



भारत निर्मित विश्व निमित्त
रेलवे उत्पादों एवं सेवाओं के निर्यात की संभावनाओं को साकार करना
Make in India for the World
Realising Export Potential of Railway Products & Services

**Seminar Organised
by**

Indian Railways

at

National Academy of Indian Railways, Vadodara

Co-hosted by

Export Import Bank of India

on

15th & 16th December 2015

भारत सरकार, रेल मंत्रालय
भारतीय रेल राष्ट्रीय अकादमी
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EXECUTIVE SUMMARY

There exists a significant global opportunity for railway equipment, rolling stock and services. The current market volume for railway products, equipment and services is around EUR 162 billion per year and is said to be growing at a rate of 3.4 percent per annum. Modest share (5%) of the market amounts to significant figure Rs. 50000 crores. In this context, National Academy of Indian Railways organized a two days seminar “Make in India for the World – Realizing export potential of Railway products & services” on 15th and 16th December 2015 with the participation of Railway Board, Production Units, Workshops, RDSO, Public Sector Units, Exim Bank, Directorate-General of Foreign Trade, and important private industries. The seminar came up with vision and mission for exports along with a roadmap for positioning India as a dominant player on global stage.

Vision should be “To establish Indian Railways as a World Brand for Railway Products and Services” and Mission should be “Deliver timely, quality engineered, appropriate technology based, railway equipment and services at the most competitive rates”.

Main constraints to increase the export of Indian Railways is inward looking attitude. Non availability of off the shelf designs for export market, excessive time taken in responding to the market requirement, business processes not amenable to quick decision making, lack of platform for exchange of information, quality issues and surplus manufacturing capacity not identified are other constraints.

There exists market for rolling stock and infrastructure services in the countries of Africa, South America, Middle East, South east Asia and CIS countries. Railway focussed on IT related services have potential market all over the world. IR should leverage India’s strength in R&D services and IT to gain entry in world market. Participation in railway oriented trade fairs and exhibitions at various trade fairs to show capabilities is essential.

Road Map is to create Railway Export Board to drive export initiatives, Railway Export Council for coordination of resources, creation of SPV for export, create a forum for regular deliberations amongst RITES, Railway Board, RDSO, PUs for export promotion. In addition to above, creation of world class testing facilities, collaboration with technologically advanced countries, organise funding from infrastructure bonds, JICA/ Korea, EXIM Bank, World Bank/ ADBIMF are required.

Empowering PUs to allocate small production capacity say 5% for export will facilitate RITES for timely compilation of export order. Appointing/ hiring of marketing consultant on international level is important because export marketing is a specialised job.

IR should develop the products which are required by the customer like meter, cape and standard gauge rolling stock.

For export promotion railway staff and officer should be given monetary and non monetary incentives.

Actionable points for Railway Board , Ministry of External Affairs, National Academy of Indian Railways, Export Import Bank of India, RITES, IRCON, CRIS, IRCTC, Rail Coach Factory – Kapurthala, Diesel Locomotive Works – Varanasi and RDSO- Lucknow were also decided.

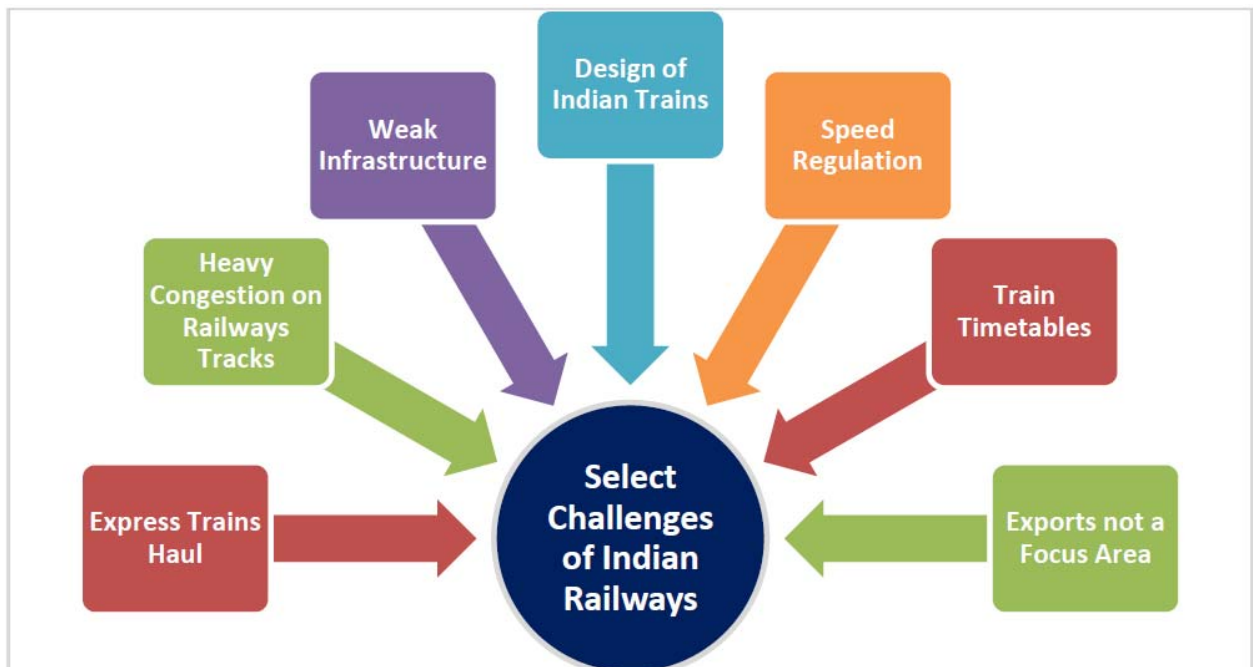
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REPORT

