

CENTRAL ORGANISATION FOR RAILWAY ELECTRIFICATION
PRAYAGRAJ

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Seminar on history of electric traction and upcoming 2x25 KV traction system

On completion of 98 glorious years of electric traction, a seminar was organized at CORE/Hq on 03/02/2022 in the august presence of General Manager, Shri Pramod Kumar. Apart from throwing light on the history of electric traction, 2x25 KV traction system was deliberated in detail by various speakers.

It was informed that first train on electric traction was started on 1500 V DC system from Bombay Victoria Terminus to Kurla Harbour on 3rd Feb. 1925. This was the turning point in development of Railways and growth of sub-urban transport system for Mumbai as also for other metropolitan cities. Madras was second metro city to get electric traction in Southern Railway on 11th May 1931. Upto Independence, India had only 388 RKM of electrified tracks. Post independence, electrification of Howrah-Burdwan section was carried out at 3000V DC. However, keeping in line with international standards for electric traction, 25 KV AC system was adopted in IR in 1961 which at present is the back bone of traction network.

In wake of industrial development in eastern region and growth in freight traffic, electrification was introduced in the early 1960s from Raj Kharswan to Dongoaposi on South Eastern Railway. With a view to provide continuity of traction system, Howrah-Burdwan section of Eastern Railway and Madras-Tambram section of Southern Railway were converted to 25 KV AC system by 1968.

Electric Traction started gaining momentum and a number of electrification works were taken up for execution in due course of time. It was felt that there is a need for a dedicated and specialized organization for electrification works and thus Central Organization for Railway Electrification came into being at Nagpur which was later shifted to Prayagraj.

Till 2014 no special emphasis was laid on electrification works. However, after 2014, keeping in view the inherent advantages of electric traction such as energy efficient, econ-friendly, economical and faster mode of rail transportation, a much higher thrust was given to electrification works and it was taken up in a Mission Mode. As a result, the electrification works

increased nearly 10 times in Indian Railways since 2014 – from 610 RKM in 2013-14 to 6366 RKM in 2021-22 of which CORE had the Lion's share. Between 2007-14, CORE electrified a total of 3460 RKM compared to 19800 RKM between 2014-22, signifying a quantum jump of 470%. In 2021-22, out of 6366 RKM done over IR, CORE's share was a record 4286 RKM ie.67% of the total electrification carried out which it is all set to surpass in the present FY. This amply shows the country's commitment towards clean and energy efficient mode of transportation and also signifies the high level of caliber and commitment of railway officers and employees alike.

Along with completion of 98 years of electric traction system in Indian Railways, 85% BG route has been electrified and the balance network is slated for completion by December 2023 with CORE playing a leading role in it. In this way, even before completion of 100 years of electric traction system, the whole BG network would be completely electrified and this will be a major mile stone in the history of railway traction system and take the railway transportation system and economic development of the country to newer heights.

2x25 KV network is a new electric traction system which will be incorporated in various sections where there is need for high speed operation and capacity enhancement due to its advantages like better voltage regulation, increased line capacity, decreased TSS feeder current etc. Various aspects of 2x25 KV system were discussed in detail in the seminar.

GM/CORE, Shri Pramod Kumar in his address congratulated the entire team of officers and staff associated with Railway Electrification and said that it is only due to their collective efforts that we as a team have scaled new heights of achievements. He expressed his happiness that CORE family would be a part of the team that will witness complete electrification of BG network and associated benefits in the coming times.

On this occasion, all Head of the Departments and other officers were present. Presentation on 2x25 KV network was given by Dy.CEE, Shri Akash Srinetra. The entire program was conducted by DGM and CPRO, Shri S.K.Dwivedi along with vote of thanks.

(S.K.Dwivedi)
CPRO/CORE/PRYJ