

(17) 18 17

MEMORANDUM OF UNDERSTANDING

THIS MEMORANDUM OF UNDERSTANDING (MoU) made at New Delhi this Twenty Second day of December Two Thousand and Fifteen (22.12.2015).

BETWEEN

GOVERNMENT OF INDIA, MINISTRY OF RAILWAYS, hereinafter referred to as 'Indian Railways' represented by Shri Manoj Pande, Executive Director (Training & Man Power Planning) having its office at 368, Rail Bhavan, New Delhi - 110001 (which expression shall unless repugnant to the context or meaning thereof be deemed to include its successors and assigns) of the **FIRST PART**

AND

The **Indian Institute of Technology Roorkee**, herein after referred to as 'IITR', having perpetual succession and common seal having its office at Roorkee, India, represented by Prof. M. Parida, Dean, Sponsored Research & Industrial Consultancy, IIT Roorkee (which expression shall unless repugnant to the context or meaning thereof be deemed to include its successors and permitted assigns) of the **SECOND PART**

Indian Railways and IITR are individually referred to as the Party and together referred to as the 'Parties'.

WHEREAS, Ministry of Railways is operating one of the largest railway systems in the world transporting 8.397 billion passengers and over 1000 million tons of freight annually. It has its own facilities for production of locomotives and other rolling-stock besides Research, Design and Standards wing to carry out research work in rail technology, standardization and application to attain self-sufficiency. With growth in Indian economy, Indian Railways transport business is expected to grow at an average rate of 10% per annum over the next 10 years. To achieve this phenomenal growth Indian Railways considers it necessary to make use of the technological advancements in the field of Railway technology, as technology plays a major role not only in improving the quality of service but also in productive utilization of the rail infrastructure and reducing costs. Indian Railways which at present is an importer of technology intends to develop cutting edge indigenous technologies and turn a net exporter of technology.

WHEREAS, the First Part is INDIAN RAILWAYS is desirous to conduct research for advancement of technology and also expand its wings to maximum reach of the students;

AND WHEREAS, the Second Part is a renowned IIT, a national institute of higher education and research in generic areas of science and technology.

NOW THEREFORE, IN CONSIDERATION OF THE FOREGOING PREMISES, THE PARTIES MUTUALLY AGREE TO CO-OPERATE AND COLLABORATE AS UNDER:

- a. In order to develop a long-term frame work for research collaboration a Centre for Railway Research (CRR) will be set up at IITR.
- b. Parties will set-up an APEX STEERING COMMITTEE consisting of senior officials, faculty members and experts of the Parties.
- c. The Centre for Railway Research shall carry out research related to the following indicative areas:
- Civil Infrastructure of High Speed Rail
 - Bridges & Structures
 - Track Management System
 - Remote monitoring of Railway Assets
 - Environmental Engineering
 - Station Infrastructure
 - Rail Wheel Dynamics
 - Engine noise analysis and management
 - Electric drives
 - Advance communication systems
- More areas may be identified, as mutually beneficial.
- d. A Program Advisory Committee (PAC), comprising of officers from Indian Railways and faculty members of IITR will be formed. The exact composition of PAC will be based on the recommendation of the APEX STEERING COMMITTEE. PAC will administer, monitor and supervise all the R&D related activities coming under this MOU.
- e. A multi-disciplinary approach would be adopted for carrying out the research. The Centre for Railway Research will form research programme groups in each field comprising Professors and faculty members from IITR along with officers from Railways.
- f. Experts working in the Centre for Railway Research will be given specialized training in Railway technology in India and abroad.
- g. The Centre for Railway Research will facilitate manpower training and explore the possibility of offering degree program, postgraduate programs and PhD program in research areas related to Railways through the sponsored research avenue of IIT Roorkee. It will also involve IIT Roorkee students in research projects and design and offer appropriate courses and electives related to Railway technology through mutual discussions.



h. Railway officers will be sent on deputation at the Centre for Railway Research for participating in the research and development work as well as for short-term and long-term training programmes.

i. Ministry of Railways, at its discretion, through the Training Directorate, will either entrust part or whole of work at Centre for Railway Research to the Research Design and Standards Organisation (RDSO), Lucknow without any financial implications for IIT Roorkee.

j. To implement this MOU, Indian Railways will provide grants in aid to the Centre for Railway Research. Parties would mutually decide the modalities of funding and execution of this MOU based on recommendations of the APEX STEERING COMMITTEE.

Intellectual Property

It is expected that research activities under IITR will generate lot of Intellectual Property (IP). Indian Railways' and IITR's usage of such IP will be without restrictions and without any financial impact to Indian Railways and IITR. Licensing of the Intellectual Property to any third party would be carried out individually by Indian Railways and IITR after filing of joint patents etc., as applicable for the technology, for protection of its IPR. There will be no royalty charges levied on vendors if the technology developed is used for supplies to Indian Railways or its subsidiary PSUs and/or IITR. Royalty payments will, however be levied, if the IP is utilized for supply to other than Indian Railways or its subsidiary PSUs and/or IITR and may be applied towards future funding of Centre for Railway Research (CRR), IITR. In case a contractor/vendor/industry is associated for a particular project, he will only be entitled to free usage of IP for Indian Railways and/or IITR without any proprietary rights.

Patent will be owned jointly by Indian Railways and IITR and will be filed by CRR, IITR which should not normally take more than three months after the technology is declared as developed. Once the application is filed for patent, both Indian Railways/RDSO and IITR shall be entitled to use it as described above. Both Indian Railways and IITR will be eligible to license the IPR independently subject to this clause.

The issue of distribution of royalty to inventor will be as per the policy of the respective entities.

Any changes/amendments in IPR policy as mutually agreed between IITR and Indian Railways for projects Dispute resolution



Dispute resolution

In the event of any dispute, claim, question or disagreement arising from or relating to this Memorandum of Understanding, the parties hereto shall use their best efforts to settle the dispute, claim, question or disagreement. To this effect, they shall consult and negotiate with each other in good faith and recognizing their mutual interests, attempt to reach a just and equitable solution satisfactory to both Parties. If they do not reach such solution within a period of thirty (30) days, then, upon notice by either party to the other, all disputes, claims, questions or differences shall be referred to an arbitrator to be appointed by mutual consent of both the parties. If the parties are unable to agree for mutual arbitrator within a month, the arbitrator shall be nominated by Secretary, Department of Legal Affairs, Ministry of Law and Justice as per the extant procedure.

Date of Effect and Amendment of MoU

The MOU will be operative from the date of signing of this MoU for 3 years and any alteration/modification may be carried out with the consent of both parties in writing.

The Memorandum of Understanding is executed in duplicate and one copy will remain with the First Part and the other with the Second Part.

It has been agreed between the parties that, Second Part shall provide Academic Support and the Parties hereto, have caused this MOU to be signed in their respective names as on the day and year first above written.



(Manoj Pande)
Executive Director (T & MPP),
Ministry of Railways
(Railway Board)
Government of India
New Delhi.

On behalf of the Ministry of Railways



(Prof. M. Parida)
Dean, Sponsored Research and
Industrial Consultancy,
IIT Roorkee,
Roorkee.

On behalf of IIT Roorkee
