



The BEST Story

S. N. Pendsay

THE BEST STORY

By
S. N. Pendsay

Rendered into English from the Marathi
by
M. V. Rajadhyaksha

The Brihan Mumbai Electric Supply &
Transport Undertaking
(of the Brihan Mumbai Municipal Corporation)

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FOREWORD

Fifty years ago on 7th August, 1947, the old B.E.S. & T. Company was municipalised and it came to be known as the B.E.S. & T. Undertaking. The year 1997 is the Golden Jubilee Year of the Municipalisation.

The city of Mumbai has developed from a small trading centre at the time of municipalisation into the commercial capital of India, today. In almost all spheres of human activity, Mumbai has so many firsts to its credit. Likewise, the BEST Undertaking has scored so many firsts not only in the State of Maharashtra, but in the country.

This book has been designed to present a compact view of the achievements of the Undertaking on the occasion of its Golden Jubilee. This is not a reference book. It traces the main lines of the Undertaking's achievements.

Completing fifty years is an emotional experience. However, our glorious past gives us confidence to re-dedicate ourselves, with renewed vigour and hope, to the service of this great city and its people.

I am thankful to Shri S. N. Pendsay, renowned novelist, who had also authored the first edition of this book at the time of Silver Jubilee, for accepting the responsibility of writing this book. My thanks are also due to Prof. M. V. Rajyadhyaksha for rendering its English translation.

VINAY MOHAN LAL
General Manager
BEST Undertaking

P R E F A C E

This edition is an account of the progress achieved by the Undertaking till 1997.

I must specially and gratefully mention the co-operation offered by Shri Vividh Dhuri, Public Relations Officer of the BEST Undertaking. Particularly, for arranging for the help of Shri Lotankar. Urban transport has been a subject of Shri Ashok Lotankar's keen study. More importantly, he is very interested in the art of writing. This made his work with me much more than a mere imposed task. A helpful hand Shri Dhuri provided to assist me was Shri Avinash Musale. Shri Musale carried out promptly what I assigned to him.

To these two helpers in putting this book together, my most sincere thanks.

My thanks are also due to my friend Shri Mangesh Vitthal Rajadhyaksha for once again doing the job of translating my writing into English.

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CHAPTER 1

A HUNDRED YEARS AGO

One of the world's great cities, Mumbai has been the hub of the country's economic and industrial activity. It has other distinctions too. The Indian National Congress, which spearheaded the country's struggle for freedom, was founded in Mumbai. The city has been justly famous for being the most receptive of any in the country to new ideas and trends, particularly to those from the West. The forward-looking and disciplined ways of its people evoke the admiration of everyone from the other parts of the country who is on his first visit to the city.

And yet, about three hundred years ago, Mumbai was no more than an obscure bunch of tiny islands. They were not even proper islands. Only at high tide they were cut off from one another. Sometime at the beginning of the eighteenth century these 'islands' were joined together to form what was to grow into the First City of India. The growth, in area and population, as well as in material prosperity, has been unabated till this day.

It was in the period from 1820 to 1857 that Mumbai took its first strides towards becoming a 'modern' city. The period witnessed many significant changes. The most important of them, probably, was the use of steamships for the voyage to England, and the opening of the 'Overland Route'. Mumbai built

