

CHAPTER III

PAMBAN RAILWAY BRIDGE; A PLAUDIT OF SOUTHERN RAILWAY

According to legend, when Ravana, the Demon King of Lanka kidnapped Sita, the wife of Rama, he had to invade Lanka to recover his wife from Ravana. Rama crossed the Pamban pass from Mandapam on the mainland to the large island on the Indian side and got as far as Dhanushkodi. The story tells about the cause way known as 'Adam's Bridge'. Rama crossed the sea by this on to Mannar island and then to Srilanka and recovered the queen from the hands of Ravana¹.

Simhala, which means lion's abode, is the name by which Sri Lanka was called by the Buddhist writers. In some Puranas the word Ratnadeepam or Island of gems is used for Srilanka. Lanka, in Sanskrit meaning beautiful, was the old mythological name of Srilanka. Lanka was the capital town of Ravana, the abductor of Sita, with whom Rama fought².

The possibility of connecting India and Srilanka by a railway across the bank of sand extending the whole way from Rameswaram to Mannar had been reported from the 19th century.

Pamban Island is in the district of Ramanathapuram in TamilNadu³. It is an ancient Zamindari town of Madras state⁴. Upto 10th century Pandyan kings and queens remained the rulers of this district. Through Malik Kafur's invasion of Madurai, Ramanathapuram came under muslim rule. In 1520 AD the Nayaks of Vijayanagar took over this district⁵. After this Ramanathapuram fell into the hands of the Nawab of Arcot. Later the British appeared in the political scene of Ramanathapuram⁶. There was a struggle between the French and the British for the supremacy of South India and this culminated in the victory of the British who obtained control over all the Carnatic provinces including the present Tirunelveli and Ramanathapuram districts⁷. In 1792 the British appointed Benjamin Torin as the collector of Tirunelveli and Ramanathapuram provinces⁸. The famine of 1876-78 necessitated the reorganization of the Madras Presidency⁹. Subsequently Sir William Mayor of Indian Civil Service was appointed to give suggestion for the same. He found that the Madurai district was spread over 8708 square miles and had a population of 3 million. On the basis of the recommendation of Sir William Mayor's report, a new district was created in 1910 as Ramanathapuram. It was created by carving out certain portions from the Madurai and Tirunelveli districts¹⁰. Ramanathapuram district comprises of 6 taluks – Ramanathapuram, Pamban island (Rameswaram), Paramakudi, Thirkalanai, Kamuti and Mudukulathur.

The Report of Mr. A. cotton, the chief engineer of Pamban channel in 1854 gives us a vivid picture about the importance of Pamban channel. Through the Pamban channel the trade had increased from 17000 tones in 1822 to nearly 1,60,000 tones in 1853¹¹. The trade between Colombo and Nagapatam was remarkable and it earned profit for both the countries. For instance the exports from Tanjore to Columbo valued 25 lacs a year¹².

RAILWAY SYSTEM IN PAMBAN

The Pamban pass light house was built in the year 1846. It was situated on sand hill about one mile East of Northern channel and in Latitude $9^{\circ} 17^1$ N and Longitude $79^{\circ} 13^1$ E. It was exhibited at circular masonry tower at a height of 94 feet. It was visible from a distance of 14 miles in clear weather. In 1872 the Great Southern of India Railway Company got permission from the government of India to construct a railway line from Thiruchirapalli to Madurai. In the same year the railway line was extended upto Tuticorin. While the work was in progress the Great Southern of India Railway Company was amalgamated with the Carnatic Railway Company under the title of South Indian Railway. The collectors of Tirunelveli and Madurai in 1873 took initiative to help South Indian Railway in land purchase¹³. The Madurai Tuticorin Railway line was opened in 1876. Further South Indian Railway was permitted to extend the Railway line towards Ramanathapuram¹⁴. The portion of the Railway line which cut across Madurai district and entered Ramanathapuram near Vadamalaikuruchi was the first Railway line in the Ramanathapuram district¹⁵.

