प्रथम संस्करण अक्तूबर, 2019

जल अनुसंधान

त्रैमासिक समाचार

केन्द्रीय जल और विद्युत अनुसंधान शाला, पुणे

CONTENTS

संदेश

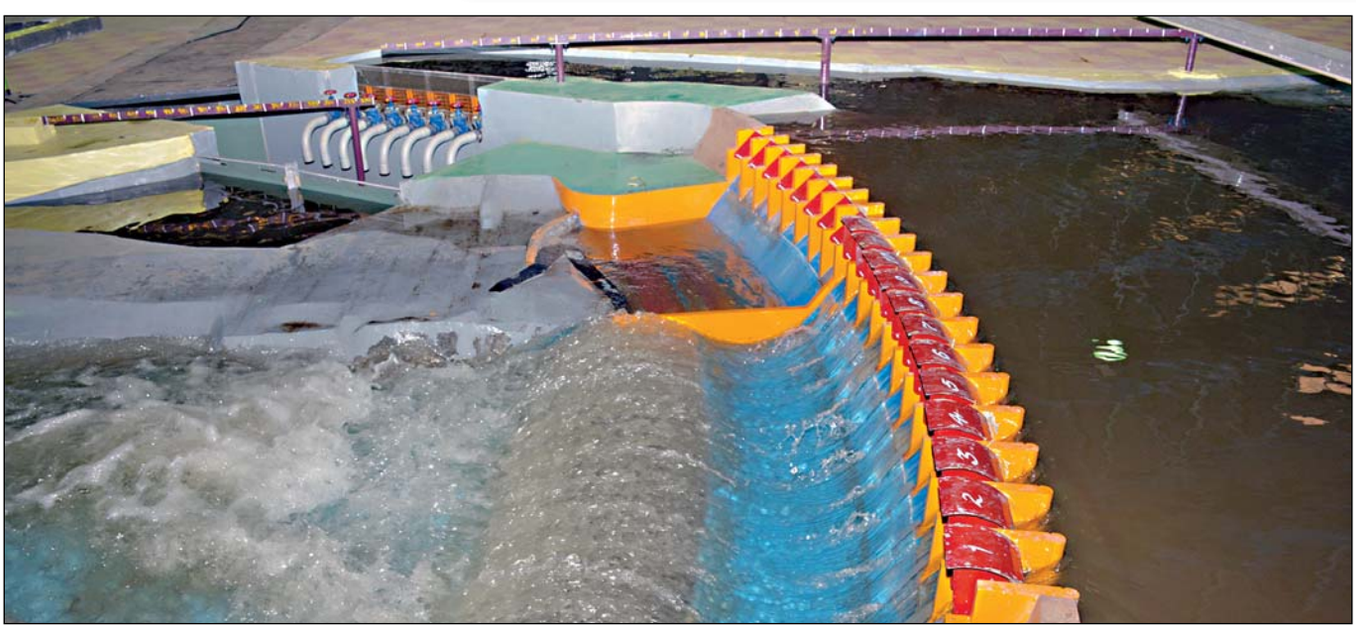
केन्द्रीय जल और विद्युत अनुसंधान शाला की त्रैमासिक गतिविधियों और उपलब्धियों का प्रथम अंक प्रस्तुत करते हुए मुझे बहुत खुशी हो रही है। जल संसाधन विकास परियोजनाओं, नदी प्रशिक्षण और संरक्षण, जल विद्युत/थर्मल/परमाणु बिजली परियोजनाओं और तटीय और अपतटीय इंजीनियरिंग संरचनाओं के अभिकल्प से अनुसंधान एवं विकास अध्ययनों से संबंधित समस्याओं को हल करने हेतु मुख्य रूप से जोर दिया जा रहा है। इस उद्देश्य की प्राप्ति के लिए भौतिकी जलीय प्रतिमानों, गणितीय प्रतिमानन और क्षेत्र तथा प्रयोगशाला अध्ययनों का उपयोग किया जाता है।

