



WEST OF INDIA
PORTUGUESE GUARANTEED
RAILWAY:
PLANNING & CONSTRUCTION

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“Civilising crusade based upon the prominence of intelligence over force executed by Steamers, Railways and Telegraph-”- Portuguese Statesman Fontes Periera de Melo, 1849

In the year 1878, an agreement was signed between the West of India Portuguese Guaranteed Railway Company (WIPGR) and Portuguese Government of Portuguese India for construction of Harbour and connected Railway, eighty three kilometres of Rail lines extending from the port of Morumgao in the Portuguese colony of Goa eastward, and up the precipitous Western Ghats mountain range to Castle Rock, just across the border inside British India.

The Goa line was to join a branch of the Southern Mahratta Railway at Castle Rock from whence the line—conceived as a single project involving two different Railway companies and two colonial jurisdictions—extended 111 kilometres to New Hubli located in the Dharwar District of British India’s Bombay Presidency.

The origin of WIPGR is a tale of political history, diplomacy, intense lobbying and protracted back room negotiations as it required the approval and support of multiple decision makers & stake holders: The British and the Portuguese governments, Government of India, Governor General Goa, Mumbai presidency and self interest group-Stafford house committee. Capital for the construction of the WIPGR had to be privately raised from stock-holding investors who were overwhelmingly British.

It is a fascinating story; a story of desperate attempt by former colonial power to regain its former glory by investing in transport infrastructure to rejuvenate the economy, a story of statecraft & diplomacy where Britain acceded to Portuguese request to construct a port and connecting rail lines to its territories only to grab host of trade concessions & monopolies, a story of intrigue , manipulations & “private enterprise at

public” risk by Aristocratic British capitalists, a story of an era when Railways would lay rail lines and also develop a port, a story of Railways rising to occasion and complete the work departmentally when its contractors would quit in case of major challenges, a story of human grit & determination to complete the work against all odds, a story of “*Labor omnia vincit*” (*work conquers all*), a story of first transnational link joining two foreign territories ensuring seamless movement of traffic and a story of cut throat competition and unfair trade practices adopted by MSMR & BCCI to strangulate WIPGR, a story of WIPGR turning proverbial white elephant for Portuguese.

By the mid-19th century Goa, which once was a major trading hub outside Lisbon, a fulcrum of vast trading empire from east Africa to East Asia, had become a pale shadow of itself, reduced to a colonial backwater of a minor colonial power, and an economic liability to Portugal. Mormugão had become a minor port used primarily by small vessels engaged in coastal shipping up and down the West Coast whose main destination was often Bombay, the great entrepot. -- **J. B. Amâncio Gracias, Caminho de ferro e porto de Mormugão.**

Andrade Corvo, a Portuguese Foreign Secretary in the 1870s, lamented that there were years during which no ship from Europe reached Goa, and that the livelihood of many Goans depended on remittances from relatives working in Bombay, and elsewhere in British India¹. --**Bernard Dale Ethell, “Portugal and Portuguese India 1870 – 1961** Portuguese authorities wanted to invigorate the economy of Goa to reduce the drain on the Portuguese treasury as trade deficits were rising to alarming levels.

Portugal had undertaken an ambitious public works programme (commonly known as Fontismo, after its main promoter, engineer and statesman, Fontes Pereira de Melo),

based on the saint-simonianist ideology, including building of Railways to spur the economic growth in Portugal & its colonies. A Railway across Goa and into British India to tap natural resources of Deccan and stimulate greater use of the harbour at Mormugão seemed to be one possible answer.

Railways, the most spectacular symbol of this age, pioneer of civilization, conqueror of time and space, unrivalled promoter of migrations, settlement and resource extraction was marketed as tool of peace and harmony by its Saint-simonianist promoters. Railways became the very icon of progress and civilization in the collective perception of Western societies.

Article VI of a Treaty of Commerce and Extradition between Her Majesty and the King of Portugal and the Algarves, with Reference to their Indian Possessions signed at Lisbon on 26 December 1878 with ratifications exchanged on 6 August 1879 opened the door for the WIPGR.- -----**Parliamentary Papers, 1881 [C.3019] Marmagoa. – (Railway and harbour.)**

Treaty of Lisbon entailed Abolition of all custom duties on the frontier lines between British India and Portuguese India. Portugal offered Britain salt monopoly in return as Goan salt was considered to be a threat to the salt monopoly exercised by the government in British India.

It would pave way for construction of rail lines as Portugal wanted to end Portuguese India's trade isolation. Signing of the treaty proved to be ruinous for economy: fall in exports, collapse of lucrative salt trade, large scale migration of Goans and its disastrous impact on agriculture.

The GOI was not in favour of the construction of the Mormugão line. However, neither the GOI nor its subsidiary jurisdiction, the Government of the Bombay Presidency opposed railway construction that linked the southern interior regions of the Bombay Presidency directly with nearby, west coast ports located within British India.

