

## आर.डी.एस.ओ में गणतंत्र दिवस समारोह का आयोजन

आर.डी.एस.ओ. प्रांगण में 68वें गणतंत्र दिवस समारोह बड़े हर्ष और उत्साह के साथ मनाया गया। इस अवसर पर आयोजित रंगारंग समारोह में भारी संख्या में अधिकारियों, कर्मचारियों तथा उनके परिवारजनों की उपस्थिति में श्री पी० के० श्रीवास्तव, महानिदेशक/आर.डी.एस.ओ. ने राष्ट्रीय ध्वज फहराया। इस अवसर पर श्री श्रीवास्तव ने अधिकारियों, कर्मचारियों तथा उनके परिवारजनों को बधाई दी और रेल उपभोक्ताओं हेतु सुरक्षित और आरामदायक यात्रा के लिए अनुसंधान एवं विकास कार्यों के माध्यम से भारतीय रेल के बेहतर प्रचालन हेतु पूर्ण समर्पण दिखाने की आवश्यकता पर बल दिया। महानिदेशक महोदय ने आर.डी.एस.ओ. के प्रगति कार्यों पर भी चर्चा की और आर.डी.एस.ओ. को एक विश्व स्तरीय संगठन बनाने पर बल दिया।

इस अवसर पर भारत स्काउट्स एण्ड गाइड/आर.डी.एस.ओ. जिला तथा केन्द्रीय विद्यालय/आर.डी.एस.ओ. एवं अरुणोदय विद्यालय



के बच्चों ने राष्ट्रीय भावना पर आधारित सांस्कृतिक कार्यक्रम भी प्रस्तुत किया। इसके अतिरिक्त जेआर आरपीएफ अकादमी द्वारा मोटर बाइक एवं मलखम का उत्कृष्ट प्रदर्शन किया गया।

## INNORAIL Exhibition & International Conference at RDSO

2nd Innorail International Conference was organized by RDSO in association with CII (from 01.12.2016 to 03.12.2016) at RDSO Lucknow. Technical seminars on various current technical issues were held during the INNORAIL in which about two hundred companies from India and all over the world showcased their products and innovations in the field of Railway Technology. Japan was the partner country for INNORAIL and 40 companies from Japan participated in the 3 day event. Hon'ble MR Shri Suresh Prabhu addressed the conference by Video Conferencing in which experts from all

over the world participated and deliberated their expert views on the latest innovations happening around the world. The conference was widely appreciated by the media and by the industry.



## Automatic Fire Detection & Alarm System (AFDAS)

The final specification for Automatic Fire Detection & Alarm System (AFDAS) (RDSO/SPN/217/2016 Ver. 1.0) has been approved and issued for vendor registration and development on dated 03.11.2016. The final Schedule of

Technical Requirements for Automatic Fire Detection & Alarm System (AFDAS) (SIQ 0211 Ver. 1.0) was also approved and issued for vendor registration and development on dated 17.11.2016.

## Rail Vikas Shivir

Indian Railways organized a 3 day Rail Vikas Shivir (Rail Development Camp) at Surajkund near New Delhi, from 18th November to 20th November 2016 with a view to generate innovative yet practical ideas covering most of the critical areas of Railway Operations and Infrastructure for modernization & transformation of Railways. The Shivir was inaugurated by Hon'ble Prime Minister of India Shri Narendra Modi and was attended by a team of RDSO Officers & Officials including DG, ADG, Executive Directors (Research, PS&EMU and Administration), Directors (B&S, Testing, Computer).



Following five innovative ideas were presented by RDSO during Rail Vikas Shivir :

1. Open Wagon with detachable cover
2. Next Generation Signalling System Based on Microcontrollers
3. Development of trains to carry both Passengers and Cargo
4. Moving Block-A way to enhance throughput with minimum inputs
5. Design & Develop components of technology which can deliver subsonic guided transport.



## Meeting of SRESTHA

A meeting of Special Railway Establishment for Strategic Technology & Holistic Advancement (SRESTHA) was held on 23.1.2017 at newly designated PMU office at Lucknow. The meeting was presided over by Dr. V.K. Saraswat, Hon'ble Member of NITI Aayog and was attended by Director General, Additional Director General, Executive Director/ E&R/ Railway Board, Chief Engineer(HQ)/Northern Railway & Sr.EDs/EDs from RDSO along with following members of Advisory Group of Experts.

SN	Name	Designation
1.	Dr. N.S. Vyas	Chairman, TMIR
2.	Dr. S.K. Salwan	Chairman, Armaments Research Board, DRDO
3.	Prof. Prem Vrat	Pro-Chancellor, Northcap University
4.	Dr. N.K. Gupta	Ex. Project Director/ISRO
5.	Shri Jeet Sondhi	Former World Bank and Rail Expert

Issues related with operationalization of SRESTHA like nomination & functioning of Project Monitoring Unit (PMU), nomination of team for different verticals/centre of excellence were discussed during the meeting.