केन्द्रीय जल और विद्युत अनुसंधान शाला के सात मुख्य गतिविधियों के क्षेत्रों, जैसे कि नदी इंजीनियरिंग, नदी तथा जलाशय प्रणाली प्रतिमानन, जलाशय तथा संबंधित संरचनाएँ, तटीय तथा तटदूर इंजीनियरिंग, बुनियादें तथा संरचनाएँ, प्रयुक्त भू-विज्ञान और यंत्रिकरण, नियंत्रण अभियांत्रिकी तथा परीक्षण सुविधाएँ, इनकी रिपोर्टों को संबंधित परियोजना अधिकारियों को प्रस्तुत किया जाता है। महत्वपूर्ण अध्ययनों की उपलब्धियों को उजागर करके सारांश, अनुसंधान और विकास खंड के तहत रिपोर्ट में प्रस्तुत किए जाते हैं; जो केन्द्रीय जल और विद्युत अनुसंधान शाला की विशेषज्ञता वाले सात मुख्य विषयों में वर्गीकृत हैं।

केन्द्रीय जल और विद्युत अनुसंधान शाला ने आईएसओ और बीआईएस के मानकों को पुनर्जीवित करने तथा विकसित करने में भी महत्वपूर्ण योगदान दिया है।

30.10.2019

डॉ (श्रीमती) व. वि. भोसेकर
निदेशक



इंदिरा सागर बाँध अधिप्लव मार्ग प्रतिमान

INSTALLATION OF SOLAR POWER PLANT

The Solar Power Plant of 700 KWp was Inaugurated at CWPRS by Shri Gajendra Singh Shekhawat, Hon'ble Union Minister, Ministry of Jal Shakti, in the presence of Shri U.P.Singh, Secretary, Ministry of Jal Shakti, Department of Water Resources, River Development & Ganga Rejuvenation and Dr. (Mrs.) V.V.Bhosekar, Director CWPRS on 20th August, 2019. Ministry of Jal Shakti directed CWPRS to implement generation of Solar Power to promote ecological and sustainable growth as per the MNRE directives. Accordingly, CWPRS has taken up the work of installation of roof top Solar Power Plant in CWPRS Campus to meet the power demand and to affect savings by reducing the use of conventional Energy from the Grid.

- The infrastructure facilities installed at CWPRS consumes around 90,000 KWh power per month and the energy bill is around Rs.15 Lakhs per month.
- MOJS, DoWR, RD&GR directed CWPRS to install Solar Power plant to promote ecological and sustainable growth as per the MNRE directives
- CWPRS has installed the plant in RESCO model (Renewable Energy Service Company). The RESCO model is a zero-investment model, in which the consumer pays only for the electricity generated, while the solar plant is owned and maintained by the RESCO developer.
- Surplus solar power generated during holidays will be fed to the Grid which will be adjusted with the units consumed from the MSEDCL and this power will be utilized by CWPRS during peak hour and rainy days.
- The present grid tariff of CWPRS @ Rs. 12.50 per unit is escalating every year by 3-5%, while the solar tariff rate is fixed @ Rs. 3.62 per unit for 25 years.
- The electricity bill of 15 Lakhs per month will reduce to approximately Rs. 7.0 Lakhs per month after Solar Power utilisation. Hence there will be a saving in the power bill of CWPRS to the tune of Rs. 8 Lakhs per month

Visit of Shri Gajendra Singh Shekhawat, Honourable Minister and Shri Upendra Prasad Singh, Secretary to different models

Shri Gajendra Singh Shekhawat, Hon'ble Minister, Jal Shakti, at Multi Purpose Wave Basin Hanger

Shri Gajendra Singh Shekhawat, Hon'ble Minister, Jal Shakti at Yamuna River Model

Visit to Kosi Model

Shri Gajendra Singh Shekhawat, Hon'ble Minister, Jal Shakti at Yamuna River Model

Tree plantation by Shri U.P.Singh, Secretary, Jal Shakti

Visit to Polavaram Dam Spillway Model

First Meeting of Project Monitoring Committee of Coastal Management Information System (CMIS)

Considering the importance of collection of data on coastal processes relevant for evolving long term plans and coastal protection measures, a new component in the 12th Five Year Plan (Period 2012-17) for the establishment of Coastal Management Information System (CMIS) has been approved by the Government of India under the Plan Scheme of Ministry of Jal Shakti, Department of Water Resources, Ganga Rejuvenation & River Development (MoJS,DoWR, RD & GR).