The cause of the Goa line was advanced by the lobbying efforts of a well-connected, self-interested group in England, the aristocratic capitalist (the so called Stafford House Committee led by the Duke of Sutherland) for the project from which they expected financial benefit.

The possible line to Karwar was one of the obstacles to the construction of the Mormugão line. Some claimed that Britain should not finance a railway towards foreign territory, particularly when it had the good option of Karwar.

Proceedings of House of Commons sub-committee underlined the intense debate and deliberations on the issue:

“I would ask what is the condition of the question as to the proposed line of railway from the Deccan to Carwar, and whether that, in your opinion, would be a paying line?—The line under consideration at the present time is one from the Deccan to Marmagoa, north of Carwar, on the same coast. The present position of it is that it has been offered to a company who required no guarantee, and who have still two or three months remaining, during which they are to make up their minds as to whether they will continue to carry it out.

What are the considerations then which have induced the Government to support the Goa line, terminating at a harbour not in our own territory, in preference to the Carwar line, with a harbour in our own territory?—The promoters of that line asked different terms; they did not require a subsidy, and were content with the grant of land

and other facilities.”---**Reports from committees – volume 9 page 11, House of Commons 1879**

It was a solitary proposal at that time by a private company which did not ask for any subsidy from British government.

“As far as I know there is only one proposal (which is by no means likely to come to anything) of a private company undertaking to construct a railway in India on their own risk, whereas thousands of miles of railway have been constructed in South America, in the United States, and in Canada, almost entirely by English capital. The only railway I know (and that is only even in contemplation now) of whose construction by a private company there is any prospect is the railway to Goa?—That is so.” -

Reports from committees – volume 9 page 11, House of Commons 1879

It was expected that WIPGR & SMR will connect a large tract of fertile areas to Indian railway network and will provide port connectivity at Morumgao.

“The Southern Mahrutta Railway, the construction of which is now in active progress, will connect the lines of this company with the Indian railway system, and will open out a large tract of fertile and well populated country, for the produce of which the Port of Morumgao is the natural outlet.” .”---**Investors Chronicle and Money Market**

Review, Volume 46

In Calcutta office of GOI, there was scepticism with the Goa Railway project being termed as chimera as project was not being fully financed by Portuguese authorities.

However, in the end, the objections of the GOI were overridden in London—a decision Krus Abe cassis, a Portuguese engineer writing in 1951, considered it to be a victory of engineering over nationalism. Pragmatically, the main British negotiator of the 1878 Treaty, R. B. D. Morier, realized the Mormugão line would make the substantial costs of 83 km of rail track and large harbour works the responsibility of Portugal. Even so, Article VI, clause 6 retained for Britain the right to build a line to Karwar “from any point or points” along the Mormugão line.

Portuguese government was convinced of the, possibilities of Morumgao competing with that of Bombay Port when once the former was connected to the rich lands of Central and South India by rail. It was assumed that construction of Railway of Morumgao would lead to a faster growth of maritime trade in Portuguese India.

R.B. Morier the British Minister at Lisbon and his predecessor Lytton had also suggested that the Portuguese acquiescence and goodwill could be secured by providing in the agreement for Anglo-Portuguese cooperation in the construction of a railway linking Morumgao, the Port of Goa, with the British Indian railway system at New Hubli. The building of this line he said would be an important step towards Goa again fulfilling its natural role as the port for British Indian hinterland with obvious advantages to both.

Once the Stafford House Committee and the Portuguese Government came to initial agreements, the British Government gave its consent to the agreement about the survey for the railway line.

Earlier attempts of “Stafford house committee” had not proved successful despite guarantee offered by Portuguese as sufficient money could not be raised by promoters.

“The Stafford House Committee spawned the financial syndicate known as the 'Morungoa and New Hubli Survey, and a survey of the proposed line was commissioned. This indicated that a line of 124 miles from Marmagoa to New Hubli (about 50 miles of it within Portuguese territory) would cost about £166,000 to build, would attract cotton, salt, timber and general traffic, and would return about 4 per cent per annum on capital.

However, although the Portuguese government proved willing to guarantee the interest on the capital for the entire line, the Committee could not raise enough money in London on the basis of that guarantee alone. It was obliged to approach the Government of India for a guarantee on the section of the line from the Goan border to New Hubli. This in turn resulted in some delay, because it enabled the Government of India to re-open the case for its own preferred option of a line to Karwar.

Only the intervention of the Secretary of State for India, the Marquis of Hartington, who over-ruled the Viceroy in December 1880 and insisted that the Hubli-Marmagoa route was commercially superior to the Hubli-Karwar route, saved the project and enabled it to go ahead.”

–**“Maritime Enterprise and Empire: Sir William Mackinnon and His Business ...By J. Forbes Munro**

The Portuguese had hoped that a private company would undertake the project (railway construction and operation, and major harbour improvements) without any kind of financial aid from the State.