IMPERATIVES OF EXPORT ORIENTATION

There exists a significant global opportunity for railway equipment, rolling stock and services. The current market volume for railway products, equipment and services is around EUR 162 billion per year and is said to be growing at a rate of 3.4 percent per annum. Modest share (5%) of the market is significant Rs. 50000 crores. Potential to make significant contribution to GDP. Significant part of required technology is available indigenously. Export orientation will help improve both top line and the bottom line of Indian Railways, as the fixed costs shall be apportioned over larger volume. Making for world markets will improve quality of services within India. Indian Railways has a large infrastructure and support system in the country that delivers products and services for sustaining the operations. At present it is focused in meeting the traffic requirements within the country. Indian Railways has a significant presence as a purchaser in this market. However, as provider of railway equipment and services it is a marginal player. The scale of manufacturing and services of Indian Railways can be leveraged to enable it to become a major player in the global railway equipment, rolling stock and services market.



SEMINAR AT NAIR

In this context, National Academy of Indian Railways organized a two days seminar “Make in India for the World – Realizing export potential of Railway products & services” on 15th and 16th December 2015 with the participation of Railway Board, Production Units, Workshops, RDSO, Public Sector Units, Exim Bank, Directorate-General of Foreign Trade, and important private industries. The seminar came up with vision mission along with a roadmap for positioning India as a dominant player on global stage.

VISION AND MISSION

Vision

To establish Indian Railways as a World Brand for Railway Products and Services.

Mission

Deliver timely, quality engineered, appropriate technology based, railway equipment and services at the most competitive rates.

The following issues were deliberated in the seminar

1. Global opportunity for export of railway product and services.
2. Benchmarking export strategy of main players in the field .
3. Identify the constraints to a railway exports from India
4. Understand the India’s strengths and weaknesses.
5. Leverage India’s strength in R&D, services and IT to gain entry in world market
6. Revitalization of R&D.
7. Financing of exports .
8. Creation of incentives for exports.
9. Changes in business processes to facilitate exports .
10. Development of a roadmap.
11. Creation of a Railway Exports board to drive the export initiative.
12. Establishment of railway exports council for coordination of resources of Indian railways, research institutions, MEA, PSU’s, private sector, banks and market research agencies.

UNDERSTANDING AND LEVERAGING INDIA’S STRENGTHS

India has distinct competitive advantage in Rebuilding /Upgrading /After sales market of 20 billion Euro .Extensive Manufacturing capacity is supported by a structured Research and Design organization. System wide competitive IT capabilities i.e. **PRS, FOIS, CMS, REMLOT, SATSANG, SIMRAN, GOLD** across the value chain positions Indian railways uniquely to offer services globally. Cost leadership is derived from standard driven manufacturing, operation and maintenance. System integration competence at design, operation levels , optimized through IT provide IR with unique competitive advantage. Brand IR driven by Frugal Innovation like Bio toilets promises to deliver sustained value for money.

Where we can make an impact...