Being the implementing agency for CMIS, Central Water Commission (CWC) decided to rope in the expertise of research agencies/institutions for the role of project executor for the implementation of CMIS, in response to which, Central Water and Power Research Station (CWPRS), Pune submitted a proposal containing an estimate for the implementation of CMIS one each in the North Maharashtra and South Gujarat. The proposal was approved and tripartite agreement was signed between CWC, CWPRS and State Government of Maharashtra and Gujarat. Subsequently, a Project Monitoring Committee (PMC) was set up in July 2019 for close monitoring of CMIS project. The first meeting of PMC was convened on 19.09.2019 at CWPRS, Pune.

Dr. (Mrs.) V. V. Bhosekar, Director CWPRS welcoming Shri M. P. Singh, Chairman, PMC

Shri M.P. Singh, Chief Engineer, C.W.C & Chairman, PMC addressing members

गवर्निंग कौंसिल की बैठक

दिनांक 30.09.2019 को नई दिल्ली में माननीय सचिव, **श्री उपेन्द्र प्रसाद सिंह**, जल शक्ति मंत्रालय, जल संसाधन, नदी विकास एवं गंगा संरक्षण विभाग की अध्यक्षता में गवर्निंग कौंसिल की बैठक संपन्न हुई।

VISIT OF CWPRS OFFICERS TO INDIRA SAGAR DAM PROJECT, MADHYA PRADESH

The spillway for Indira Sagar Dam was operated with various discharges with partial gate operation of main spillway. In consultation with CWPRS officers, project officers gradually operated all gates of main spillway up to the gate opening of 3.0 m with reservoir level El. 260.75 m till the cascading flow is transformed into ski action. After reaching the 3.0 m gate opening for all gates of main spillway, a clear ski action was seen in the prototype as observed in the model for the same condition. Corresponding discharge of about 7470 m3/s was passing through 12 spans of main spillway. CWPRS and NHDC officers were satisfied with the performance of the EDA of main spillway.

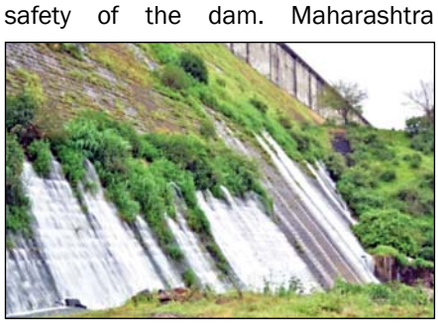
To witness the performance of auxiliary spillway and flow conditions downstream of the spillways for combined operation of main and auxiliary spillway, further all 8 gates of auxiliary spillway were opened by 1 m. It was observed that lateral flow coming from auxiliary spillway did not affect the ski action of the main spillway as observed in the 3D comprehensive model. The model-prototype conformity was seen exactly for both the above mentioned conditions, which underlines the importance of model studies

Development of Navi Mumbai International Airport (NMIA)

A new Greenfield airport known as Navi Mumbai International Airport (NMIA) is being developed by City and Industrial Development Corporation of Maharashtra Limited (CIDCO) in Panvel creek at Kopre-Panvel area of Navi Mumbai. One of the major components of this project is recoursing of Ulwe River for the purpose of reclamation of land for Airport. CIDCO has reported that this important phase of NMIA viz.,recoursing of Ulwe River has been successfully completed as per the recommendation given by CWPRS. On 2nd July 2019, Panvel area received high magnitude rainfall of 350 mm in 24 hours, out of which 250 mm in just 6 hours. It was the first rain after completion of diversion work of Ulwe recourse channel. The water flow has been well confined with in the 3.2 km long Ulwe River recourse channel. According to CIDCO, now the Ulwe River in this region is flowing smoothly and there is no threatening situation in Ulwe River after the completion of recourse channel as suggested by CWPRS. CIDCO has expressed appreciation and has acknowledged the usefulness of studies carried out in respect of Navi Mumbai International Airport by CWPRS, Pune