That did not happen, and Portugal had to guarantee a return on investment to the stockholders of a private, British-based railway company formed by the Stafford House Committee (June 17th, 1880 law and April 18th, 1881 contract).

Portugal offered a 5 per cent guarantee on capital of 800,000 pounds and 6 per cent on additional capital above that figure (550,000 pounds as stated by the laws of 23 July 1885 and 16 June 1888) in addition to free land and various tax exemptions.--**Gaspar Cândido Correia Fino, Legislação e disposição esregulamentare ssobrecaminhos-de-ferro ultramarinos (Lisbon: Imprensa Nacional, 1908), vol.1**

The guarantee in turn was secured by the hypothecation of revenues, broached extremely delicately to not offend Portuguese sensibilities, derived from an annual sum paid to Portuguese India by the Government of Bombay in return for various concessions and undertakings made by Portugal in the 1878 treaty. They did not wish to highlight that Portuguese Government guarantees were of limited value without British collateral.

On 18th April,1881, Sir T. Douglas Forsyth, Duke of Sutherland, William Mackinnon, Sir Henry Green and Frederick Youle, all of "Stafford House Committee", signed the contract with the Portuguese Government to construct the Marmagoa port and the railway.

The agreement in turn opened the way or floatation of two rail companies in London with identical board of directors: "The West of India Portuguese Guaranteed Railway Company Private Limited" (W.I.P.G.R.) for construction of harbour at Morumgao and fifty miles of railways to the frontier with British India registered in April 1881 and southern Marhatta company, registered in May 1882, to construct the balance line to Hubli. The Duke of Sutherland and William Mackinnon were the largest shareholders of

the company. The Southern Marhatta was the largest of the company with authorised capital of 3 million pounds and WIPGR had nominal capital of 80000 pounds.

The registered office of W.I.P.G.R. was situated at 332 Coastal Chambers, Buckingham Palace Road, Westminster. The contract of 18th April, 1881 gave to the W.I.P.R. British company a lease free of charge for 99 years. The British company made the Portuguese pay even for the registration of the English company in England.

The WIPGR was allowed to operate in Portuguese territory by an ordinance of 8 March 1882 (under the terms of the Corporations Act of 22 June 1867). The deadline to complete the works was April 1887, but the construction continued through December 1887.

Survey and Construction, 1880-1887

The Portuguese Government chose the prominent, London-based firm of Sir John Hawkshaw, Son & Hayter to be the Goa project's consulting engineers. That firm, in turn, selected Ernest Edward Sawyer (1850-1937), to lead the survey to establish the route and its alignments: a survey that also included the SMR line, Castle Rock to New Hubli. Sawyer subsequently became the Chief Engineer in executive charge of the construction. He remained Chief Engineer (and also the Agent) of the WIPGR in South Asia until he returned to England in 1887. Sawyer became a Director on the London Board of the WIPGR in 1898, and later served as the Company's Chairman. He also became a director of the Madras and Southern Mahratta Railway, and of the British Aluminium Company.

“Mr. Merivale was employed by the West of India Portuguese Railway Company as Executive Engineer on the construction of the line, on the completion of his training in

1881, from the harbour of Mormugao to the Western Ghats, which connects the ancient Portuguese possession of Goa with the Southern Mahratta system of railways in British India.-- **1902 Institution of Civil Engineers**

Immediately on the formation of the company Mr. E. E. Sawyer, under whose charge the original surveys were made, was appointed chief engineer, and was sent out to India to make preliminary arrangements.

On his return, he submitted a report to the Board; plans were at once prepared by Messrs. Sir John Hawkshaw, Son, and Hayter, from his surveys, and a competent staff of engineers and subordinate officers was selected by the Board.

Mr. G. M. Stewart, having been appointed agent to the company, accompanied by Mr. G. H. Stephens, district engineer, and the majority of the staff, left for Morumgao at the beginning of October; Mr. Sawyer himself remaining in England until the contract for the construction and maintenance of the line was let. The board having invited tenders for this contract, that of Messrs. Thompson Dixon, Bayly, Bulkley and Thorne, which was for the sum within that originally estimated, was provisionally approved, and the sanction of the Portuguese Government having been notified undersign manual, it was finally executed on the 15th December, 1881. – The Railway Times, December 30, 1882

The survey began in February 1880. The survey had to encompass broad gauge (5' 6''/1676 mm) and metre gauge (3' 3/4''/1000 mm) options. Other contentious issues involved in the survey included double or single tracking the line (or at least building the right-of-way to dimensions that provided for subsequent double-tracking) and the weight of the rails (lighter, 40 pounds/yard; 20 kg/m; or heavy, 75 pounds/yard; 37

kg/m). The higher standards required greater expense so another option was to build the Ghats section alone to a higher standard to facilitate operation across the inclines. Thus, overall construction costs depended on these and other variables. All parties had some interest in keeping costs down, but the Portuguese wanted a good volume of traffic to stimulate Mormugão so they favoured the broader gauge and other measures that might support that goal.