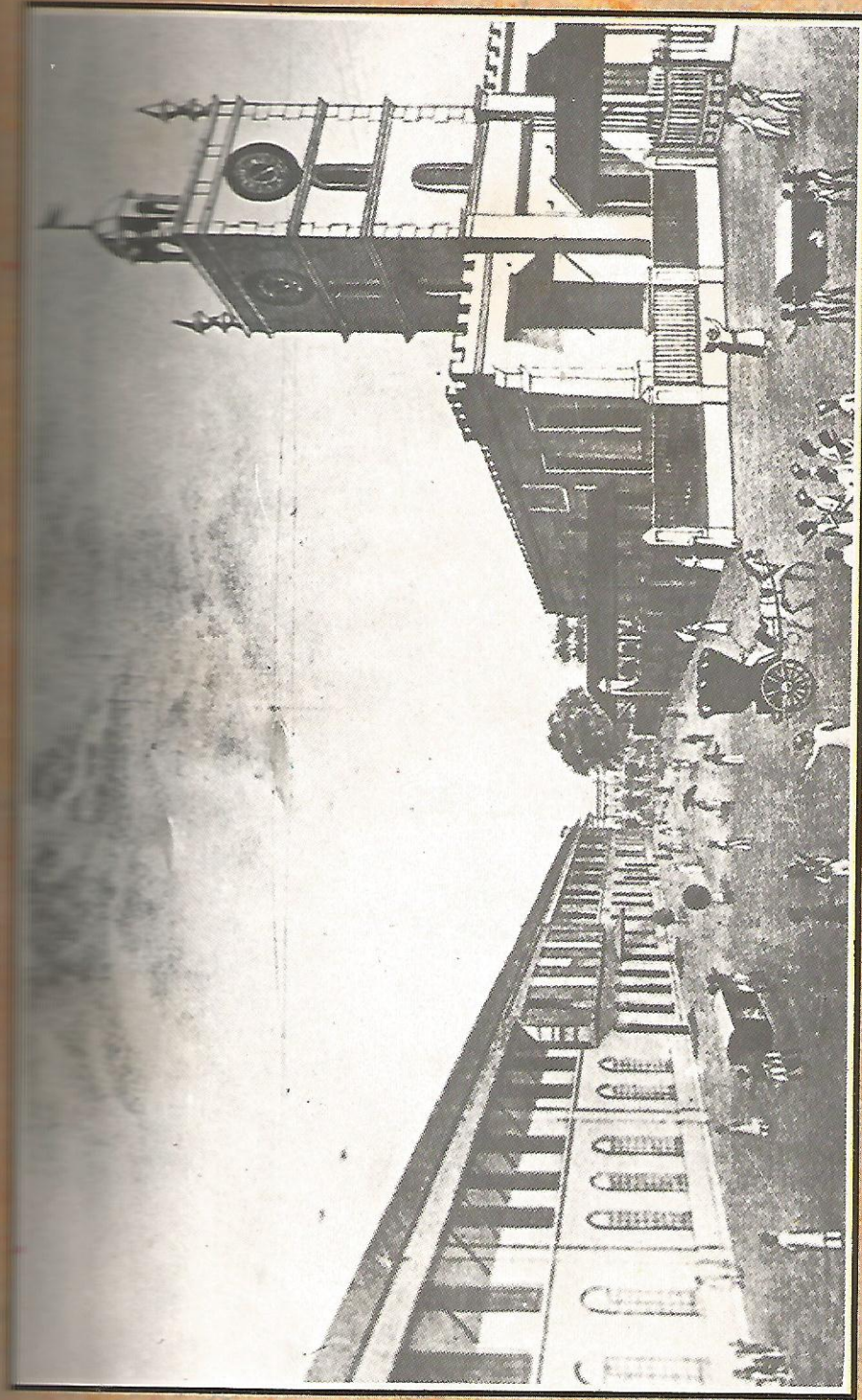
A HUNDRED YEARS AGO

its first steamer in about 1830. The ship was propelled by the paddle wheels on its sides. You went by steamer to Suez, then travelled by land to the Mediterranean Sea for taking a boat to England. This was the 'Overland Route'. Till then you had to take a voyage round the Cape of Good Hope, and it occupied no less than five months. Now it was a matter of a mere month and a half. With England thus brought closer, the trade between India and England began to expand. Mumbai started wearing a new complexion. The entire water-front from Colaba to Mazgaon was soon lined by wharfs, docks and godowns.