In 1899, a proposal was made to extend a railway line upto Pamban. A fund of Rs 10 lakhs was allotted in 1899 and the work began in the same year¹⁶. The owner of this Madurai Pamban section was the Madras Presidency. The first portion of this line from Madurai to Mandapam, a place near Pamban Bridge, was opened on 1 August 1902 covering a distance of $89\frac{1}{2}$ miles¹⁷. Then the second phase from Pamban to Rameswaram a distance of 7 miles was opened for public on 11 September 1906. The distance between Mandapam and Pamban was covered by sea. Hence forth from Mandapam to Pamban, water boats were maintained for the passage of a distance of 3 miles.

Another line was laid between Rameswaram and Dhanushkodi covering a distance of about 11½ miles. This line was opened for traffic on 10 December 1908. Although a line from Madurai to Dhanushkodi was laid it could not be completed because of a sea gap between Mandapam and Pamban for a distance of 3 miles. The connection between the main line and the isolated railway on the Rameswaram island was one of the greatest obstacles to the Government of India.

In 1907 Sir Henry Kimber, the chairman of the South Indian Railway received an important deputation from Ceylon planters. In this deputation they wanted to improve the means of transport and communication between India and Srilanka. He contacted Lord Morley, the Secretary of State for India and Lord Elgin, the Viceroy of India regarding this. By this time, Ceylon Government agreed to construct a railway from Madavachu to Talaimannar, a distance of 67 miles. On Indian side Madurai Mandapam Railway was extended across the Pamban Pass by a bridge to the island of Rameswaram and then to Dhanushkodi. A meeting was held at Dhanushkodi on November 25, 1908 and it was attended by Sir Arthur Lawley, Governor of Madras and Henry Mc Callum, the Governor of Srilanka¹⁸. They decided to build a viaduct across Palk Straight and run a ferry service between Dhanushkodi and Thalaimannar. The extension of the line from Dhanushkodi Jetty to Dhanushkodi point on the Rameswaram Island aggregating 10.15 miles was opened for traffic in 1914. The question of extending the main line to Ceylon over Adam's Bridge was under investigation by the Railway Company¹⁹.

The distance between Dhanushkodi, the southernmost point of Rameswaram and Talaimannar on Mannar island was 21 miles. The idea of connecting these two terminal stations by a railway line on a solid embankment raised on the sand bank known as "Adam's Bridge" was

investigated in 1913 and the South Indian Railway Company made a detailed survey and prepared a project for it. This project looked at with attention the construction of a causeway from Dhanushkodi, on Indian side to Talaimannar on Srilankan side. Actual length between these two points was 20.05 miles of which 7.19 miles would be on the dry land of the various islands and 12.86 miles in water. The sections on dry land consisted of low banks of sand and presented no difficulty. But the section through the sea was to be carried on a causeway constructed in the following way; A double row of reinforced concrete piles pitched at 10 feet centre and having their inner faces, 14 feet apart were to be driven into the sand. These piles were to be then braced together with light concrete arches and chains and transversely with concrete ties, struts and chains. Behind the piles, slabs of reinforced concrete were to be slipped into position, the bottom slabs being sunk well into the sand of the sea bottom. The top of the concrete work was to be carried to six feet above high water level and the rails to be laid at that level. The total cost of the construction work at the two terminal points was estimated about 111 lakhs and therefore the scheme was given up for a simple one²⁰.

Many proposals were made whether Pamban strait should be crossed by a causeway or arched viaduct with a swing bridge for passing ships, whether the strait should be entirely closed and an alternative passage provided by means of short light draft canal should be constructed across the island. At last it was decided to construct a viaduct in 1912²¹. It was finally decided to build a viaduct over the Palk Strait to provide a railway service between Mandapam and Pamban and ferry service between Dhanushkodi of India and Talaimannar of Srilanka.