Seepage Control in Temghar Dam under the guidance of CWPRS, Pune

Temghar dam a 86.6 m high stone masonry gravity dam, has been constructed across Mutha River near Pune district of Maharashtra during the period March 1997- May 2010. Heavy water leakages with high exit pressure have been observed at many locations when construction reached RL 685 m. This continuous heavy seepage through dam body raised apprehensions about the structural safety of the dam. Maharashtra government formed Temghar Dam Expert Committee in the year 2015 by including senior Scientists from CWPRS, Pune, to suggest remedial measures for controlling seepage through dam body. Several studies namely, Cementitious grout mix design, Shotcrete mix design, estimation of in-situ material properties by field studies, stress and stability analysis of the dam etc. have been conducted by CWPRS towards rehabilitation of the Temghar dam for arresting seepage/ leakage and improving structural safety of the dam. Extensive dam body grouting and shotcrete application on upstream face has been carried out under the supervision of CWPRS during the last two years under reservoir empty conditions. This has resulted more than 90% of water seepage/ leakage reduction i.e. from 2500 LPS to 210 LPS through the dam body. Also, significant improvement has been observed in the structural safety of the dam. Based on remedial measures carried out under the guidance of CWPRS, the Project Authority has decided to store water upto full reservoir capacity from the previous 45% reservoir capacity before carrying out remedial measures. This has enabled availability of more water for drinking and irrigation purposes to the local population downstream of the dam.



Upstream face of dam before grouting and shotcrete, July 2016

Upstream face of dam after grouting and partial shotcrete, July 2019

JAL SHAKTI ABHIYAN

- Jal Shakti Abhiyan (JSA) launched by Ministry of Jal Shakti is a time bound campaign with a mission mode approach intended to improve conditions in around 1500 Blocks that are drought affected, water stressed or over-exploited falling in 254 districts with water conservation related central programmes.
- JSA was planned to be carried out in two phases.
- Phase - 1 was from July 1 to September 30, 2019 for all States.
- Phase - 2 is from October 1 to November 30, 2019 for States/UTs with retreating monsoon namely Andhra Pradesh, Tamilnadu, Karnataka, and Pondicherry.
- The JSA aims at making water conservation a Jan Andolan through asset creation and extensive communication.
- During the campaign, central team officers worked together with district officials for the water conservation and focus on implementation of following five target interventions:
  - (i) Water conservation and rainwater harvesting
  - (ii) Renovation of traditional water bodies/tanks
  - (iii) Reuse, bore well recharge structures
  - (iv) Watershed development
  - (v) Intensive afforestation

Participation of CWPRS in Jal Shakti Abhiyan (JSA)

A total of 32 officers from CWPRS were nominated as Technical Officers for JSA

- 20 for Tamil Nadu
- 6 for Maharashtra
- 4 for Karnataka &
- 2 for J&K

❖ Most of the Technical Officers have completed their mandatory three field visits (Phase -1) to their respective Blocks.

❖ Technical officers visited the alloted district / blocks to monitor the progress of rain water harvesting structures provided at district levels during JSA.

❖ They were involved in large-scale communications campaign by mass mobilization of different groups including villagers, farmers, school & college students etc. and submitted their reports.

❖ CWPRS officers also delivered lectures in Educational Institutes and Organizations to spread the motto of JSA among the Public.

Glimpses of Mass awareness programmes during JSA visits by Technical officers

SWACHHTA HI SEWA– PLASTIC FREE CAMPAIGN 2019

Swachhta Hi Sewa – Plastic Free Campaign 2019 (11th September to 27th October 2019) was started at CWPRS, Pune from 11th September 2019. Following activities were carried out during the campaign till 30th September 2019.

- Shramdan for cleaning the roads, office and models at CWPRS by all officers and staff members.
- Padyatra for awareness about "Swachhta Hi Sewa-Plastic Free Campaign 2019" at CWPRS office, colony, Kolhewadi and Kirkitwadi villages.
- Planting of saplings at CWPRS campus and colony.
- Meeting with village heads of Kolhewadi, Kirkitwadi, Khadakwasla and Nanded gram-panchayat regarding "Swachhta Hi Sewa-Plastic Free Campaign 2019" and joint measures to avoid single use plastic at all levels.
- Awareness building for the objectives of "Swachhta Hi Sewa-Plastic Free Campaign 2019" at Kirkitwadi, Kolhewadi villages and Z.P. schools at Kirkitwadi and Kolhewadi villages.