Sr. No.	Products	Possible Importers
1	Customer Designed Cargo Containers	Israel, Africa, South America, China, Russia, Algeria, France
2	Railway maintenance- of way service vehicles	Myanmar, Malaysia, Singapore, Kenya, Iran, rest of world
3	Signalling Devices for Railways, waterways, airports	Bangla Desh, Sri Lanka, Denmark, South Africa, Saudi Arabia, rest of world
4	Rail Locomotives powered from an external source of electricity	Germany, rest of world
5	Self propelled railways/ tramways coaches	Bahrain, China, Senegal, Singapore, UAE, rest of world
6	Passenger and special purpose coaches	Myanmar, Thailand, rest of world.
7	IT and services market	Entire world

So far, we are here...

Indian Railways' Exports : In a total market of 162 Billion Euros, our share is about 2%, though we have 35% PKM and 11% FKM share.

Sr. no.	Year	Export in US \$ (mn)
1	2010	56.8
2	2011	134.5
3	2013	192.4
4	2014	140.3

Sr. No.	Importer	% Share
1.	Bangla Desh	27.2
2	Tanzania	12.8
3	USA	12.6
4	Australia	5.1

Sr. No.	Exported Products	% Share
1	Parts of Locomotive, rolling stock	44
2	Vans, Wagons	25
3	Locomotives tenders	18
4	Cargo Containers	9

CONSTRAINTS AFFECTING RAILWAY EXPORTS

The following factors are affecting exports of Railway equipment and services

1. Non availability of off the shelf designs for the target market.
2. Surplus manufacturing capacity not Identified .
3. Excessive time taken in responding to market requirements .
4. Market forecasts not shared with all stakeholders .
5. Businesses process not amenable to quick decision making , in time response to market needs giving advantage to competitors like China .
6. Lack of platform for exchange of information , intelligence, capabilities between stakeholders like Exim Bank, Railways, PU's, PSU's, RITES , Private industry and RDSO.
7. Quality issues with products .
8. Lack off differentiated vendor list .
9. Value engineering based on customer inputs is not practised .
10. IT strength not being leveraged as CRIS is not a commercial organization .

MARKET AND STRATEGY FOR EXPORT

There is market for rolling stock and Infrastructure services in the countries of Africa, South America, Middle East, South East Asia and CIS countries. Railway focussed IT related services have potential markets all over the world. Potential for exporting Intellectual expertise in the areas of Design, IT and services is substantial. IR should leverage India's strength in R&D, services and IT to gain entry in world market. Participation in railway oriented trade fairs and exhibition at various trade fairs to show case capabilities is essential .

ROLE OF R&D FOR CAPTURING EXPORT MARKETS

There is need for ready availability of concept designs with associated costs for participation in International Tenders and for enabling customers to make purchase decisions. Starting design process after publishing of tender severely handicaps export offering .

To have ready availability of designs following steps are required to be initiated. Road Map for R&D and Innovation to be made including requirement of specialisation and infrastructure . Enhancing of design capability of RDSO by deepening expertise of officers by enabling them to do MTech, PhDs in the areas of their specialisation. RITES/ IRCON to provide 'wishlist' based on market study to RDSO. This wishlist will be used for making the road map for R&D. Collaboration with Academic Institutes, Industries, Foreign Organisations, Railway PSUs in the field of R&D needs to be strengthened .

Railway research centres are required to be set-up to develop design expertise to the international standards. Business processes are to be simplified for procurement and project management at RDSO. Improve project management by outsourcing the project management to RITES. Project based stay/ tenure of other 50% Group A officers of RDSO has to replace time based tenure for specialist officers from Group A. Foreign deputation/ visit of RDSO officers needs to be delegated to DG, RDSO. A development fund of Rs. 50 Crore has to be made available for RDSO at the discretion of DG, RDSO. RITES/ IRCON and other railway PSU to allocate annual R&D budget and set-up complementary R&D facilities in RDSO and provide qualified manpower to work in tandem with RDSO. Private Industries to be encouraged to set-up R&D facilities which can complement / supplement the RDSO / PSU/ RITES/ PU R&D facilities. R&D roles for Railway entities e.g. RDSO, PUs, Railway PSUs to be clearly spelt out so that there is no dichotomy / cross-purpose between these. These activities should be co-ordinated by RDSO.

In case development of design will take a longer time and there is an immediate requirement for the tenders at hand, JVs/ Consortiums by RITES/ IRCON/ other Railway PSUs to be done with Indian Private Industries for Acquisition of either design or acquire design companies either in India or abroad. EXIM Bank can finance these acquisitions. RDSO/ Railway PSU/ PUs R&D to however learn from those design acquisitions and develop their own R&D strength. Autonomy to the GMs of the PUs is a must for them to take up prototype development based on market research given by RITES/ IRCON. Design changes to be approved by GMs of the PUs.