In the history of railways in South India the year 1914 was a landmark. Hereafter pilgrims

who travelled by boat to and from Mandapam and Rameswaram enjoyed the train service of South Indian Railway²². The distance between Rameswaram and Mandapam is only 15 miles. In the year 1914 the South Indian Railway extended the railway line upto Dhanushkodi by the construction of a viaduct over the reef between Mandapam and Rameswaram. A cantilever bridge was constructed over the Pamban Channel. Passenger traffic started in January 1914 and the goods traffic on 14 September 1914. Indo- Srilankan connection was opened on 24 February 1914²³. The opening ceremony was attended by the Governors of Madras, Srilanka and Pondicherry and a lot of other dignitaries.

FACTORS LED TO THE CONSTRUCTION OF PAMBAN BRIDGE

The most important reason for the construction of Pamban Railway Bridge was to enlarge trade activities and thus acquire more profit from it²⁴. For the smooth administration the British had a strong desire to link the Rameswaram with the main land. The British wanted to bring provinces, towns, districts and villages under a single political administrative system and it led to the speedy construction of Pamban Railway Bridge.

The British wanted to reduce the travelling distance of its both colonies, India and Srilanka. The British also wanted to avoid the risk and delay in cotton trade. The soil of Rameswaram is very suitable for the cultivation of cotton²⁵. Tondi and Devapatnam of Ramanathapuram were the chief centres of cotton. The export of agricultural products and the expansion of tourism in Ramanathapuram district also induced the British to construct the bridge.

Pamban Port

Pamban is an important port situated on the South Western corner of Rameswaram Island, opposite to the mainland of Rameswaram. It is separated from the main land by the Pamban Strait which connects the Palk Strait on the North and Gulf of Mannar on the South.

The question of opening a rail communication between India and Srilanka was under consideration as early as 1876²⁶. In the year 1910, the government of India gave sanction to the proposal for bridging the Pamban pass. Several schemes were considered to construct the bridge, but in 1912 it was finally decided to build a viaduct over the Palk Strait, to provide a railway service between mainland and Pamban port and ferry service between Dhanushkodi of India and Talaimannar of Srilanka. Rameswaram Island in which Pamban Port situated was once a part of the mainland. About AD 1480 a violent storm breached the isthmus and a subsequent storm rendered the breach permanent. This resulted in to separation of Rameswaram island²⁷.

The Pamban Railway bridge which connects the mainland at Mandapam with Rameswaram Island in Tamil Nadu was opened to traffic in 1914. Since then the passenger and goods traffic from Srilankan ports have been entirely through Pamban Railway Bridge to India.

Construction of Pamban Railway Bridge

The Pamban Railway Bridge is the longest and oldest railway bridge in India. Though the bridge was constructed at a time when technology was not advanced, it stands out as a fine example of construction. The Pamban Railway Bridge is also called as Cantelever Scherzer Rolling Lift Bridge. It was named after the German engineer Scherzer, who built the Pamban viaduct.

Of all the work on the Indo Ceylon connection, the most important was the spanning of the Pamban Pass. From Mandapam the extension follows for about 2 miles to its end at Toniturai point and then across the sea on a viaduct about 1 ¼ miles long, constructed on the sand stone reef connecting the mainland with the island of Rameswaram. The viaduct is 6776 feet long and consists of 145 openings. Out of 145 openings 143 of 40 feet span²⁸, one 43 feet span and another one was 44 feet span. 113 spans are on the West side of Pamban channel and 32 spans on the East side. East side is spanned with two leaf Scherzer Rolling Lift Bridge. This bridge is 289 feet long. The bridge was designed by Scherzer Rolling Lift Bridge Company of Chicago. The bridge was constructed by Head, Wringtonson & co, Ltd of Thornaby-on-tees²⁹. The Pamban railway bridge is considered an engineering marvel and it was built within two years. Six hundred workers were involved in the construction of this bridge.

The honour of the building of Pamban Bridge, the only one of its kind in the whole world goes to South Indian Railway, one of the predecessors of the present Southern Railway.

The stone and concrete metals used for the bridge were brought by rail from a quarry which was situated 270 km away from Pamban. Sand came from a site 100 km away. 4,000 tons of cement, 1,36,000 cubic feet of clay, 18000 cubic feet of crushed metal, 163000 cubic feet of sand and 80,000 cubic feet of boulders were used to construct the Pamban Railway bridge.