Awareness campaign in CWPRS including Sarpanches of nearby villages to avoid singleuse plastic items in day today life

Padyatra from CWPRS main building via Kolhewadi-Kirkitwadi-Sinhgad Road to CWPRS colony for awareness about "Swachhta Hi Sewa-Plastic Free Campaign 2019"

Shramdan along the Channel in CWPRS

Plantation of saplings on Hindi Day at CWPRS campus

Meeting with village heads of Kolhewadi, Kirkitwadi, Khadakwasla and Nanded Grampanchayats regarding planning of Swachhta Hi Sewa-Plastic Free Campaign

Padyatra from CWPRS to Kolhewadi village

Public awareness at Kolhewadi village

Awareness buikding among students at Kolhewadi school, Pune

Awareness building among students at Kirkitwadi Jilah Parishad School, Pune

LETTER OF APPRECIATION BY NAVIMUMBAI INTERNATIONAL AIRPORT (NMIA) AND TILLARI INTER-STATE IRRIGATION PROJECT DIST. SINDHUDURG (MAH)

Govt. of Maharashtra
• Water Resources Department •
EXECUTIVE ENGINEER,
SINDHUDURG IRRIGATION PROJECT CONSTRUCTION DN.
CHARATHE- SAWANTWADI •
"visit us on : https://wrd.maharashtra.gov.in" •

• AT & Post - Charathe - Sawantwadi, Tal :- Sawantwadi- Dist Sindhudurg-416510• Ph/ Fax .02363/272213•
Email : eetcd1@gmail.com •

No. SIPCD/ PB- I / BBC / Km No. 10 / 95 / 2019 Dated : 11 / 09 / 2019

Dr.(Mrs.) V.V. Bhosekar, The Director,
Central Water and Power Research Station
Central Water and Power Research Station Colony
Sinhagad Road, Khadakwasla, Pune - 411024
Ph. 02024103200 / 02024380552, email. cwprs.gov.in
(Kind Attention :- Dr. Sanjay A. Burele, Scientist, "B")

Subject :- TILLARI INTERSTATE IRRIGATION PROJECT Dist :- SINDHUDURG (MAH)
Letter of Appreciation

Dear Mrs. Bhosekar

It gives me immense pleasure to take this opportunity to express my heartfelt sincere thanks and appreciate you and your team for investigative, laboratory and field study in connection with the designing of successful Preventive Remedial Measure regarding stability of hillock on Inspection path side of Canal and Protecting RCC Box Conduit work against uplift pressure in the reach of Km No. 10 in between Ch. 9/735 m to Ch. 9/920 m of Banda Branch Canal of Tillari Interstate Irrigation Project in Sindhudurg District.(Maharashtra)

The work involved in this remedial measure is (1) Drilling and casting of RCC piles in Three Rows in the bottom of RCC Box Conduit and connecting these piles with Longitudinal & Cross RCC Beam in between Ch. 9/775 m to Ch. 9/860 m (85 m Length), (2) Drilling and casting of RCC piles in Two Rows on the berm level on Inspection Path side of Canal in between Ch. 9/735 m to Ch. 9/920 m (185 m length) and connecting these piles with Longitudinal & Cross RCC Beam, (3) Constructing Retaining wall on Service Road side for Protecting Earth Filling of 6.00 m deep over the slab of RCC Box Conduit in between Ch. 9/735 m to Ch. 9/920 m and maintaining Service road approachable.

The CWPRS team has contributed immensely through several field visits during the studies and by the virtue of execution at site and provided valuable suggestions during meetings/ Telephonic discussions regarding stability of hillock on Inspection path side of Canal and Protecting RCC Box Conduit work against uplift pressure.

During mansoon period of 2019, work was continuously under observation and it is noticed that, work of RCC Box Conduit in between Ch. 9/735 m to Ch. 9/920 m with Preventive Remedial measures for slope stability is safe & intact after heavy Rainfall also. There is no any uplift movement of RCC box conduit is observed.

Due to execution of this successful remedial measure, this division succeeded into providing Water upto Km No. 29 during May 2019, beyond Km No. 10, which was unable from 2009. i.e near about 10 Years from Completion of Canal upto Km No. 29. Sliding of Hillock and uplift movement of RCC Box Conduit in Km No. 10 was the main hindrance in providing water to irrigable area in the extent of about 3958 Ha beyond Km No. 10 of Banda Branch Canal. Due to successful and perfect solution from CWPRS, Pune in this respect, department is succeeded in solving this problem and in feature able to provide water upto Km No. 57 of Banda Branch Canal.