LEVERAGE INDIA'S STRENGTH IN IT TO GAIN ENTRY IN WORLD

IT to increase productivity manufacturing , operations and Supply chain efficiencies through ERP for cost leadership. Indian Railways have IT systems that increase productivity through across their entire value chain. Indian Railway would leverage its IT strength to help it become a global innovation and design hub. India has already proved that it can do this and become globally-competitive in sectors such as automobiles and pharmaceuticals. The model is to replicated in railway sector. ***CRIS must lead the IT enabled transformation of India's railway sector.*** CRIS to develop global ticketing solutions for the world market .

ROLE OF QUALITY IN ENHANCING EXPORTS

Minimum Quality Certification (MCQ) standards for export by promoting International certification. Incentivise of high quality firms and simultaneous filtering of low quality firms is vital to have an quality conscious supply chain .At present RITES is the Inspection agency as well as the Export House. This should be replaced by third party inspection. Global quality experts will have to engaged to improve quality of products and services .To develop the customer interaction portals for online demand and feedback.

ROAD MAP

1. Creation of a Railway Exports board to drive the export initiative.
2. Establishment of railway exports council for coordination of resources of Indian railways, research institutions, MEA, PSU's and private sector, banks and market research agencies
3. Create a SPV for exports - Indian Railway International Corporation (IR Vidersh) along with Railway PSUs and private sector to take advantage of IR brand and flexibility of the private sector. The IR Videsh to have necessary autonomy and authority.
4. Create a tripartite Vehicle (IRVidesh + Indian Technical Company + Financial Institution) for foreign investment, PPP and other development works in Africa, Latin America and Asia.
5. Create a forum for regular deliberation amongst RITES, Railway Board, RDSO, PUs for export projects.
6. Set up a vibrant Market Research Centre in IR Videsh .
7. Create world class testing facilities at RDSO which can be showcased to the world.
8. Collaborate with technologically advanced countries and companies to win the competition. Specifically collaboration with Japan in passenger sector .
9. Aggregate demand especially for metro systems which require similar type of rolling stock and head hardened rails. Railways could consider procuring/manufacturing the same.
10. Organize funding from Infrastructure Bonds , JICA/Korea, EXIM bank , World Bank/ADB/IMF
11. Railways should supply MG stock and also design & manufacture standard gauge/cape gauge rolling stock which is the need of the hour

CHANGES REQUIRED IN BUSINESS PROCESS FOR EXPORT POTENTIAL

1. Empower PUs to allocate a small production capacity (say 5%) for export for which they should actively pursue with RITES for export orders.
2. Facilitate easier deployment of experts and manpower for IR for O&M opportunities abroad. Power to depute officials to foreign countries for exports should be totally within the power of GM of PUs.
3. Marketing consultants to be appointed/hired at international level to sell our products.
4. Revisit PU and Zonal Railway pricing policy for export.
5. GM of PUs to have a developmental fund of Rs. 50 Crore totally at the disposal of GM of PUs.
6. PPP model for technology transfer and fund generation.
7. Incentive and facilitation required for enhancing exports
8. SEZ status shall be extended to Indian Railways for export Purpose
9. Source Tax free for the Raw Material through Export duty reduction .Capital goods require for setting up of facilities can be imported and would be exempt from duty. Railways would need to export six time the amount of exemption availed within 6 years.
10. Incentivize development of new products by the Indian industry. This can be seen by the various conditions of contract which indicate that the supplier should have supplied X quantity prior to supplying railways etc. The group felt that this condition should be dropped for new development.
11. The raw material for manufacturing of exports coaches should be imported so as to avail duty exemption benefits to the tune of 20%. It was also felt that presently RCF is purchasing stainless steel from the domestic market of about 1.85meter length. As a result there are 10 to 12 joints in a coach. If this is imported from suppliers like Auto cam etc. who manufacture 2 meter wide panels, the manufacturing cost for imported coaches will come down. If the cost of the coach comes down, the overhead would also be less and the final product being sold through RITES/IRCON will also be more competitive in the export market.
12. Railways could take advance authorization for import and then procure locally by getting the authorization invalidated for domestic procurement as per para 4.2 of the Foreign Trade Policy.