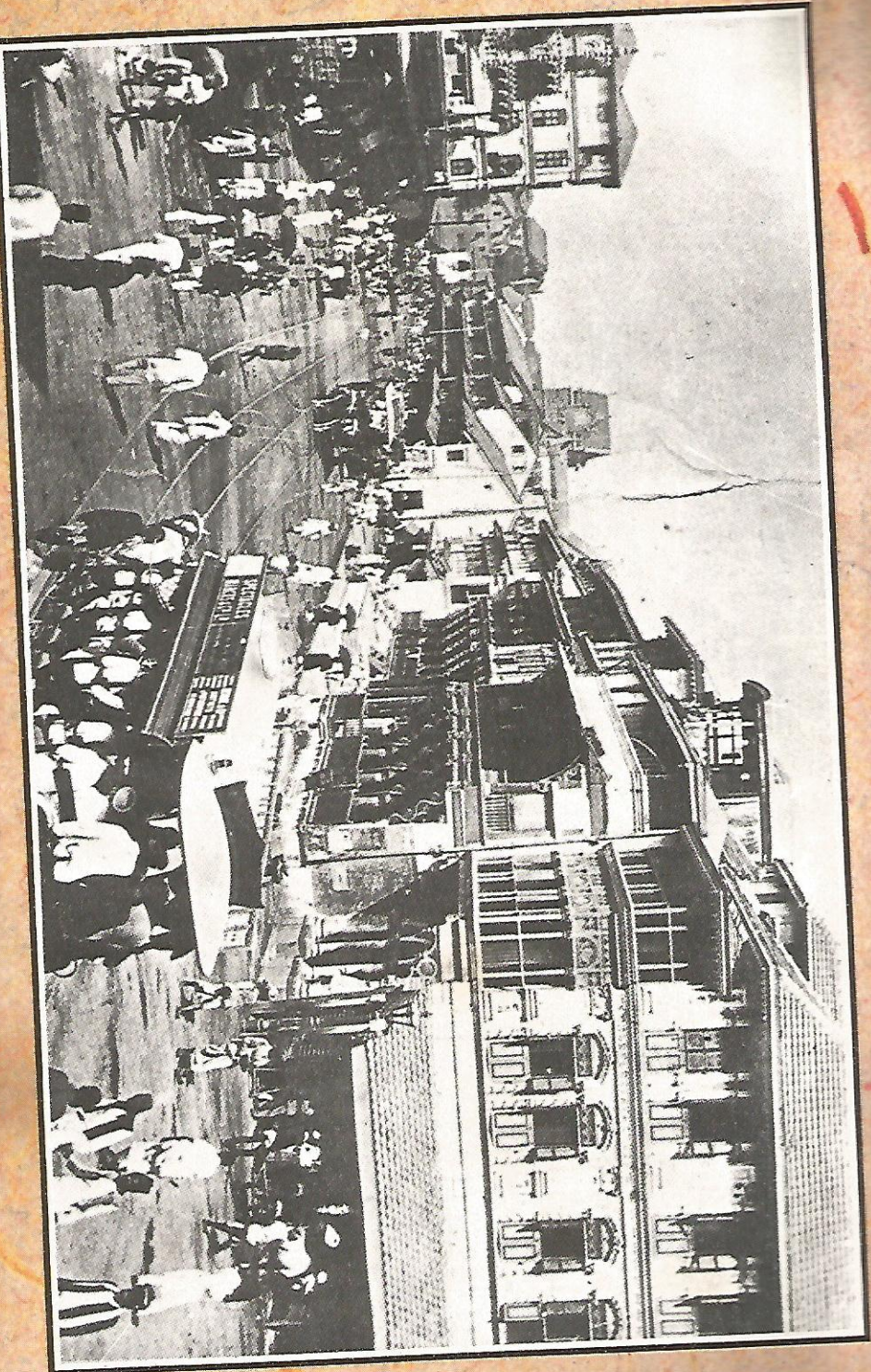
MUMBAI'S ROADS

Early nineteenth century Mumbai could not have been proud of its roads. Even the so-called main roads were very narrow. Horse-owners would often use them for stabling the animals. The government woke up to the situation in 1806, and issued orders for the widening of the Parel Road and the Breach Candy Road to sixty feet. The Sheikh Memon Road and the Dongri Road were widened to forty feet. Twenty feet was laid down as the minimum width for the cross-streets. The city, as we know, has not yet done with the widening of its roads.

The city underwent remarkable transformation during the sixties of the last century. Wide modern-looking roads were planned. By 1868 the roads from the Elphinstone Circle to Bazargate, and from there to Foras Road, had been completed. Apollo Street was widened. Bellasis Road, and the road linking Babula Tank with Elphinstone Bridge, were laid during these years. The population of certain parts of the city, like Dongri, Mazgaon, Girgaon, Byculla and Mahalaxmi, was increasing which necessitated new roads and the widening of the existing ones; the Girgaon Road, for example, was widened; and so were



Church at St. Thomas (Near the Horniman Circle) Palanquins and Shigrams are seen on a road in old Mumbai.