## 4<sup>th</sup> Meeting of Malaviya Chair

4<sup>th</sup> meeting of Chair Core Committee of Malaviya Chair was held on 09<sup>th</sup> January 2017 at RDSO Lucknow. The Meeting was chaired by Secretary, Railway Board and was attended by members of IIT-BHU, Railway Board & RDSO, Scientist from DMSRDE Kanpur, delegates from M/s Saertex. Newly sanctioned Project on 'Use of Smart (Alternate) Materials in Design of Rolling Stock' & Progress of two

sanctioned projects were discussed during the meeting. Issues like FEM training International Seminar, New Project proposal, and Follow-up Action on MOM of 3rd CCC meeting were also discussed during the meeting. Executive Director/ Research and other officers from RDSO attended the Meeting of Technology Mission for Indian Railways (TMIR) held on 20th January 2016 at Railway Board, New Delhi.



## आर. डी. एस. ओ. राजभाषा कार्यान्वयन समिति की बैठकों का आयोजन

महानिदेशक श्री पी. के. श्रीवास्तव की अध्यक्षता में दिनांक 28.11.2016 को कान्फ्रेंस हॉल में आर. डी. एस. ओ. राजभाषा कार्यान्वयन समिति की बैठक आयोजित की गयी जिसमें

समिति के सभी सदस्यों तथा सदस्य-प्रेक्षक ने भाग लिया। बैठक में दिनांक 30.09.2016 को समाप्त तिमाही की प्रगति की समीक्षा की गई।



## Visit of Research Team from RTRI/Japan

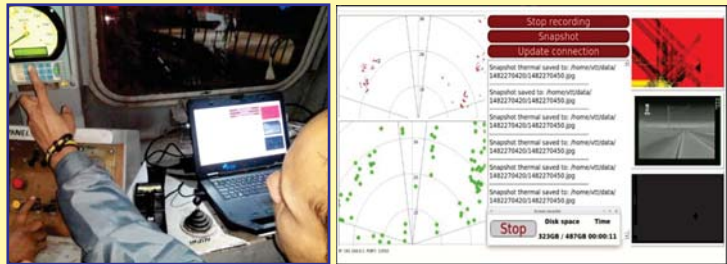
A Research Team from Railway Technical Research Institute (RTRI)/ Japan headed by Mr. Mitsumasa Tatsumi, Senior Chief Researcher, Rail Welding, Mr. Yoshihiro Terashita, Senior Researcher, Rail Welding & Mr. Yoshikazu Kanematsu, Assistant Senior Researcher, Frictional Materials visited RDSO on 24-01-2017 & 25-01-2017 in connection with development of Rail

Fracture Detection System for Indian Railways. Interaction Meetings of RTRI team with officers of Track Directorate and M&C were held, in which damage analysis of Rail and Weld parts of track, Inspection methods used in Japan were discussed. RTRI team also visited various laboratories of RDSO and testing facilities of RDSO and shared their experiences.



## Fog Vision Technology

A presentation on Fog Vision Technology of M/s VTT, Finland was made by M/s Tooltech Global Engineering, Pune at RDSO/Lucknow on 6th December 2016. Further field trial of Fog vision system was done on 19th & 20th December 2016 via Lucknow Mail (12229/12230) between NDLS-LKO-NDLS. In this regard a meeting was also held on 22.12.16 at NITI Aayog to discuss the issues related to this system, which was attended by Senior Officers from RDSO.



## Design of H-type Coupler (740 mm) for Reduction of Buffer Gap

A meeting was held on 29.02.16 Railway board on H-type coupler issues and it was decided to optimize the design of H-type coupler, to overcome the problem of excess buffer gap. Being a proprietary design, RDSO instructed all the firms to maintain the takeoff point of H-type coupler same as E-type coupler. M/s Frontier alloy steels (FASL) has submitted a proposal of H-type coupler (740 mm) with modified clevis in place of existing coupler length (752 mm). As decided in meeting one modified coupler assembly supplied by M/s FASL Kanpur, was fitted in

WDP4D loco no 40304 based at AMV shed and coupling trial was conducted with coach having screw coupling at Charbagh on 28.10.16 to verify the gap between buffers. It was found that buffer gap has been reduced and average gap of 32 mm was measured with modified clevis arrangement in H type tight lock coupler. Few more couplers would be provided for dedicated trials in two sheds. Railways will feel more confidence for safe train operation and reduction of snatch load on screw coupling would also increase reliability of product.