Navigation Span.

The Pamban viaduct is a unique viaduct as it could open up and allows vessels to pass through. The Pamban viaduct has 145 fixed spans and one navigation span is open for ships. The

draw bridge at the centre comprises two leaves or sections of the navigation span. It is also called Scherzer span, weighing 415 tonnes each. The navigation span at the centre is the star attraction of the Pamban viaduct.

Methods of Operating the Railway Bridge.

The lifting of the Pamban Railway Bridge was done by means of winches on each side of the lifting span. The winch is normally locked by means of mechanical lever in the operation cabin. The lever is controlled electrically by another lever called the 'King lever' which has three positions – normal, middle and reverse.

The authority of the passage of vessels is vested in the hands of the port officer of Pamban. The Port officer will contact the Bridge operator through telephone communication³⁰. The Bridge operator, on receipt of information, communicates with the Pamban and Mandapam station masters. The station masters at either end accord permission if there are no trains to pass. On receipt of permission the bridge operator brings the king lever to the mid position. The station master gives a prolonged beat on their respective block instrument. The mid position of the king lever cuts off the block line and communications on either side polarized in the cabin. The polarized relay circuit is closed by the prolonged beat, which is necessary to give time for the operator to move the king lever from mid to reverse position by deflecting the needle to the right. The local contact in the relay close the lock circuit which, when energized releases the king lever, so that it can be brought to the reverse position, thus disconnecting the lock circuit. The position of the king lever releases the mechanical lever which in turn releases the winch lock thus enabling the bridge leaves to be lifted up. Normally six persons are needed on either side to manually operate and lift them for ships to pass. The navigation span needs to be lifted 4 times a month.

CYCLONE AND RECONSTRUCTION OF PAMBAN RAILWAY BRIDGE

Dhanushkodi is situated on the Southern most tip of the Pamban Island. It is a strip of land about one km width and 18 kilometres length on the eastern end of Rameswaram Island. On the one side, there is the rough water of the Indian Ocean and on the other the calm sea of The Bay of Bengal. The two seas otherwise known as Ratnakara and Mahodadhi with their confluence is shaped like a bow while the strip of land resembles an arrow posed for release. Hindu devotees consider the Aathi Sethu (Arrow head) as a sacred place to perform religious rites³¹. During colonial period Dhanushkodi was famous for trade and commerce. But now it has lost its importance and lusture as it is submerged in the sea. During the middle of the 20th century, Dhanushkodi was made as modern free market, due to the availability of goods and transport facilities. The geographical location of Dhanushkodi and its economic richness earned the name “Singapore of the South”. Dhanushkodi is 18 kilometres away from Rameswaram which links the Gulf of Mannar and Palk Straight. Throughout the year people from different parts of India visit this place. The distance between Dhanushkodi and Srilanka is 13 to 14 kilometres. The most convenient route for passengers from India to Srilanka is through Dhanushkodi to Talaimannar³².

During the 17th century Dhanushkodi port was under the control of the Dutch. In 1660 they made an agreement with Ramanathapuram ‘Sethupathis’- the local rulers, for permitting them to sail through the Pamban channel. This agreement helped their trade with different parts of India and also with Srilanka³³. But in the beginning of the 20th century Dhanushkodi Port came under the control of English from the Dutch. They made tremendous changes in this place and decided to establish sea transport between Dhanushkodi and Talaimannar in Srilanka. The British developed the ports at Dhanushkodi and Talaimannar in 1911³⁴. Sea transport was established and transportation took place from this port which is situated 18 km away from Rameswaram. Thus

Dhanushkodi became an important port city in the Southern part of India.

The Dhanushkodi station, yard and other facilities were operative in the colonial period. For the sea service between Dhanushkodi and Talaimannar, the British built three streamers and named as the Curzon, the Eglin and the Hardinge for the memory of the three Governor Generals of India. People who travelled to Srilanka on the rail route had many sweet memories. South Indian Railway and later Southern Railway continued to operate the train service from Madras to Dhanushkodi pier, where passengers were transshipped to a turbine ferry steamer for crossing Adam's Bridge for Talaimannar and there to Columbo. The crossing used to take one and half hour.