The GOI believed Hawkshaw and Sawyer too optimistic in their traffic and revenue forecasts, and too low in their costing of the harbour improvements and the railway. The GOI presciently suggested the Portuguese Government should be informed that the cost of the guarantee likely would be a significant burden on the revenues of Portuguese India for many years. Regardless, as noted above, Portugal guaranteed a return on the capital invested in the WIPGR Company promoted by the Stafford House Committee. However, the GOI did insist that the line within British territory be built to the cheaper metre gauge that effectively meant the entire line because a break-of-gauge at the border would have reduced the traffic to Mormugão.

Inaugural function to formally start construction was reported prominently in major newspapers and journals of the era.

“The inauguration of the Goa Railway, took place at Mormugao, in Goa, on the 31st of October 1882, and the ceremony, with the blessing prescribed in the ritual, was performed by his Excellency the Governor-General of Portuguese India, Viscount De Paco D’Arcos in the presence of his Grace the Archbishop of Goa. The above day of the month was fixed, as being the birthday of his Majesty the King of Portugal, Luis I.

A special fete was held at Mormugao, dispensing with the public ball, which was annually held at Panjim for the celebration of the Royal anniversary.

Orders were issued that all the leading officials should form themselves into a committee to make the necessary arrangements to have the opening ceremony performed with éclat. In order to enable the better classes of the inhabitants to proceed from Panjim to the scene of festivities, the Government of Goa had ordered steamboats to be placed at their disposal.

It was expected that this line of Railway , the first work of the modern civilisation which was now being introduced in Goa, would be the precursor of the prosperity of its inhabitants, which the present Governor was endeavouring to promote”.—**The Railway Times, December 2,1882**

The inaugural event as appearing in The Times of India ---

“The ceremony was performed by the Governor-General of Portuguese India, who, at the breakfast succeeding the ceremony, said that the present enterprise virtually originated in the Treaty of Lisbon, signed in December, 1878. When this treaty was made it was not known whether it would be possible to construct a line up the Western Ghats, which bound the Goanese territory. Fortunately it had been found possible, and a company had been formed for this purpose, and the contract, after severe competition, had been let to Messrs. Thompson, Dixon, Bayley, and Co. The harbour works, not being suitable for contract work, will be constructed by the offices of the company departmentally. Since the commencement of this company another has been formed whose object is to join this line to the railway system of India.” ----- **The Railway News, December 16,1882**

Morumgao, a small fisherman's village with population of only 1451 inhabitants would be transformed for ever with 4635 labourers deployed at the commencement of

construction work. The overwhelming majority of the construction workforce—upwards of 16,000 at peak periods employed on the harbour and rail works combined—were Indians, among whom Goans were very few.

The surveys and the construction were supervised by British engineers working for British companies with hardly any participation of Portuguese engineers. However, the harbour and the WIPGR were being built within Portuguese territory so the Portuguese Government had supervisory authority exercised by Portuguese engineers in Goa. The successive directors of public works were Cândido Celestino Xavier Cordeiro and Luís Fernando Mouzinhode Albuquerque.

Cordeiro resented criticism of his work and resigned his commission in 1885. He was replaced by Luís Fernando Mouzinho de Albuquerque, an engineer graduated from the Army School. He had worked with Sousa Brandão in the survey of a narrow gauge network in the Portuguese province of Trás-os-Montes in 1878.

The Portuguese engineer blamed the company for squandering too much money on the railway works and on superfluous structures (like a house for the WIPGR Company Board in Mormugão). Afterwards, he accused the company of trying to find any pretext to demand compensations from the Portuguese Government.

Both the Governor General Ferreira do Amaral and Tito Augusto de Carvalho confirmed that Mouzinho de Albuquerque was a more thorough director than Cordeiro. In fact, Mouzinho went as far as to blame the engineers of the SMR for drilling a tunnel (two tunnels at the top of the Ghats were in British territory) in the rainy season against his best advice. The tunnel ended up collapsing and Mouzinho wrote the proverbial “I told you so”....

British engineers of WIPGR were finding Supervision of Mouzinho and Cordeiro quite meddlesome & bureaucratic, more concerned more with the forms and routines of reporting than practical engineering especially by Mouzinho; probably British were not used to the scrupulous supervision that was common practice in Portugal.

Construction began on 15 December 1881. Thomas Dixon Bailey, Bulkly & Thorne had won the construction contract but they soon proved incapable and were removed. Thereafter, the WIPGR constructed the Mormugão line departmentally via petty contracts and direct supervision by the Company's engineers. Sawyer and Cordeiro had overall charge, the former as Chief Engineer, and the latter as the representative of the Portuguese Government.