INCENTIVES FOR EMPLOYEES

1. Changing incentive schemes to increase focus on quality of international standards. Quality incentive to be paid after warranty claims have been settled.
2. Staff and officers shall be given productivity linked monetary and non monetary incentives .
3. Skill development and training for global quality at world renowned institutes.
4. Special allowances for the staff and officers working for Exports.
5. A corpus shall be kept from profits for the benefits of employees working for Exports.

ACTIONABLE POINTS

RAILWAY BOARD

1. Creation of a Railway Exports board to drive the export initiative.
2. Establishment of railway exports council for coordination of resources of Indian railways, research institutions, MEA, PSU's, private sector, banks and market research agencies
3. Create a SPV for exports - Indian Railway International Corporation (IR Videsh) along with Railway PSUs private sector to take advantage of IR brand and flexibility of the private sector. The IR Videsh to have necessary autonomy and authority.
4. Create a tripartite Vehicle (IRVidesh + Indian Technical Company + Financial Institution) for foreign investment, PPP and other development works in Africa, Latin America and Asia including China.
5. Create a forum for regular deliberation amongst RITES, Railway Board, RDSO, PUs for export projects.
6. Board will facilitate Make in India and export initiatives by convening meeting of all stake holders every quarter. In this regard key role will be played by AMPU, AMF, AMRS, ED(PSU), EDF, ED(C&IS) and EDME(W) to boost the export market.
7. PSUs and CRIS should prepare draft MOUs for collaborative working wherever required and send to Board for approval .
8. Policy no. 6 needs to be revisited especially when there are small changes in product layout to accommodate the customer requirements and accelerate product development.
9. Imperative to ensuring quality in export is to ensure quality production for indigenous in-house requirement, for this long term procurement cycle with cap of number of vendors to enable them to invest them in infrastructure, technology, training etc.is necessary.
10. For boosting the Make in India the tender specs should incorporate percentage of indigenisation in next five years similar to what has been done in the Loco tenders. Gradually this should be enhanced to 70% over a period of time.
11. Empowerment of PUs for international interaction/ exposure.
12. Incremental pricing - product pricing has to be done on marginal costing.
13. Policy regarding profit sharing between PU and Railway PSUs and the money accrued to Railways to be credited directly to the PU for developmental activity and incentives to the officers and staff.
14. To prioritise development and manufacture of contemporary products for Meter and Cape gauge
15. Railway should consider setting up a factory in Africa from where they can assemble products and supply. This would reduce duties. For export railways can also avail 2% incentive (reward)

MEA

1. Tapping Indian Diplomatic Goodwill for selling railway products and build diplomatic goodwill by providing value for money products and services .
2. Recently, 10 billion Dollar worth of lines of credit have been announced for Africa and another additional two billion dollars worth of lines of credit for neighbouring countries. Inter-sectoral allocation for these lines of credit will be done very quickly in the near future. MEA will inform railways of emerging opportunities and allocation of funds .

MEA advised that Railway needs to have a clear strategy and concrete proposals for International projects to grab a major share of these LOCs.

3. DPRs have been made a mandatory requirement under the IDEAS scheme of Government of India. Railway PSUs like RITES/ IRCON may like to undertake detailed DPR preparation for possible projects.

NAIR

1. Will organise two seminars/ exchanges on export in the next one year.
2. Will partner with Indian Institute of Foreign Trade and EXIM Bank, DGFT, DPA in MEA to produce a status report on IR export.
3. NAIR will act as repository of knowledge on export promotion for railway sector .

EXIM BANK

1. EXIM Bank commits support the efforts made by the IR and its various institutions to realise the export potential of railway products and services over next three years by doing research work, papers, supporting faculty etc.
2. EXIM Bank also undertakes to visit PUs of IR and disseminate business opportunities to Private sector who are interested in doing business with IR to export products and services from India
3. EXIM Bank also expects to be informed and invite for future seminars, business opportunities that IR may have. E.g. EXIM Bank has brought out business opportunities in Asia, Africa, etc. in a working paper. Action on these points by IR may be informed to EXIM Bank.
4. For Innovative Funding Mechanism - EXIM Bank will enter into an agreement with IRFC. This may also open up opportunities for export

RITES

1. Focus on product design and development for export on MG/ Cape gauge/ Standard gauge locomotives, coaches and DEMUs.
2. PU's and RDSO should expedite RITES sponsored development projects in time bound basis.
3. Pricing of Export products prepared by Zonal Rly workshops should be done on the lines of PU's.
4. Costing of product from PU's should also be done on incremental costing basis.
5. RITES/ IRCON to provide 'wishlist' based on market study to RDSO.
6. Rites will work with international consultants to obtain market forecasts and market intelligence and share it with other stake holders

IRCON

1. IRCON will identify projects export opportunities in consultation with EXIM and DPA of MEA.

2. CRIS may provide IT support to the PSU's in implementation of ERP/ E-office. IRCON and CRIS will collaborate for IT opportunities in construction sector.
3. IRCON will lead the project management initiative in railway sector . It will invest in co development of ERP for construction sector with CRIS and other IT entities and firms .

