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भारत सरकार Government Of India
रेल मंत्रालय Ministry Of Railways
(रेलवे बोर्ड) (Railway Board)

Minutes Of The Meeting For Functioning Of Newly Sanctioned

"Technology Mission For Indian Railways"

Held In Railway Board on Tuesday, The 10th March, 2015

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1. In terms of Railway Board's communication vide no. 2014/CE-I/Innov./4, dated 05.03.2015, meeting was held in connection with formulation of road-map for going ahead in the recently announced "Technology Mission For Indian Railways" (TMIR) by Hon'ble MR for introduction of technological advancements on Indian Railways. Following officers attended and deliberated further on the subject -

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1.	Alok Kumar	*ED/CE(G), Railway Board*
2.	R.K. Verma	*Adv./PG/MSR, Railway Board*
3.	Prof. Nalinaksh S. Vyas	*Vice Chancellor, Rajasthan Technical University*
4.	Nikhil Pandey	*ED/E&R, Railway Board*
5.	Vipul Kumar	*ED/Track-II and Research, RDSO*
6.	Neilabh Mahesh	*Dir./S&T/Research, RDSO*

2. The meeting started with briefing by ED/CE(G), Railway Board on the background and earlier efforts made in respect of Mission approach on Indian Railways –

(1) In Railway Budget 2015-16, Ministry of Railways have sanctioned a project of 'Technology Mission For Indian Railways' at a cost of Rs. 300 cr. through consortium approach in which Railways' investment share would be 30%, i.e. Rs. 90 crore. In this connection, extract of Budget Speech 2015 of Hon'ble MR is as under :

*"**74.** A consortium of Ministry of Railways, Ministry of Human Resource Development, Ministry of Science & Technology and Industries on an Investment Sharing Model is being set up as part of 'Technology Mission for Indian Railways' to take up identified Railway projects for research."*

(2) This 'Technology Mission For Indian Railways' (TMIR) is based on earlier similar project of 'Technology Mission For Railway Safety' (TMRS), which was announced by Shri Atal Bihari Vajpayee, the Hon'ble Prime Minister during his Independence Day Speech, 2003. Extract of the speech of PM is as under :

"Infrastructure Development – A Technology Mission for Railway Safety will be set up to comprehensively address safety-related issues in Indian Railways. This will be done in collaboration with the Department of Science & Technology, IIT Kanpur and a consortium of private sector companies." {http://pmindia.nic.in/}

(3) During the previous Mission, i.e. TMRS sanctioned in 2004, a Mission Management Committee (MMC) was constituted and Prof. N.S. Vyas of IIT/Kanpur was the Mission Coordinator. In this Mission, the consortium approach was adopted which comprised of Indian Railways, M/o HRD and industries. 9 projects out of 12 projects conceptualised could successfully be concluded by the Mission - TMRS and indigenous technologies could thus, be developed with related source codes etc. being available in India, by the concerned Directorates of RDSO with useful contribution from various academic & research institutions and the concerned industries as well. It is also detailed in RDSO's letter no. R2/145/CSP/Vol.VII/Pt.I, dated 01/02/2011.

(4) For working & functioning of the Mission - TMRS, 'Mission Management Manual' (MMM) was also prepared and approved by Railway Board.

(5) In the consortium approach for 'TMIR', the Members of consortium would seek to develop marketable technologies, either novel or import-substitution. The participants would seek to benefit from the actual introduction of new technologies.

(6) The newly sanctioned 'Technology Mission For Indian Railways' will also involve participation and contribution in the ratio of 30%, 25%, 25% and 20% by Ministry of Railways, Ministry of Science & Technology, Ministry of HRD and Industries respectively, over a time period of 3 years. The consortium approach has also been successfully followed in many foreign Railway systems, like JR, DB, SNCF etc. and it is already a tested method, adopted by Govt. of India in its 'Technology Development Programme' including that on Ministry of Railways.

(7) Through this Technology Mission, Indian Railways would also be in a position to utilise various funding schemes of Ministry of Science & Technology, Ministry of HRD alongwith technical expertise available with various Academic / Research organisation & Labs including CSIR etc. and also through involvement of Industries. It will, thus, provide forceful impetus to India's growth engine on the 'Make in India' vision track of the Hon'ble Prime Minister.