The year 1964 is memorable in the history of South India and also in the pages of Southern Railway. On 22 December 1964 a storm formed in the Bay of Bengal in the eastern direction of Dhanushkodi town³⁵. A wave of 20 feet lashed the town and the speed of the cyclone was calculated as 120 kilometres per hour. The cyclone wiped off Dhanushkodi from the map. Many people lost their lives while they were sleeping. The cyclone formed around 12.30 pm and lasted for 24 hours and devastated Dhanushkodi. After the cyclone, a portion of the railway track at Dhanushkodi was also swept away. The Southern part of Dhanushkodi surrounded by the buildings including temples was submerged in the sea³⁶.

On that day, the six coaches Pamban Dhanushkodi passenger train No: 653 left Pamban at 11:55 pm with 110 passengers including a party of school students³⁷ and five members of the railway staff. The signal at Dhanushkodi failed and the train stopped for a while, in pitch darkness around and there was no indication of the signal being restored. The driver then gave a long whistle and decided to take the risk. The train started rolling along the sea and suddenly a giant wave rose from the turbulent sea and smashed the train³⁸. The initial reports put the casualty figure at 115

based on the number of tickets issued but it was suspected that the figure would be around 200 as more passengers were said to have travelled ticketless on that night.

Another major victim of the cyclone was the Pamban Railway Bridge built exactly 50 years ago. It was washed away by the tidal waves. It was 2.06 kilometres long and had 146 spans. One of the spans had lifting mechanism to give way to passing ships. Due to the cyclone 126 girders collapsed. Only 19 girders and the lift span named after its designer Scherzer were spared.

A portion of the railway tracks at Dhanushkodi was also swept away. The survivors also deserted Dhanushkodi and there remained only a portion of railway track. In the year 1965, the Government of Madras declared the town as unfit for living³⁹. At present a small group of fisher folk only reside in Dhanushkodi.

Immediately on receipt of the information about the disaster, arrangements were made for the rescue operations⁴⁰. Food packets were dropped through helicopters and three boats belonging to the Indian navy were utilized for evacuating the people. The Food minister and the Home Minister of the Tamil Nadu camped at Mandapam and supervised the relief operations. Feeding centres were opened and cash grants disbursed to the suffering people⁴¹. Gift articles and contributions had been flowing in and a number of non-official organizations had offered their services for the rescue operation.

The Government of India had sanctioned a sum of Rs. 17 lakhs for redecking of the existing pier at Dhanushkodi. The ministry of transport had also issued sanction for an expenditure of Rs. 21.06 lakhs for works relating to forming and metalling of the road from Rameswaram to

Dhanushkodi and the construction of minor bridges linking the roads. On disembarkation at Dhanushkodi the repatriates were taken to the relief camp at Mandapam which could accommodate about 1000 families.

Before 1964 one wireless station and police outpost were functioning at Dhanushkodi. Consequent on the havoc caused by the tidal waves and cyclone in December 1964 the wireless station was transferred to Rameswaram and there was no police outpost at Dhanushkodi. The distance between Rameswaram and Dhanushkodi via Rameswaram road is twelve miles and so separate wireless station and outpost at Dhanushkodi needed and government gave sanction to this also.

The government of India took effective measures to reconstruct the Pamban viaduct, under the leadership of E. Sreedharan, the chief engineer of Southern Railway⁴². Almost all the girders were salvaged from the sea and the emergency girders were brought from Assam. The Pamban bridge was reopened in a record time of 46 days. Engineers installed an anemometer which is a safety parameter against high wind speed. When the wind speed crossed 55kilometres per hour, signal of the bridge sent out a warning to the approaching trains. The metre gauge line has a terminus now at Rameswaram. The Scherzer Bridge near Pamban is a very special steel structure. The steel girder bridge opens from the centre, the two arms lifted up from the huge mechanical devices at the two piers. The Scherzer bridge had been always a special of South Indian Railway and later of Southern Railway.