Horse driven Tram. On the right can be seen a Stable for Company's Horses.

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the roads in the Kamathipura area. Charni Road was extended to Falkland Road. Worli and Parel were linked by a road, named Fergusson Road. The Jacob Circle was laid; so was Sankhli Street. All these were macadamised roads. Tarred roads had not yet been heard of. The first steam-roller appeared on the City roads in 1869.

The city had its first gas-light in 1833. The credit for it goes to Shri Ardeshir Cursetjee, who had installed a plant for producing coal-gas at his residence. The Governor of Bombay, we are told, once visited Shri Cursetjee's place when it was lighted up with gas lamps.

It was in the same year that street lighting was proposed; but it was not before the proposal was discussed threadbare for ten years that Mumbai's streets had lights for the first time (1843). These were kerosene lamps. The first gas lamps appeared on Mumbai's roads in October 1865. Bhendi Bazar, Esplanade Road (now Mahatma Gandhi Road) and Churchgate Street were the roads chosen for the honour. It was quite an excitement for the Mumbaite. Crowds of people would follow the lamp-lighter; they would watch him do it with almost a sense of wonder. The idea of gas-lighting caught on so well that several well-to-do citizens donated large ornamental gas-lamps for being put up at some important spots in the city.

It was at about this time that some of the fine public buildings which give the city its imposing look came up, particularly in the Fort area. The road from Museum to Flora Fountain was lined on either side by what were for those days huge buildings. A dignified edifice was put up to house the Secretariat. The small University area next to it distinguished itself architecturally with the Convocation Hall, and the Rajabai Tower over-topping the Library. The solemn gothic pile of the

A HUNDRED YEARS AGO

High Court next to it held you with its stately dimensions. These structures appeared around the year 1870. Soon the stretch between Flora Fountain and the Crawford Market had equally impressive buildings. Mumbai was by then an attractive city, not merely a prosperous one.

The Great Indian Peninsula Railway Company (G.I.P., for short) was established in 1849. Its first train, the first in the country, ran from Mumbai to Thane on 16th April 1853. In 1865, the railway went over the Borghat. By 1870 Calcutta and Madras had been linked with Mumbai by rail. The Bombay Baroda and Central India Railway was started in 1855.

Getting off to a start with the opening of a cotton mill in 1850, the textile industry soon made phenomenal progress.

THE CITY CONTINUES TO GROW

About 1670, the population of Mumbai was around ten thousand. It has been growing since then. When a regular census was taken in 1864, the figure was somewhere near eight lakhs. Now it seems to have crossed a crore! With the opening of the Suez Canal in 1870, England was only fifteen days away from Mumbai, by sea. This had much to do with the growth of Mumbai. It gave the Mumbai port an important place on the map of the world's sea routes. Mumbai started prospering, and it has not looked back since.

MEANS OF CONVEYANCE

At the beginning of the nineteenth century the usual means of conveyance in the city had been what were called the *shigram* (horse-drawn), the *rekla* (bullock-drawn) and the *palkhi* (palanquin). Now the gharry, a horse-drawn vehicle, joined them. A modified version of it, called the 'victoria', was

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put on the roads in 1882. There were some twenty-five or thirty stands for vehicles in the city — as at Colaba, Apollo Bunder, the Municipal Offices, the Portuguese Church at Girgaum, and Lalbaug. The fares were modest : for a mile's road, the horse-drawn vehicle charged one four annas (twenty-five paise, to us) and the 'rekla' three annas. Of course the wedding season or a dislocation caused by heavy rains was then, as now, something of a 'heaven-sent' opportunity for pitching their fares higher. Bullock carts carried all the heavier goods. There were no hand-carts yet. Tram-cars started plying towards the end of the nineteenth century. However, attempts seem to have been made earlier to provide some kind of a stage-transport system. An 1819 issue of the *Bombay Courier* carried an announcement by a certain firm, named 'Architect and Coach-maker'. It said that if the scheme received adequate support the firm would start a horse-coach service from the Fort to Sion, stopping at suitable places. The residents of the Byculla-Parel area were particularly assured that such a service would be a great convenience to them.