Progress of construction works as reported by Investors Chronicle and Money Market Review, Volume 46 is given below:

*"By the end of year 1882, around 5,000 workers were employed and about 15 per cent. of the earthwork was completed together with some masonry. About one-half of the permanent way materials had been purchased and shipped, and much of the iron bridgework has been despatched, and that not yet shipped has been contracted for and is in a forward state."---***Investors Chronicle and Money Market Review, Volume 46**

The third annual report of West India Portuguese Guaranteed Railway Company states that during the year 1883 the progress of the harbour works has been satisfactory but things were far from satisfactory in ground. The tender was awarded to. Contractors Messrs. Thompson, Dixon, Bayly, Bulkley, and Co. could not make arrangements for adequate supply of labour and it was found necessary to give the contractors formal

notice to proceed more vigorously with the work, and in reply the contractors put in a claim for an extension of the contract time.

“Under these circumstances the Board desired Mr. Sawyer, their chief engineer and agent, to come to England, and meetings took place with the consulting engineers and members of the contractors' firm, and it was hoped that some points of difference having been adjusted, the works would proceed more satisfactorily.

The Board requested their chairman, Sir Douglas Forsyth to Visit India and inspect the works, and to consult generally with the local authorities and the company's officers on the best means for insuring the successful prosecution of the undertaking. On his arrival at Mormugao at the end December last, Sir Douglas Forsyth found that the contractors were not proceeding satisfactorily with the works, and were disposed to treat for the surrender of their contract.”-The Railway Record, June 18, 1884

After the negotiations, an amicable arrangement was reached between the company and the contractors, by which, under the advice of the consulting engineers and with the consent of Senhor Cordeiro, representative of Portuguese Government, the contract was rescinded and the whole of the work was carried out departmentally and by petty contractors. – **The Railway Record, June 18, 1884**

Extracts from report of third annual general meeting of the shareholders are reproduced below; a story of challenges, setbacks and struggles in early days:

“The Chairman said:—Gentlemen,when I arrived at Mormugao at the end of December, I was in hopes that everything was going on as fast as could be; but I was

*met by Mr. Sawyer on arriving at Mormugao, and he put in my hands a letter from one of the contractors who said they found it impossible to carry on the work at all in accordance with our requirements; and they talked about extending the time to what we thought was an unconscionably long period. I went into the whole thing thoroughly with Mr. Sawyer and Senhor Cordeiro, who represented the Portuguese Government, and as the contractors were anxious to give up the work, I went into the question, and found it would be considerably to our advantage if we clinched the matter at once, because I also found the labour, which was always a matter of great difficulty, was getting into a critical state.”-- **The Railway Times, June 28, 1884***

Gangs of labourers would come up to him on the road and declare that they would not continue to carry on work.

“One set of Afghans, who are a fine body of men and fit for anything in the way of labour, came to me and said they would give up at once, and they gave their reasons for so doing.”

*“We were able to close the contract upon very favourable terms. .. The result has thoroughly justified our expectations, and has proved the wisdom of the board in agreeing to the rescission of the contract; because we hear from Mr. Sawyer that not only has he been able to carry on the work very effectively, but at a considerable reduction in cost compared with what it would have been if there had been as much done by the contractors as he has done now”.-- **The Railway Times, June 28, 1884***

The Board recorded that there was every reason to believe that the line would be completed by the time that the Ghat Section of the Southern Mahratta Railway was expected to be ready by January, 1887.

The complicated Anglo-Portuguese mix of British engineers, British capital and a British-based and British-directed Company supervised by Portuguese authorities and underwritten by the revenues of Portuguese India resulted in the friction and frequent disagreements.

It was a construction against all odds and in most challenging field conditions- torturous landscape laden with Ghats, valleys & ravines full of geographical challenges ever ready to test the ingenuity of engineers, sickness was rampant in disease ridden Ghats & ravines; dense forest teeming with wild animals and swamps were taking their tolls and work could be undertaken only between October and April due to torrential rains. The line in the Ghats went through the Sonauli Valley, sometimes labelled the “valley of the shadow of death”.

The company had hoped, during the cold season of 1883-84, to lay a line of Railway from Sanvordem to the foot of the Ghats to run daily trains for labourers, and prevent their sleeping in the unhealthy valley.

But, it required ten tunnels to pierce and these had not been touched by the contractors. Men especially skilled for this work from Ceylon and other places were brought to get those tunnels bored quickly.

The harbour works were progressing exceedingly satisfactorily and Mr. Sawyer, the chief engineer, had laid down the foundation work. Cement blocks were laid at the

location where the breakwater commenced and the works stood the monsoon of last year very well.

The old port and palace were turned into excellent quarters for Railway company officers at the present time, with planning to eventually utilise them as the offices of the company.