In 1968 Government allotted Rs. 3,59,000 for the pilot age fund of Pamban port and the port

recovered its lost privilege⁴³. In 1970 for the repairs to 'Motor Tug' at Pamban, Rs. 950 was allotted⁴⁴. For proper navigation of the vessels passing through the Pamban channel during night time, lighted buoys at a cost of Rs. 2.20 lakhs had been also provided by the government in 1984⁴⁵.

SIGNIFICANCE OF PAMBAN RAILWAYS

Pamban Railway Bridge is the oldest and the longest railway bridge in India. The Pamban Railway Bridge on the Palk straight links Pamban Island to the mainland India. The open able part of the Railway Bridge which is called the movable bridge in engineering terms has been in existence since 1912 and it is functioning in good condition. It carries meter gauge trains. This meter gauge line is now slated for gauge conversion. The unique structure of the Pamban Bridge was designed by the German Engineer, Scherzer⁴⁶. Therefore the navigation span of the Pamban Bridge is called as Scherzer rolling bridge.

Pamban Bridge which has a 214 feet long movable part lifted for passage of vessels and lowered for the passage of trains is the characteristic feature of this Bridge. In 1854, the Pamban passage was made for navigation facilities of vessels upto 200 tons⁴⁷. A ferry service was also conducted between Pamban and different ports of South India, Orissa, West Bengal, Bangladesh and Colombo.

The introduction of Pamban Railway Bridge reduced the distance between India and Srilanka. Before this, most of the traffic was from the port of Tuticorin⁴⁸. But the Pamban Port provided safe and secure conditions than the Tuticorin port⁴⁹. Further Dhanuhskodi – Talaimannar

ferry service could attract greater traffic than between Tuticorin and Columbo. The British India Steam Navigation Company maintained a steamer service between Tuticorin and Columbo. This passage occupied an uncomfortable tug of 12 hours. But the passengers were able to reach Talaimannar from Dhanushkodi within 2 hours. Thus the Pamban viaduct facilitates a comfortable and shorter journey between India and Srilanka⁵⁰.

Both Pamban Bridge and Ramanathapuram attract people from different parts of India. Ramanathapuram has a number of holy places associated with Gods and Goddesses. It is through the Pamban viaduct people visit the Rameswaram which is 12 miles from Mandapam, the mainland of Ramanathapuram district⁵¹. Rameswaram in India is a sacred place for Hindus and it is as famous as Varanasi in North India. Therefore Rameswaram is visited by people from different parts of India and Pamban Railway Bridge and it provides safe and comfortable journey to the pilgrims⁵².

Dhanushkodi is another holy place situated at a distance of 8 kilometres from Rameswaram. The famous Kothanda Ramaswamy temple is the speciality of this place. It is believed that Vibhishana, the brother of Ravana surrendered before Sri Rama at this spot. This belief inspired the pilgrims of different places to visit this place. The pilgrims are supposed to take bath in a small pond called Ratnakara in Dhanushkodi. The place is also used to offer Sradha.⁵³ (rites offered to ancestors).

The Pamban Railway Bridge linking the mainland at Mandapam and the Rameswaram Island gained a position in the list of world Heritage sites of UNESCO. Steps are being taken by the railway to seek coveted status for the Pamban Railway Bridge. It has been playing a significant

role in bringing people together and promoting national integration and creating a chord of harmony, transcending territorial barriers.

The construction of Pamban viaduct has its own effects on the socio economic life of the people of South India. Communication has become more rapid than in earlier centuries with the construction of this.⁵⁴ Even the local people of Pamban island began to travel to other destinations. Their ideas and fashions changed due to their contact with the people of different parts of the country. The isolated people of this island, with the help of Pamban viaduct began to move to distant places in search of employment also. A small island could not have offered much of employment to its people in this region.

The construction of the Pamban Railway Bridge accelerated the growth of tourism industry also. A number of roads were also constructed in connection with this bridge⁵⁵. Parthibanur - Narikudi road and Madurai – Tondi road, Tiruvadanaai - Oriyur road are the examples of such roads⁵⁶.