## SATCOM and SATNAV Based System for Indian Railways

RDSO has undertaken a trial project with SAC/ISRO for development and trial of SATCOM and SATNAV based system for Indian Railways. The MoU was signed on 12.10.2015 between Space Application Center (SAC) ISRO Ahmedabad and RDSO Lucknow. The initial funding for phase-I (trial phase) is being borne by ISRO.

The system will broadly serve the following purposes:

- Real-time train tracking
- Warning at unmanned level crossings
- Navigation Aid to Loco Pilot
- Emergency voice communication and messaging
- Unusual incidence reporting and SoS messaging

## Miller Turbocharger for 16 Cylinder ALCo Locomotive of Indian Railways

In Miller Cycle, the engine's effective compression stroke has been made shorter than the expansion stroke by shifting the intake valve timing. Early closure of the intake valve necessitates a higher boost pressure to get the same quantity of air into the cylinder during the suction stroke.

The main purpose of the miller process is to increase power density of the engines without exceeding thermal and mechanical limits.

Miller Turbocharger has been fitted in Loco No-11260 of Alam Bagh Shed, Lucknow. and It is under field Trial Since 07-06-2016 after field trial this miller turbocharger will be tested at test bed of Engine Development Directorate of RDSO.

Expected benefits of Miller Turbocharger technology are:

- Reduction in NOx emissions (approx 20%)

- Fuel saving (approx 2%)
- Reduction in exhaust gas temperature (50 degree centigrade)
- Engine footprint of the existing turbocharger is retained



Miller Turbocharger for ALCO Locomotives

## A Special Course for Bridge Design Assistant

“Special Course for Bridge Design Assistant for ABEs and Design Assistants involved in bridge design including Earthquake provision compliance was conducted by B&S Directorate in their conference hall from 26.12.2016 to 30.12.2016 (5 Days). 21 trainees from different zonal railways attended this course. Topics covered during training were design of composite steel girder, open web girder, bowstring girder, ROB Bridge, RCC box, LWR on bridges, Guideline for GAD, Instrumentation of bridges, clearance of rolling stock, earthquake codal provisions, and track stress.”



Session No. 16425 One Week Special Course for Bridge Design course in B&S Conference Hall RDSO

## नगर राजभाषा कार्यान्वयन समिति (कार्यालय-3) लखनऊ की अर्धवार्षिक बैठक

नगर राजभाषा कार्यान्वयन समिति (कार्यालय-3), गन्ना अनुसंधान संस्थान, लखनऊ की अर्धवार्षिक बैठक दिनांक 16.12.2016 को आयोजित की गई। इस बैठक में संगठन के मुख्य राजभाषा अधिकारी एवं सहायक हिंदी अधिकारी ने भाग लिया। नगर

राजभाषा कार्यान्वयन समिति द्वारा आर.डी.एस.ओ. को कार्यालयी कार्यों में उत्कृष्ट प्रदर्शन हेतु अष्टम पुरस्कार तथा हिंदी कार्यशाला का सफलतापूर्वक आयोजन हेतु प्रमाण-पत्र प्रदान किया गया।

## आर.डी.एस.ओ. में स्वागत



श्री राकेश कुमार मिश्रा ने दिनांक 02.11.16 को कार्य. निदेशक/इनर्जी मैनेजमेंट का कार्यभार ग्रहण किया।



श्री मनोज कुमार राम ने दिनांक 02.11.16 को निदेशक/स्टोर का कार्यभार ग्रहण किया।



श्री एस.के. वर्मा ने दिनांक 02.11.16 को निदेशक/स्टोर का कार्यभार ग्रहण किया।



श्री योगेश कुमार ने दिनांक 02.12.16 को निदेशक/मानक विद्युत का कार्यभार ग्रहण किया।



श्री मुख्तियार सिंह ने दिनांक 13.12.16 को संयु.निदेशक/कैरेज का कार्यभार ग्रहण किया।



श्री सुप्रिया बोस ने दिनांक 16.12.16 को संयु.निदेशक/वैगन का कार्यभार ग्रहण किया।

### Kind Attention to Our Readers :

- ❖ The achievements and good work done in or out side RDSO, by all officers and staff are always welcome. They may send their brief write-up with photograph to the editor for inclusion in RDSO Highlights.
- ❖ The RDSO employees are also welcomed to send achievements/write-up of their wards along with photograph for inclusion in RDSO Highlights.

Editor, RDSO Highlights

एन.के. सिन्हा / कार्यकारी निदेशक / प्रशासन, I एवं ई०एम०एस०, अनुसंधान अभिकल्प और मानक संगठन, रेल मंत्रालय, लखनऊ द्वारा संपादित एवं प्रकाशित।  
RDSO Website <http://www.rdsO.Indianrailways.gov.in> E-mail : [publicationrdsO@gmail.com](mailto:publicationrdsO@gmail.com)