This division extends sincere thanks and highly appreciates to Dr. K.C. Dhawan, Scientist 'D', CWPRS, Pune and Dr. Sanjay A. Burele, Scientist 'B', CWPRS, Pune for investigative study and giving successful designing in remedial measure against stability of hillock on Inspection path side of Canal and Protecting RCC Box Conduit work against uplift pressure and providing valuable suggestions during this process by site visit / during meetings / Telephonic discussions..

I once again extend my sincere thanks towards your services and greatly appreciate for assistance you have provided to our organization regarding stability of hillock on Inspection path side of Canal and Protecting RCC Box Conduit work against uplift pressure in between Banda Branch Canal in Km No. 10 of Tillari Irrigation Project of Sindhudurg District.(Maharashtra)

I am looking forward to explore this association with you in feature also

Thanking you. With Regards

(R. R. Dhaklode)
Executive Engineer
Sindhudurg Irrigation Project Construction Division
Charathe–Sawantwadi. Dist :- Sindhudurg

सिडको
शहराचे शिल्पकार

शहर व औद्योगिक विकास महामंडळ (महाराष्ट्र) मर्यादित

(सीआयएन - यु ९९९९९ एमएच १९७० एसजीसी - ०१४५७४)

नोंदणीकृत कार्यालय :
'निर्मल' दुसरा मजला, नरीमन पॉईंट,
मुंबई - ४०० ०२१.
दूरध्वनी : ००-९१-२२-६६५० ०९००
फॅक्स : ००-९१-२२-२२०२ २५०९

मुख्य कार्यालय :
'सिडको' भवन, सी.बी.डी. बेलापूर,
नवी मुंबई ४०० ६१४.
दूरध्वनी : ००-९१-२२-६७९१ ८९००
फॅक्स : ००-९१-२२-६७९१ ८९६६

संदर्भ क्र. CIDCO/CE(NMIA)/2019/648 /E-1946 दिनांक : 08.08.2019.

To,
Dr. Mrs. V.V. Bhosekar,
Director, CWPRS,
Khadakwasala,
Pune -411024.

Sub:- Letter of appreciation.

Dear Mrs. Bhosekar,

It give me immense pleasure to take the opportunity to express my heartfelt thanks and appreciate you and your team for successful " **Mathematical model studies for the modified layout of proposed International Airport of Navi Mumbai" and "Preparing technical report on storm water drainage studies for Dungi, Pargaon, Dapoli, Khalche Owale and Bhangarpada villages near NMIA Navi Mumbai"**

CIDCO has completed 1st phase of land development works and also commissioned the "Ulwe Recourse Channel" in the month of June 2019 as per the recommendation of the CWPRS.

The **CWPRS** team visit CIDCO office and site of the NMIA for successful completion of the project with professional expertise, hard work and diligence. It is significant that the **'Ulwe Recourse Channel'** is functioning smoothly.

I once again extend my sincere thanks towards you services and greatly appreciate the assistance, you have provided to our organization. I am looking forward to explore this association of 'CIDCO' with you in future also.

With regards,

(R. B. Dhayatkar)
Chief Engineer (NMIA)
3rd floor, CIDCO Bhavan,
CBD-Belapur, Navi Mumbai.

भ्रष्टाचारासंबंधी कुठल्याही तक्रारीसाठी कृपया या संकेतस्थळाला भेट द्यावी.
cidco.maharashtra.gov.in / CIDCO VIGILANCE MODULE NEW / Userlogin.aspx