The first motor car appeared on Mumbai roads in 1901. Today the city has over six lakhs vehicles, which include motor cars, buses, trucks, scooters, bicycles. Mumbai's roads are well-nigh groaning under this wheeled traffic, but the very magnitude of the traffic is an index of the city's stupendous growth. Another year that stands out in the history of the city is 1872 : the year of the establishment of the Municipal Corporation for the city. The citizens were given local self-government; the rate-payers could elect their representatives on the body.

With the city growing at such a pace, a well-organised road transport system became a necessity. Soon the Bombay Tramway Company Ltd. was set up.

CHAPTER 2

THE TRAM-CAR ARRIVES

In 1865, an American Company applied to the government for a license for running a horse-drawn tramway service in the city. The licence was granted on certain conditions, but the project did not materialise just because a war ended rather abruptly. It was the American Civil war. The boom in trade brought by the war was suddenly over, and there was a financial crash. The city's economic life was badly disrupted. A large number of firms went into liquidation. The disaster snuffed out the tramway project.

The Times of India of 27th November 1871 carried an announcement put out by the Bombay Omnibus Company. According to it, a bus service was proposed to be run between the Malbar Hill and Fort in the mornings and evenings for the convenience of the Europeans residing on the hill. The monthly season ticket was priced at thirty pounds. However, owing to unsatisfactory response, the scheme had to be dropped, as the *Times of India* of 8th December reported.

A few years had to elapse before a similar project was mooted. This time it went through rather smoothly, and the Bombay Tramway Company Limited was formally set up in 1873. The contract granted the Municipality the right to buy up the concern after the first twenty years, or after every period of

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seven years thereafter. After this contract was entered into between the Bombay Tramway Company and the Municipality, the Government of Bombay enacted the Bombay Tramways Act, 1874, under which the Company was licensed to run a tramway service in the city. The tram-cars were of two kinds : those drawn by one horse and those drawn by two. The Company started with a fleet of twenty cars and two hundred horses. When it closed down in 1905, it had as many as 1,360 horses.

The service first started on two routes : Colaba to Pydhoni via Crawford Market, and Bori Bunder to Pydhoni, via Kalbadevi. That was on 9th May, 1874. The fare from Colaba to Pydhoni was three annas. The conductor collected the fare; but issued no tickets. There was no way of checking if any passenger had had a free ride, or if the conductor had collected precisely what he handed over to the Company, and no more. This merry situation could not possibly go on for long. Within four or five months, the tickets were there. So was checking of tickets. The fare was brought down to two annas; it dropped down to one anna in 1899.

In the early days of the horse-drawn tramway, the novelty of it provided quite a thrill. But that was not the only reaction. There were those, like the drivers of 'shigrams' and 'rekas', who were agitated as they saw in this new means of transport a threat to their occupation. Some of them would express their protest and displeasure by inserting dust and bits of stone in the grooves of the rails so that they should be clogged, and the wheels should go off the rails. Naughty boys would enjoy themselves thus obstructing the tram-cars. Once, as reported, a man playing the trick was caught redhanded by the Company's officials, and they administered a sound thrashing to him on the spot without bothering about the formality of an inquiry. They

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say the passengers in the tram-car thus sought to be obstructed were quite pleased with what they said was a proper lesson.

However, partly because of such incidents and partly because it was an unfamiliar vehicle, the tram-car was not at first received with the enthusiasm shown for the railway. The Company had to make a special effort to persuade the public that this mode of transport was fast and smooth, and that it was cheap too. The persuasion included free rides in the first few days. On the third day (12th May, 1874), the *Times of India* expressed its doubts about the prospects of the tramway. It offered some suggestions too : The vehicle must move faster ; the fares must be brought down ; more interesting than either, passengers should be prohibited from resting their feet on the seats. Characteristically for the times, a section of the educated people was suspicious of the innovations imposed by the white foreigners, and to them the tram-car was one such innovation. Dadoba Pandurang Tarkhadkar, renowned grammarian voiced the sentiments of that section when he wrote : "Our people here are in distress for lack of employment, and yet these seven or eight years some wealthy fellows from Boston in far-away America have been carrying on this business of running for hire vehicles are dwindling in number, and these fellows, sitting in America, are regularly making hundreds of rupees, by putting the wool over our eyes. The people of Mumbai should have at least resolved not to travel by these tram-cars, just as the people of Calcutta and Madras did. Instead, they are helping bring greater poverty to the country".

