

## A HISTORICAL IDEOLOGY THAT PUT FOUNDATION OF THE RAILWAYS

This article is about the founder of BB&CI. By training he was a Military Engineer, who left military and dabbled with agriculture, land management and finally wrote TWELVE Commandments of Railway working. Height from MSL (Mean Sea Level) mentioned on each station name board is due to him. This idea has immortalised him.

**Chief Editor**

## JOHN PITT KENNEDY - THE GREAT LEVELLER (1796-1879)

Exactly 160 years ago, a man aged 56, betraying his age, was trying vociferously to convince a group of people the requirement of a Railway system whose focal point was Surat - Vadodara section and with connection to Bombay towards south, to Berar (Modern Amaravati Area) towards east, Ahmedabad - Viramgam and Kutch towards north west and Ratlam and Neemuch towards North.

In coming years his rigorous and unrelenting efforts culminated into a majestic Railway system called BB&CI which connected Bombay, Vadodara, Ahmedabad, Saurashtra, Berar, Khandesh (Modern Jalgaon - Nandurbar area) and eventually to Delhi, Jaipur and Ajmer. It also provided connection to Punjab and even the troubled hinterland of Peshawar of NWFP.

He issued not TEN but TWELVE commandments, most important of them was that the track should be as level as possible i.e. 1 : 2000 gradient or easier. After lot of discussions, deliberations and even opposition, his endeavour was finally successful and germinated as a Railway line between Utran - Anklshwar on 10th February, 1860 and started bearing fruits in 1860's connecting Bombay-Vadodara-Ahmedabad. Now the city of Bombay got land connection with prosperous Gujarat and Central India. Col. John Pitt Kennedy of Irish origin graduated in Military Engineering in 1815. He worked in different capacity in various regions of Europe and Asia and had rich experience of PWD, agriculture, Railway, apart of



JOHN PITT KENNEDY

Military Engineering. Since early era, he was a reformist and did a lot of work for the welfare of common masses, especially in the field of agriculture, waste land development and famine relief.

In 1849 he became Military Secretary of then Commander-in-Chief of British army of India. As the story goes, he was deeply moved by the plight of porters who were deployed to move the Governor General Dalhousie, his entourage of British soldiers, bureaucrats and

**BB&CI was constructed without any intervention of contractor and 2/3<sup>rd</sup> amount was saved**

their retinues from plains of Kalka to Shimla. Around 20,000 labourers were mobilised to carry baggage



★ Shri Sharat Chandrayan  
CPRO, Western Railway

of British establishment. They were underpaid, exploited and detained for the treacherous and arduous transfer. He had a solution. It was building a road which was suitable for wheeled carriages as to mitigate the hardship of these poor souls. But it required huge manpower and resources to build the road in this hilly terrain. Only Governor General could have helped him to muster the resources. He thought of an idea. He built one mile road of gentle gradient with the help of prisoners, parallel to a very steep and tortuous portion of the way leading to Lord Dalhousie's residence to attract his Lordship's attention on passing and repassing.

**Land was allotted to Railway free of cost by East India Company and native States**

Col. Kennedy's experimentation proved the superiority of perfectly

leveled road over the steep gradient and the Governor immediately approved the construction of the road. Later he constructed the road to Tibet from Kalka via Simla. Lord Dalhousie was so pleased with him that he appointed

**TV section was constructed not for passengers/ goods traffic but to facilitate movement of coal and iron to be used as fuel as well as raw material for iron production to be used for manufacturing steel required for track and Rolling Stock in foundry in India (to reduce cost)**

## SPECIAL FEATURE

him Government Railway Engineer. In fact when Kennedy resigned in 1851, Lord Dalhousie wrote, "He is very grievous loss to the government, for he would have effected an infinity of good for us by his energy and experience, we groan over the loss accordingly."

Working as Government Railway Engineer, he wrote the TWELVE commandments of Railway Engineering detailing the various rules and regulations for construction and working of Railways. These general rules advocated by Kennedy became the guiding principle for Lord Dalhousie for approving various alignments of forthcoming Railway systems in India.

Some major points of the 12 General Rules proposed by Col. Kennedy were:-

1. That all Railways connected in India shall belong to one of two classes – the first class (trunk routes) and the second class (branch lines). The ruling gradient of trunk routes shall not be less than 1 in 2000 and for branch lines 1 in 330.

2. No line shall be undertaken where the estimated cost shall exceed the average rate of £ 5000 per mile of single track (excluding bridging of large rivers like Yamuna, Sone, etc.). All lines shall be single track however the land shall be acquired for double track.

3. That no portion of any line shall be permitted to open for the transport of goods and passengers until the capital account for the construction of such portion shall be closed.

4. That the height above sea level shall be reference point of all obligatory points throughout India, for construction of works, drainage and irrigation.

5. That no more than one train daily shall run in each direction upon any line until the traffic shall furnish more goods and passengers than one engine can carry, after which a second may start daily each way. And that when the traffic calls for three trains fully loaded per day, then arrangements shall be made for laying down a second track of rails.

6. He also issued guidelines for types of locomotives to be used.

On the basic principle of constructing track on perfectly flat ground, he proposed that line of railway should be constructed skirting the whole coast line of India and thence

Cost per mile track was £4000

be carried all over the interior of the country by closely following the line

of the great river valleys. He advised that the line of the "East Indian Railway" should closely follow the course of the Ganges from Calcutta via great bend at Rajmahal, the line of "Great Indian Peninsula Railway" from Bombay, instead of recklessly ascending the Western Ghats on a necessary steep and most expensive alignment, should follow the natural

Surat-Baroda region of Gujarat had rich supply of cotton, opium and salt, that's why it was focal point of BB&CI

routes to the interior in the north, via coast-line (i.e. modern

Bombay – Surat route) and then the Tapti valley and on the south to Madras via the coast, the gap in the ghats near Coimbatore and the Kaveri valley to the eastern coast line. The pursuit for the 4000 miles gigantic BB&CI Railway Network was not without impediments. Major D.G. Crawford, was Railway Engineer of BMC (not the ex BMC Municipal Commissioner Arthur Crawford after whom

famous Crawford Market is named). He was vehemently against Kennedy's

Fourth class coach was designed having two floors to accommodate double number of passengers

proposal due to competing and vested business interest of the other Railway system 'GIP'. However, Kennedy was supported in this undertaking by the then Governor of Bombay Presidency, Lord John Elphinstone (who was appointed as earlier Governor of Madras and then Bombay; to quell a rumour that the young Queen Victoria has fallen in love with him). His passion and emotions for this venture can be

summarised by quoting the last paragraph of his survey report submitted for accep-

Cost of 1st Class Railway ticket = 1/5th of Palanquin or 1/2 of First class of steam boat traveller

tance by Board of Directors of BB&CI. "It now only remains for me to bring under the notice of my colleagues the untiring zeal that our officers have exhibited in the execution of their arduous duties and their conciliatory bearing towards the natives of this country. Assuredly, the liberality with which they have hazarded their lives will be responded

to by an interest. They were not niggardly in their exertions; unflinching have they toiled through those very jungles where death

The Road Over Bridges on Mumbai Suburban are named after Railwaymen. eg.- Kennedy Bridge, French Bridge and stations are named after Governors such as Grant Road Station and Elphinstone Road Station

was loudly predicted as their doom. Happily the protection of Him who is mighty to save has enabled them to come forth unscathed". It was a great providence that his fervent appeal was accepted, otherwise the history and the present of Western Railway and of the city of Mumbai would have been quite different.

Sharat Chandrayan,  
Chief Public Relations Officer, Western Railway, Churchgate