One Day In-house Training Program on eGovernance for Group "A" Officers

Induction Training Programme for newly recruited Group 'B' & 'C' employees

केन्द्रीय जल और विद्युत अनुसंधान शाला में हिंदी दिवस समारोह का आयोजन

केन्द्रीय जल और विद्युत अनुसंधान शाला, खड़कवासला, पुणे में 16 सितम्बर, 2019 को मुख्य अतिथि श्री संजय भारद्वाज, हिन्दी साहित्यकार के कर कमलों द्वारा दीप प्रज्ज्वलित कर हिन्दी दिवस समारोह कार्यक्रम की शुरूवात हुई। दिनांक 1 सितंबर से 16 सितंबर, 2019 तक आयोजित विभिन्न प्रतियोगितायों (निबंध लेखन, वार्तालाप, पोस्टर, प्रश्नमंच, अंताक्षरी, शुद्ध लेखन, काव्य पाठ, तकनीकी शब्दों का हिन्दी अनुवाद, तकनीकी कार्य में हिन्दी का प्रयोग और हिंदी में मूल रूप से टिप्पण आलेखन योजना आदि) में पुरस्कार प्राप्त अधिकारियों/कर्मचारियों को मुख्य अतिथि द्वारा नकद पुरस्कार एवं प्रमाणपत्र देकर प्रोत्साहित किया गया। अनुसंधान शाला की निदेशका, डॉ. (श्रीमती) वर्षा विनायक भोसेकर ने अपने संबोधन में कहा कि आज का दिन 'हिन्दी दिवस' के रूप में हम सबके लिए विशेष है। भारत के एक कोने से दूसरे कोने तक हिन्दी बोली और समझी जाती है। हिन्दी भारत की राष्ट्रभाषा ही नहीं, बल्कि भारतीयों की पहचान है। माना, आज के आधुनिक युग से जुड़ने के लिए अन्य भाषाएं सीखनी जरूरी हैं, परन्तु हमें अपनी राष्ट्रभाषा को नहीं भूलना चाहिए।

मुख्य अतिथि श्री संजय भारद्वाज, ने अपने संबोधन में सभी विजेताओं को बधाई दी व कहा, "यही कारण है कि भाषा को संस्कृति की वाणी कहा जाता है। इसी कारण कूटनीति का एक सूत्र है, यदि किसी भी राष्ट्र की सभ्यता और संस्कृति को नष्ट करना हो तो सबसे पहले उसकी भाषा को नष्ट कर दिया जाए। विदेशियों के नौ सौ साल के शासन के दौरान तो यह होना ही था, क्योंकि उनकी सोच में भारत की सभ्यता और संस्कृति का विकास कहीं नहीं दिखता था।"

हिन्दी दिवस के अवसर पर आयोजित प्रतियोगिता हिन्दी शुद्ध लेखन में हिस्सा लेते हुए प्रतिभागी

हिन्दी दिवस -2019 के अवसर पर मुख्य अतिथि श्री संजय भारद्वाज के कर कमलों द्वारा राजभाषा प्रोत्साहन शील्ड पुरस्कार लेते हुए

हिन्दी दिवस-2019 के अवसर पर मुख्य अतिथि श्री संजय भारद्वाज हिन्दी गृह पत्रिका जलवाणी के 26वें पुष्प का विमोचन करते हुए

सेवा निवृत्ति

1) **श्री आशीष कुमार घोष**, वैज्ञानिक "ई" दिनांक 30.09.2019 को केन्द्रीय जल और विद्युत अनुसंधान शाला से सेवा निवृत्त हुए। वे 01.07.1982 को अनुसंधान सहायक (इंजीनियरिंग) (सिविल) के रूप में पदभार संभालते हुए सेवा निवृत्ति के समय वैज्ञानिक "ई" के पदभार से अपने 37 वर्ष 03 महिने की अविरत सेवा के बाद सेवा निवृत्त हुए। कंपन प्रौद्योगिकी प्रभाग में उनका महत्वपूर्ण योगदान रहा।

2) **श्री किशोर अप्पाजी पाटोळे**, बहु कार्य कर्मचारी वृंद 30.09.2019 को केन्द्रीय जल और विद्युत अनुसंधान शाला से सेवा निवृत्त हुए। वे 08.05.1983 को मददगार श्रेणी-III के रूप में पदभार संभालते हुए सेवा निवृत्ति के समय बहु कार्य कर्मचारी वृंद पदभार से अपने 37 वर्ष 4 महिना 6 दिन की अविरत सेवा के बाद सेवा निवृत्त हुए। गैरेज अनुभाग/ निर्माण तथा क्रय कक्ष प्रभाग में उन्होंने महत्वपूर्ण योगदान दिया।

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