This is an extract from *Shishubodh*. Some eighty years later, in 1964, a move was organised to ask people to desist from travelling by buses as a protest against a rise in fares. It too met with a poor response.

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It was only to be expected that people should air their grievances and suggestions about the tramway service through the newspapers. An interesting letter of the kind appeared in the *Times of India* of 28th July 1903. It would seem that there was a regulation that only four passengers should occupy a bench, and not five as usual, if even one of them was a woman. A soldier was fined fifty rupees for breaking the regulation. Referring to this, the letter-writer complained that officials of the company were habitual offenders in this respect. He appealed to the administration to clarify the regulation. In this connection, one Mr. E. W. Fox suggested in the *Times of India* of 1st June 1905 that the city fathers should get the company to limit the seats to four per bench. Obviously Mr. Fox had a sense of humour, for he added : "Five persons to a bench means friction. If such friction were to generate static electricity who would be responsible for it ? But why should the city-fathers worry about it ? They go about in their private vehicles as if they are Lords of the Bombay Parliament."

The Municipality could have taken over the Company in 1894 — at the end of twenty-one years — as stipulated by the contract, but it waived the right. This gave the Company a further seven years' lease — till 1901.

In 1899, the Company applied to the Municipality for permission to run its tram-cars on electricity. The application *inter alia* pleaded that considering the heavy expenditure the company would have to incur on the new project, the Municipality should waive its right of taking it over in 1901. But even before the application was disposed of, the Municipality decided to exercise its right to take over the Company. This gave rise to several legal complications, but finally in 1905, a newly formed concern, "The Bombay Electric Supply and

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Tramways Company Limited" bought the Bombay Tramway Company. During its thirty-one year's tenure, the old company had served the city well with its network of tramway routes. From Museum, one route went south-west to Sassoon Dock, another north-east to Wadi Bunder, yet others to the central part of Mumbai, to points like Lalbaug. Jacob Circle and Opera House. Two east-west routes ran from Carnac Bunder to Dhobi Talao, and from the J.J. Hospital to Grant Road. On the first day (9th May 1874) of its service the number of passengers carried was 451 and the takings amounted to Rs.85. On the last day (1st August 1905) the number of passengers was 71,947 and the takings amounted to Rs.4,260. These figures should give a fair idea of how the service had expanded during the years.

Before starting work on a new route the Tramway Company had to secure the approval of the Municipality and the permission of the Government. These were given after due consideration was accorded to the views and recommendations of all those concerned with the new route. The correspondence all this entailed, and unexpected difficulties, often confined the project of a new route to files for years together. By then sometimes the need for the route would become so urgent that the Municipality had to step in and pursue the project on its own. One such project was of the Girgaon Naka-Gowalia Tank route. It was first sent up by the Company to the Municipality in 1905 for approval, which came promptly. But the Improvement Trust had just planned a road from Chowpatty to Gowalia Tank. The Government directed that work on the new tramway route should not begin till the road was laid. It was also necessary to strengthen the Frere Bridge over which the route was to pass. The correspondence started, and had kept swelling when the World War started. The War ended, but the project had not moved. It did not move for a few more years.

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Finally the route came to be regarded as a 'must', and in 1922 it was the Municipality which started putting pressure on the Company to start work on it. Meanwhile, further difficulties cropped up. The estimate of the cost of the project had become out of date. Prices had soared, and the project was not financially viable any longer. At last, with some reluctance, the Company agreed to take up the project, and the track was laid by April 1924. But another two years had to elapse before the route was opened to traffic. This was because there was difference of opinion about the fare to be charged on the route. The route had its first tramcar on 11th February 1926.