CRIS

1. Will submit a proposal for copywriting of software for facilitating export of IT services and products.
2. CRIS should be permitted to sign MoUs with RITES/ PSUs and Pvt. Sector companies.
3. CRIS to develop global ticketing solutions for the world market .

IRCTC

1. RITES and IRCON are planning to bundle ticketing system in their export projects, IRCTC can implement and operate these.
2. To develop and market international tourism products including luxury tourist trains. EXIM Bank will examine and can fund such projects with an Indian entity .
3. Rail tel would be able to provide the communication backbone for such efforts

RCF

1. In line with advice by ED/RITES, regarding availability of future export market for MG coaches only, RCF confirmed that they can manufacture MG coaches as been done by them in past subject to supply of bogie items by RITES as free supply items.
2. The design MG coaches on LHB platform, is in advanced stage and will be given to RITES in three months time. After that there will be a need to convey approval for prototype manufacture for which the estimated cost to be conveyed by RCF.

DLW

1. Will develop Diesel Loco design on various gauges, namely, MG, CG, SG with minimal Axle loads with modular horsepower on AC:AC transmission with the help of RDSO and RITES even if we need to buy.
2. Profit margins to be kept by both DLW and RITES wafer thin and volumes of exports needs to be increased to compete finally.

RDSO

1. Develop new locomotives and coach designs and prototypes in shortest possible time
2. Development of ballast less track including the fastening/ components and indigenous signalling system complying to ETCS 2 will be expedited.

List of delegates who attended the seminar on 15th and 16th December 2015.

SN	Name	Designation
1	Shri Hemant Kumar	Member Mechanical, RB
2	Shri Ravi Shanker Kochak	AMPU/Railway Board
3	Shri K B Nanda	Advisor (Finance)
4	Shri Arun Bijalwan	Ed Finance/RB
5	Shri Binay Kumar Jha	DME/Dev
6	Shri Akhilesh Mishra	Director ME (C & IS)
7	Shri G C Agrawal	GM/WR & DG/NAIR
8	Shri Shailendra N Jaiswal	Dy DG/NAIR
9	Shri V K Saxena	Sr. Prof (Mechanical Engg)
10	S.M.Sharma	Prof (Management)
11	Shri Yaduvendra Mathur	CMD/EXIM Bank
12	Shri Rahul Mazumdar	Chief Manager, EXIM BANK
13	Shri Vanlatruata Fanai	Chief Manager, EXIM BANK
14	Shri D.K.Singh	Addl DG-FT, NDLS
15	Shri Ashok K Agarwal	GM, ICF
16	Shri L C Trivedi	CME/ICF
17	Shri R P Nibariya	GM, RCF
18	Shri Pramod Kumar	Former GM/RCF
19	Shri A K Kathpal	Chief Design Engineer/RCF
20	Shri Lalit Kishore	Dy. CME/Design/RCF
21	Shri Sanjay Kumar	ED/Wagon/RDSO
22	Shri Sandeep Sharma	ED/Track-II /RDSO
23	Sh R R Jha	Chief Marketing Manager/ DLW
24	Shri V K Jain	ED (Expotech Divn), RITES
25	Sh Puneet Kumar	RITES
26	Virendra Singh	RITES
27	Dr. Anirudh Gautam	GM, Rolling Stock Division, RITES
28	Shri Sunil Kumar	GGM/TT/IRCTC
29	Shri Ravilesh Kumar	GGM/IRCTC
30	Shri Arvind Malkhede	GGM/IRCTC
31	Shri Pankaj Singh	Advisor (Railways), MEA
32	Shri Mohan Tiwari	CMD, IRCON
33	Shri Sanjaya Das	MD/CRIS
34	Shri Ankit Gupta	International Business Development/ M/s. Titagarh Wagons Ltd
35	Shri Ashutosh Gangal	DRM/BRC
36	Shri A M Tewari	M/s Gujarat Alkali & Chemicals Ltd
37	Shri Umesh Kumar	GM/Project/RAILTEL