“That has been done at very little expense, and very cleverly they have made the alterations, so that we shall be saved a great deal of expense there. Then on the headland at the top we have built some bungalows where the staff will be lodged, their quarters being as salubrious and as good as any which can be found. I have nothing else to say except that I found all the arrangements exceedingly satisfactory. All the officers were working in the most hearty and cheerful manner, and none of them complained of sickness; and although some are the worse for wear and tear they did not seem likely to succumb”. —**Report of The third annual general meeting of the shareholders of this company, at the offices, 31, Lombard-street**

Meanwhile as there was delay in boring tunnels, It was suggested to utilise the old cart road over the hills to connect the Southern Mahratta territory for moving materials .

“By utilising an old cart road over the hills from a place called Collem to a point over the hills in the Southern Mahratta territory, by making use of the road for bullock carts, we should be able to use the line much sooner than we should otherwise be if we had to wait till the tunnels were all pierced, because we should be able to use the railway from Sanvordem to Collem, and then to use the cart road over to Kulmul, which is near to the first station on the Southern Mahratta Railway, and so we should be able to take our goods backwards and forwards, perhaps a year before the line would be thoroughly opened.”---**Railway Record, Volume 42, Issues 1-39**

Board had put in record the support rendered by Portuguese authorities and help extended by Governor General Goa especially in waiving port dues.

“We have in many instances been indebted to the Governor General there and to the good offices of our Government director, Baron Da Costa Kicci here; also to Seuhor Santos Silva at Lisbon, who has been able to push things through with celerity and expedition. We found, for instance, that the port dues at Mormugao were becoming troublesome, and we applied to the Government, who at once reduced the port dues on the steamers; but unfortunately the Patemars, or coasting boats, were left out. We, therefore, brought the matter under their notice, and they saw the importance of issuing different orders, which was done at once.”

Report of chief engineer WIPGR, Mr. Sawyer as appearing in **the Administration report on the Railways in India- part 2, 1885-86** giving the details of progress of works is reproduced below:

“The following paragraph, quoted from the report of the Chief Engineer, dated 26th April 1886, will be read with interest:—

Though not falling within the time under report, it may be appropriate to note here that the S. S. Westbourne (it was the ship which sailed into Mormugao in April 1855 that brought in Railway equipment) from London, was the first to come alongside the new quay. She drew at the time 22 feet 9 inches aft, and took up her position at No. 1 Berth to discharge a heavy weight under the 25-ton crane. There was a heavy swell outside, owing to strong north-west winds having prevailed during the afternoons of the previous

three days, but the Westbourne was so comfortable at her berth that she completed the whole of her discharge there.

Railway Works.—The line from the frontier to the sea is 51 miles. Taking this in two divisions, the first or lower division from Mormugao to mile 41 is rapidly approaching completion. Seventeen miles are already in thorough running order, on five the road is laid, and on the remaining nineteen all the heavy works are completed, except two bridge; and the permanent-way is now being laid.*

The second, or Ghat division, is from mile 41, Sonali temporary terminus, to the frontier. The heavy work on this division consists of masonry and tunnels, on both of which very good progress is said to have been made.

The following figures will give some idea of the work done. There are twelve tunnels from 150 to 838 feet long, the total length being 5,209 feet. On the 1st April 1886, 4,004 feet of heading had been taken out, leaving 1,205 feet for completion. The total excavation from these tunnels, exclusive of the heading, will be 72,054 cubic yards. Up to 1st April 1886, 18,492 yards had been taken out, leaving 53,562 cubic yards to be done.

The tunnels are almost entirely in rock; lining is required only for a certain distance at the entrances of some of them.

The line from the foot of the Ghat to the harbour will, it is expected, be quite ready by the close of the monsoon of 1886, and there is every probability that it will be ready throughout by the beginning of 1888.”—Administration report on the Railways in

India- part 2, 1885-86

The Railway line from Marmagoa to Chandor was laid on a level and easy terrain with no obstacles. The line from Chandor to Collem was also laid on an easy terrain and on level ground but had to cross the Paroda and Sanguem rivers. The Railway line from Collem to Caranzol was laid on extremely uneven and difficult terrain with tunnels and bridges. In all there were 16 tunnels upto Castle-Rock.

Administration report on the Railways in India- 1891-92.,part 2, gives us details of track structure and progress of works in the section:

“The first 38 kms up to Collem station, on which the ruling gradient is 1 in 100, are constructed for a single line as regards the earth work and iron superstructure, but for a double line as regards all bridges and culverts, and the remaining 13 miles with a maximum gradient of 1 in 40 for a double line of rails.

The permanent way throughout is of the 62 lb state railway type, with 10 sleepers to the rail. Locomotives weigh 43.5 tonne when loaded. Two suffice to take a train to Ghat.”

These were flat footed steel rails on creosoted Pine, Sal , Teak and Jamba sleepers. The line was ballasted throughout with laterite and blue stone. The line was partially fenced. The sharpest curve was of 720 feet radius.

