.2/- • PAGES - 12

## Industrial Training on Metallurgical Furnaces at NML

Mail News Service

**Jamshedpur, Dec 12 :** CSIR - National Metallurgical Laboratory (NML), Jamshedpur has been implementing CSIR Integrated Skill Initiative since 2017. The objectives of this initiative are to utilize CSIR knowledgebase and infrastructure for organizing training programs in various categories (industrial, professional, societal etc.) for contributing to national skill mission and also to promote entrepreneurship through skilling and training.

A week-long training program was organized by CSIR - National

Metallurgical Laboratory, Jamshedpur on a virtual platform from December 7 to 11 as part of a training program on "Industrial Training on Metallurgical Furnaces" under the 'CSIR Integrated Skill Initiative' scheme of Government of India. This training program is aligned with QP, ISC/Q5301 of Iron and Steel Council of NSDC. This four-week training will be imparted in two parts (online and offline) to BE, B. Tech, diploma and ITI students to improve their industry oriented skills and employability. Apart from knowledge of metallurgical furnaces, this training is designed to enhance



generic and professional skills of the participants and will also address health and safety issues while operating the furnaces.

The concluding session

of this training was held on the first day 11th December at 5.30 pm. The key resource persons of the final day session were Tanay Ray and Kaushik

Chakravarty from Tata Steel Limited (TSL) and Dr M Madan from CSIR-NML. The speakers from TSL talked about "Pellet indurations strand" and "Safety measures in furnace operation", whereas Dr M Madan demonstrated the software for heat and mass balance in furnace operation.

In his concluding speech, Dr S Tarafder, Advisor Management, CSIR-NML, congratulated the participants for completing the technical session successfully and mentioned the importance of such program particularly for diploma students. He requested the participants to share

their experience among other students so that more students can enrol to the training programmes conducted by CSIR-NML. The technical program was co-ordinated by Dr J Pal, Senior Principal Scientist, CSIR-NML and the technical lectures were delivered by senior scientists Dr M Malathi, Dr D Paswan, A Ammasi, Dr Sanjay Agarwal, Dr K Ashok and Dr G K Mandal.

Out of 150 registered participants, 100 participants from four Diploma colleges such as Adityapur, Beharagora, Purulia and Dhanbad polytechnics, attended this virtual training program. (W-pb)



जमशेदपुर  
12 दिसम्बर, 2020  
नगर संस्करण  
मूल्य ₹ 5.00  
पृष्ठ 12

# दैनिक जागरण

## पेशेवर दक्षता के लिए दिया प्रशिक्षण

जमशेदपुर संवाददाता, जमशेदपुर : जमशेदपुर के बर्मानाइस स्थित सीएसआइआर-नेशनल मेटलर्जिकल लेबोरेटरी (एनएमएल) 2017 से सीएसआइआर-इंटीग्रेटेड स्क्रिल इनिशिएटिव कर रहा है, लेकिन इसमें बदलाव किया जा रहा है। इस पहल का उद्देश्य विभिन्न श्रेणियों (औद्योगिक, पेशेवर, सामाजिक आदि) में प्रशिक्षण कार्यक्रमों के लिए नॉलेजबेस, बुनियादी ढांचे का

उपयोग और पेशेवर दक्षता बढ़ाना है। इसी प्रक्रिया में सीएसआइआर-एनएमएल ने जमशेदपुर में 7-11 दिसंबर तक वर्चुअल प्लेटफॉर्म पर एक सप्ताह का प्रशिक्षण कार्यक्रम चलाया, जिसके तहत मेटलर्जिकल फर्नेस पर औद्योगिक प्रशिक्षण कार्यक्रम के भाग के रूप में किया गया था। आयरन एंड स्टील काउंसिल ऑफ इन्डस्ट्री के साथ मिलकर चार सप्ताह का प्रशिक्षण कार्यक्रम दो

भागों (ऑनलाइन और ऑफलाइन) में वीडो, वीडोक, डिप्लोमा और आइटीआई छात्रों को उद्योग उन्मुख कौशल और रोजगार में सुधार करने के लिए प्रदान किया गया। धातुकर्म भट्टियों के ज्ञान के अलावा, यह प्रशिक्षण प्रतिभागियों के सामान्य और व्यावसायिक कौशल को बढ़ाने के लिए बनाया गया है और भट्टियों का संचालन करते समय स्वास्थ्य और सुरक्षा पर भी रहा।

### 6. Details of any New Facilitie(s)

Nil

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

Nil

### 8. Any other items considered to be significant

- Sad Demise of Staff

Mr. Rajendra Kumar Mukhi, Multi-Tasking Staff passed away on 23rd December 2020.



### 9. Scientific & Technical Services rendered

During this period the following industrial houses viz. **Central Mine Planning & Design Ltd., Asansol , Directorate of MSME, Kolkata , IGCAR, Kalpakkam , ISWP Jamshedpur , Jamipol Limited , M/s RSB Transmission I Ltd., Jamshedpur , M/s. Reliance Industries Limited,**



Gujarat , M/s. Adani Power Maharashtra Ltd.,Maharashtra , M/s. Adani Power Rajasthan Ltd., Rajasthan , M/s. Customs House Laboratory, Kutch , M/s. D B Power Ltd., Chhatisgrah , M/s.Delhi Test House, Kanpur , M/s. Fine Chemical Products, Kolkata , M/s. G.Surgiwear Limited, Uttar Pradesh , M/s. Haryana Power Generation Corporation Ltd , M/s. Hindalco Industries Limited, Jharkhand , M/s. Innovative Foundry solutions, Gujarat , M/s.Jai Mangla Enterprises, Hazaribag , M/s.JAMIPOL Ltd., Jamshedpur , M/s. KSK MAHANADI POWER COMPANY LTD,HYDERABAD , M/s. Mangalam Cement Ltd., Rajasthan , M/s. MEMORA INDIA PVT. LTD., DELHI , M/s. Met-Min Trading Corporations, Jaipur , M/s. Organic Chemical Industries, Kolkata , M/s. P&P Metalloys Pvt. Ltd., Tamilnadu , Central Coalfields Limited, Jharkhand ,M/s.Rashtriya Ispat Nigam Limited,Vishakhapa , M/s.Saluja Steel & Power Pvt. Ltd., Giridih , M/s. Sandeep International, Punjab , M/s. Sastha Scientific Agencies, Bangalore , M/s. SGS Indian Pvt. Ltd., Odisha , M/s.Shiva Casting Pvt. Ltd., Punjab , M/s. Thakur Industries, Bellary , M/s. V.S. Enterprises, Hospet , Tata Steel Limited, Jamshedpur , Western Coalfields 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: 2020-12-1 TO 2020-12-31:*

Category	TOTAL (Figures in Rs. Lakh)
Sponsored R&D	223.49668
Grant-in-Aid R&D	0
R&D Consultancy	3.855
Technical Services	25.45733
Collaborative/ Cooperative R&D	0
Premia/Royalty	0
<b>TOTAL</b>	<b>252.80901</b>



END OF NEWSLETTER