3. The indigenous technologies would successfully be developed with win-win scenario to all the consortium members. While Indian Railways would get the world class technologies at an investment of only about 30% of total project cost, Academic & Research Institutions would get involved in numerous applied research projects which would help them in reorienting research towards national objectives. It would also help the institutions, labs & students/scholars and the industries in India to get introduced to new knowledge streams and indigenous product manufacturing, thus, leading to increased business turnover and more exports as well.

4. This meeting was, therefore, convened in Railway Board for exploring the similar approach and framing a road map for the newly sanctioned project of 'TMIR' by Hon'ble MR. While meeting was attended by officers of Railway Board and RDSO; Prof. N.S. Vyas, Vice Chancellor, Rajasthan Technical University and the then Mission Coordinator in Railways' earlier Mission - TMRS, was also requested to participate for benefiting the participants with the first-hand information about Mission approach.

5. During recent 'Round Table Conference', held in RDSO on 20.02.15, various academic and research institutions were invited alongwith officers from M/o Science & Technology. The minutes of meeting were circulated by ED/Research vide letter no. R2/288/RTConf./1, dated 02.03.15. It was quite useful interactive session in which all organisations came forward for development of technologies to be used in various functional and operations requirements of Indian Railways.

6. Similar interactive and brain storming session was held in Railway Board on 28th July 2014 and the minutes were circulated by EDCE(G) vide no. 2014/CE-I/Innov./4, dated 28.07.14.

7. However, the main issue with all participants during these interactions remained that what would be the modality for going ahead with various types of projects. Therefore, the solution rightly lied through the consortium approach of 'Technology Mission For Indian Railways' (TMIR) which has appropriately been sanctioned by Hon'ble MR and made it part of his Railway Budget Speech 2015-16.

8. It was opined during discussion that this sanctioned 'TMIR' should also monitor progress of research projects of the existing Railway Research Centre (RRC), Kharagpur and in respect of further 4 upcoming Railway Research Centres, sanctioned in Budget 2015-16. In this way, Railways' investment in applied research activities will be fruitfully converted to technology development for actual use in railway working.

9. During discussion, the opinion emerged that for 'TMIR', Railway should constitute a Mission Management Committee (MMC) with Mission Office at New Delhi and to be headed by some academician/scientist who has the passion, interest and experience for such Mission Mode working for technology development on Indian Railways. This Mission Management Committee would have participation/nominees of MoR, RDSO, RRCs, MHRD, MoST and industries, as was also done in 'TMRS' set up. It was also considered view during discussion that Prof. N.S. Vyas, Vice Chancellor, Rajasthan Technical University, who was also Mission Coordinator for Railways' earlier successful Technology Mission 'TMRS' may be requested to head this newly sanctioned 'TMIR', if approved by Ministry of Railways.

10. Projects will be conceptualized by RDSO in coordination & consultation with Zonal Railways & Production Units and interaction with academic & research institutions. Project teams for respective projects, comprising of concerned Executive Director from RDSO, academic/research institutions having the expertise knowledge on the project team and the concerned industry will be formulated by the Mission Management Committee, so that through consortium approach and investment in the ratio of 30%, 25%, 25% and 20% by Railways, Science & Technology, HRD and industry; those projects may be started. The progress will be monitored quarterly by the Mission Management Committee (MMC) as per provisions of Mission Management Manual (MMM).

11. Preliminary interactions have been held by EDCE(G) with officials of M/o HRD and M/o Science & Technology and after finalizing the modalities through detailed meeting on the subject, an MoU may be signed by the M/o Railways with M/o Science & Technology, M/o HRD and M/o Industry for 'TMIR' on consortium approach with investment sharing.

12. In the meantime, the concerned Directorates of RDSO may also prepare one page Concept Notes for each project conceptualized by RDSO and other Zonal Railways, PUs etc. It should comprise of Project Name, Scope/Deliverables envisaged, the possible Resource Centres in the form of Academic / Research Institutions / Industries in India/abroad etc. Such concepts may then be discussed with all the Departments & Organisations on Indian Railways and in association & consultation with Department of Science & Technology, Ministry of HRD, Ministry of Industries etc. for further going ahead in these projects after taking approval from Mission Management Committee of 'TMIR'.

(No. 2014/CE-I/Innov./4, New Delhi, Dated 10.03.2015)

10/03/2015

(आलोक कुमार)
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