Material trains have been running from Sanvordem, mile 26, to a temporary terminus at the foot of the Ghats, mile 41, since October 1885.

The West of India Portuguese line has been undertaken by a Company under a guarantee given in April, 1881 by the Portuguese Government; it extends from Marmugao in the Portuguese settlement of Goa to the Portuguese frontier. The railway works were in the first instance given out on contract, and work was commenced on 22nd February 1882. The contractors having, however failed to make satisfactory progress, the works were taken over by the company at the end of January, 1884 and arrangements made to carry them on departmentally. The harbour and line to the 41st mile were opened for public traffic on the 17th January, 1887.

—Administration report on the Railways in India- 1891-92., part 2

Inauguration & Open Line Operation

The 82 km WIPGR within Goa with its seven bridges, five viaducts, and twelve tunnels (two in British territory), all built wide enough to encompass a double track at some future date, (one of the Anglo-Portuguese compromises) was completed late in 1887. The Goa railway began to function with 12 steam locomotives, 24 coaches 146 wagons, 13 brake vans and 1 crane. It would become the second foreign Railway in India after Pondicherry (only 7 miles long) and largest foreign Railway in country. -

Administration report on The Railways in India for 1896-97, page 66-67

The first engine ran through to the Portuguese frontier by 25th January 1888 and on the 31st of the same month, the official ceremony of connecting the Southern Marhatta and West of India Portuguese Guaranteed Railways was performed by their excellencies the Governor of Bombay (Lord Reay) and the Governor General of Portuguese India

(Cardoso de Carvalho) thus completing the originally projected Southern Mahratta Railway system throughout to Mormugao. . . .—**Administration report on The Railways in India for 1887-88**

Planning for inaugural ceremony was proving to be an exercise in diplomacy; simmering tensions were coming to surface. Both Portuguese & British authorities wanted to take control of the event as WIPGR was Railway of Goa—a Portuguese colony but the company was funded by British capitals and constructed by British engineers and run with British rolling stock.

In the inauguration ceremony the 102nd Portuguese Governor General of India, Mr. Augusto César Cardoso de Carvalho, struggled to keep the upper hand, whereas the British side (represented by Donald James Mackay, The Right Honourable Lord Reay, Governor of Bombay presidency) sought to do exactly the same.

“That feud began even before the ceremony, scheduled for January 31st 1888. Roughly three weeks before, Cardoso de Carvalho, Lord Reay, and Mr. Ernest Edward Sawyer, agent of the West of India Portuguese Guaranteed Railway Company gathered to discuss the details of the ceremony. The main dispute was... the order of the toasts. Sawyer proposed that he should address the first toast to the King of Portugal, to which the Portuguese governor should respond with a toast to Queen Victoria. A number of different tributes ensued: to the company, the guests, the prosperity of the undertaking, etc. Lord Reay disagreed: he believed that the Queen should be the first to be addressed by the Portuguese governor, after which he would do the same, drinking to the health of Louis I, King of Portugal. Cardoso de Carvalho had a different suggestion, which would

“respect our dignity”: there should be reciprocal and simultaneous salutes to the King and the Queen by the English and Portuguese authorities. A toast to the companies should follow: he would address the West of India and Lord Reay should salute the Southern Mahratta. The final salutations should stress, *“The loyal and ancient alliance between Portugal and Britain, linked in India by the most absolute community of interests”*, and the *“unchangeable friendship of the two peripheral colonies”*. --

Portuguese Overseas Historical Archive, box 1977 1L, letter of January 10th 1888

It was a ceremony full of pomp and display of colonial splendour & pageantry by Portuguese & British authorities, entire event meticulously planned in advance with steps to be taken, language to be used, order of toasts and tightening of a few track bolts by ceremonial silver spanner by Governor General Goa and Governor of Bombay presidency formally at the back drop of national anthems of Portugal & Britain.

“The first part of the ceremony took place at around 10 o’clock at the border, where an arch with the banner “Labor omnia vincit” (work conquers all) was set. The trains that conveyed Lord Reay and Cardoso de Carvalho and their staff from British India and Goa stopped a few meters away from where the ceremony was to be performed and then the two gentlemen walked to meet each other.

They were met by Mr. Sawyer, the agent & chief engineer, who addressed them in French, describing the history of the line and inviting both men to finish the work by tightening the bolts of the very last rails. Neither Portugal nor Britain were close friends with France, but French was indeed the international language of diplomacy and its use

throughout the ceremony would not give any special predominance to either the Portuguese or the British governors.