The pilgrims who then went across the island from Mandapam, the mainland of Ramanathapuram may have entertained scruples in visiting holy places. Above all Ramanathapuram is the most important pilgrim centre which attracts pilgrims from different parts of India⁵⁷. Hindus believe that sprinkling of well water from the temple premises will confer on them all kinds of boon both in the world and the other. Rameswaram is a place hallowed by the epic Ramayana. A Hindu devotee who visits Varanasi in the North is expected to visit Rameswaram also for the culmination of his quest for salvation. During the festivals like Sivarathri

and Vaikasi a large number of people from different parts of India visit Rameswaram via Pamban Railway bridge to attain salvation. Ramanatha Swamy temple is an important holy place. It is a delightful place for every tourist. The corridor of the Ramanatha Swamy temple is the longest one in Asia with 97 metre span from east to west and 133 span from South to North. It is the third largest corridor in the world and the longest one in Asia. The entrance of the temple is adorned with a 38.4 metre high gopuram⁵⁸. With its magnificent, imposing structure, long corridors, aesthetically carved pillars, 38 metre towering gopuram attracts people.

Badrakali Amman temple with Devi Durga as its chief diety is another famous temple in Rameswaram. It is very famous among the Bengalees whose famous diety is Devi Durga. Erwadi, which attracts the muslims of India, is another popular place of Ramanathapuram. The tomb of sultan Ibrahim Syed Aulia is situated here who came from Arabia through Cannanore. Pilgrims from far off countries like Sri Lanka, Malaysia and Singapore like to visit this holy place of Ramanathapuram through Pamban Railway Bridge.

Oriyur in Ramanathapuram also attracts pilgrims and tourists. It is one of the most important pilgrim centres for Christians. St. John De Britto, a Portuguese Jesuit missionary better known as 'Arul Anandar' attained martyrdom here. It was in this place that the saint was beheaded in 1693 and the sand of this place said to have turned red, by the blood of the saint. Here one can see a magnificent shrine that contains a captivating statue of Arul Anandar offering his neck in humble submission to the executioner. The faith of the devotees is based on the healing power of the red sand. After applying the sand on their bodies, people are said to have cured of incurable diseases. Childless couples are believed to be blessed with children after visiting this shrine.

Number of pilgrims including foreigners visit this holy place where the holy man shed his life blood⁵⁹.

Above all, the economic condition of the people of Ramanathapuram and Pamban also has improved. It accelerated the growth of export and import of agricultural and industrial products between mainland India and Rameswaram Island as well as a few foreign countries like Bangladesh and Srilanka⁶⁰. The soil of Ramanathapuram district is suitable for cotton cultivation. Two varieties of cotton namely karunganni 2 and karunganni 5 are grown in Tondi and Devipattanam of the Ramanathapuram district and are exported through the Pamban Railway Bridge to different parts of India and also to Bangladesh and Srilanka. Large quantity of grains, onion, chillies, oil cakes, paddy, coconut and dry fish are the local products of Pamban and these products are exported through Pamban Bridge. Coral stones and fire wood are also exported from here. Recently many local markets sprang up on the island itself which provide livelihood to many people.

Among the coastal districts of Tamilnadu, Ramanathapuram district has a good coast line with good facilities for the development of fisheries⁶¹. The coast line of the district extends nearly 160 miles and about 50 villages are there. Nearly 25000 persons are engaged in fishing. Dry fish is the chief export item of the people and they earn more profit from this. Through Pamban bridge they export dry fish to Madurai and other parts of the state. Salt trade is also famous in this region and salt is carried to Madurai, Tanjore, Salem etc.

Inshort, the Pamban Railway Bridge constructed in 1914 is an engineering marvel. In 1964 after 50 years of its construction a great cyclone devastated Pamban Railway Bridge. But it was

reopened with in 46 days. Pamban Railway Bridge which connects the mainland India at Mandapam and Rameswaram Island pave the way for Indo- Srilankan connection. It also accelerates the growth of export and import of agricultural and industrial products. Above all the Pamban Railway Bridge is a plaudit of Southern Railway's scientific and technical achievement.

END NOTES

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