Cardoso de Carvalho congratulated both companies for their work and described the junction of the lines as “a new proof of the ancient friendship of the Portuguese and English Governments, which unites more and more the two countries in their several interests”. Regally, Lord Reay complimented the excellent engineering work that had a “wider bearing, and which will exercise as solid an influence in uniting our two nations, as these fastenings exercise over the two lines”. Then with “a handsome silver spanner, with an ebony handle” both men tightened the last couple of bolts of the track at the sound of each country’s national anthems.”—by Hugo Silveira Pereira et al- Institute of Railway Studies (University of York)

The ceremony resumed in British India, after the train that had conveyed Lord Reay to the border hauled the Portuguese train to Castle Rock, the first station in British territory. Afterwards the revelers journeyed back to Mormugão harbor. In both occasions, Lord Reay’s suggestion about the order of the toasts prevailed. Cardoso de Carvalho saluted the Queen – enthusiastically according to the correspondent of The Times of India – and was followed by his British counterpart, who saluted Louis I. Lord Reay also highlighted the fact that trains from both nations could roam freely across the border, an advantage “which the managers of European international lines may well envy”.

The opening of the WIPGR was a remarkable feat when Railway in India would be a first transnational link, joining two foreign territories ensuring seamless movement of goods and people while the traffic was disrupted and fragmented in European Railroads. *The inauguration of the Goa Railway was thus the inauguration of a service that overcame the frontier as a psychological barrier. From a British perspective, this had a particularly important meaning, since the British were not accustomed to transnational links, as the terminus of their rail system was the ocean.*

In order to allay Portuguese apprehension of slow disintegration of their empire due to integration of the Portuguese territory into British India, Lord Reay, Governor of Bombay presidency stressed at the absolutely pacific nature of new infrastructure as an unlike trans frontier lines of Europe based on military considerations.

The ceremony led Bombay's leading newspaper, the Times of India, to opine that "to traders the port of Mormugão offers large attractions, and there is not much doubt but that they will be taken advantage of, by Bombay merchants particularly, and others generally..Unfortunately for Goa and Portugal that prediction did not materialize.

The WIPGR remained unprofitable well into the 20th century, and the guarantee conceded in 1881 was extended in 1892 when a subsidiary contract between the WIPGR and the Portuguese Government continued, secured and enlarged the guarantee by pledging the Abkari (excise duties) revenues of the Portuguese Indian possessions to that purpose.

Colonel Joaquim Jose Machado, Governor-General Elect of Portuguese India, stated in an interview in Bombay in August 1897 (Machado was en-route to Goa to take up his

position) that “Portugal is a poor country, and yet the Government has already paid about pounds 900,000 on account of the railway; the line does not even pay its working expenses”. In 1902 Portugal had already paid the WIPGR 1.238.625 pounds, almost the entire budget of the harbour improvements and the railway construction. As late as 1918 the WIPGR had not produced a single annual profit in excess of 2.5 per cent, and not until 1927 was Portugal obliged to pay nothing to the WIPGR on account of the guarantee.

Laying of rail lines and improved harbour facilities at Mormugão failed to make Mormugão a major port for ships travelling directly from or to Europe, or other parts of the world.

WIPGR had to face host of operational challenges and suffer loss of revenues, which were bleeding it dry: delays at custom check point Castle Rock, manipulations of rate traffics by railways in British India and offering direct rail route to Bombay port from South Western Deccan, use of traditional boats for sending goods and reluctance of doing business in foreign are in foreign language in a foreign way. - **Gazeta dos Caminhos de Ferro, XII (1899), 282, p. 275**

WIPGR had to face another threat which was not contemplated at the time of giving guarantee by Portuguese government. A connection was made by SMR from Londa to Poona was made with Great Indian Peninsula Railway (GIPR) , by passing traffic to Marmgao port.

Times of India in reported the “ruthless adjustments of tariffs” by the SMR and how the GIPR had converted the WIPGR “from the natural outlet of an extensive system into a local line barren of traffic and incapable of meeting its ordinary working charges” such

that the annual charge generated by the guarantee “hung like a blight upon the whole colony”.

In 1896, working expenses per mile for WIPGR were three times more than similar expenses incurred in other meter gauge railways in country. Its expenses were 126.55% of earnings, solitary railway amongst meter gauge railways of the country. - **Administration report for 1896-97 –CHAPTER IX.-details of Revenue earnings and expenditure. Page 157**

WIPGR had become proverbial white elephant and company was staring at the bankruptcy due to ever mounting operational losses with little likelihood of fulfilling the rosy developmental goals for Goa touted by its Portuguese advocates, and self-servingly embraced by the WIPGR’s British promoters for whom the guarantee ensured “private enterprise at public risk”. WIPGR was leased to SMR in 1902 and traffic increased. Between 1888 and 1901, the average tonnage transported annually along the WIPGR was around 85,000 tons: after 1902 and until 1914 that increased to 350,000 tons annually. The Goa line continued to require payments from the guarantee until the 1920s but the amount slowly reduced. Throughout, the London-based WIPGR continued as little more than a rent-receiving shell of a private company until finally wound up in the 1950s.

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