Mumbaites gave a warm welcome to the electric tramcar. The service was formally inaugurated on 7th May, 1907 by Shri Vallabhdas Thakersey, the then Chairman of the Municipality. Among those who attended the function were Mr. Sheppard, the Municipal Commissioner; Mr. R. M. Philips, Deputy Police Commissioner; Sir Bhalchandra Krishna Bhatwadekar, the Collector of Customs; Sir Harikisondas Narottamdas, Shri Ibrahim Rahimtulla and Members of the Municipality, besides important officials of the Company like the Managing Director, Mr. Remington, and the Chief Engineer, Mr. Cooper.

At five-thirty that afternoon the first electric tram-car, specially decorated for the occasion, started from outside the Municipal Office, went as far as the Crawford Market, and returned to the point from where it had left. After this ceremonious, inaugural run, four tram-cars kept plying on the various routes till eleven in the night. People jostled one another to board them.

The service started regularly from the next day. It drew nothing but praise : praise for its speed, its comfort, and its low fares. But, unfortunately, there occurred a bad accident on the

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very first day. A passenger, named Shri Malvankar, fell off a running tram; one of his legs got under a wheel. The leg had to be amputated.

The accident was much talked about, and much written about too. Suggestions were sent in telling the Company how to prevent such accidents. One was that there should be something more effective than a chain on the 'wrong' side of the tram-car to stop intending passengers from getting in that way. Another was that there should be more stops than the six provided on the route from Colaba to Bori Bunder. And many more of the kind. But not all of the letters carried complaints and suggestions. There were bouquets too-plenty of them.

VARIATIONS AND MODIFICATIONS

The order for the first electric tram-car had been placed with the Brush Electrical Company of London. The vehicle arrived in Mumbai in January 1906. There used to be an Upper Class in the tram-cars ; it was removed after some time.

By 1910 the service was up against a problem no city transport service can hope to escape for long. The problem was of the rush-hour traffic. The commuters being mostly office-goers, the pressure used to be particularly unmanageable immediately before and after the office-hours. There were not enough trams to cope with the rush. Trailers were attached to the trams, but they brought little relief. So the Company approached the Municipality for permission to run a triple car. But the Police Commissioner objected to it; and the proposal fell through. The pressure on the service kept on mounting. The next proposal was to use space which would provide for standees. It was approved by the Municipality. It worked till January 1914, when the approval was withdrawn.

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DOUBLE-DECKER TRAMS

The passing years aggravated the problem of rush-hour traffic. The solution next thought of was the double-decker tram-car. It was accepted, and the first vehicles of the kind appeared on Mumbai's roads in September, 1920.

THE SCHEDULE OF FARES

Fixing the fares used to be a constant ground for disagreement between the Company and the Municipality. The latter would seek to keep the fares low, and the former would argue at length how such fares were uneconomical and plead for a rise. The Managing Director of the Company issued a statement in 1909 which gave the fare-structures for local transport services in Europe, America and (Australia, and in Calcutta to prove that the tram-fares in Mumbai were the lowest. He made other points too : The salaries paid to the Company's employees and the other expenses were higher than those for a transport organization in any other city in India. More comfort and conveniences were available to the commuters than under the previous tramway organization. The service was more frequent, and speedier too.

With all such pleas and petitions proving of no avail, the Company applied itself to increasing its efficiency without affecting its profits. Mr. James Dalrymple of the Glasgow Tramways Corporation was invited as an expert to recommend ways of effecting economy and other improvements in the administration of the Company, after a detailed scrutiny of its working. Mr. Dalrymple's recommendations were as follows :

- (1) The tramway service is excellent, except for its slowness. Between leaving the depot and returning to it, a tram-car moves, on the average, at only 4.8 miles

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per hour. It is only in the case of horse-drawn trams that so slow a speed can be defended. The present rate must be improved by at least one mile per hour. This will have to be done immediately. The people of Mumbai may not tolerate so sluggish a service for long. The Company should reckon with the fact that the local railway services are soon to be electrified.

- (2) There must be a proper time-table for the trams. When it is enforced, conductors and drivers will not have unduly long breaks, as at present, after the vehicle has reached the terminus.
- (3) There are more drivers and conductors in the company than needed.
- (4) Not enough care seems to be taken by the officials of the Company to the appearance of the vehicles. This is not proper. The vehicles must have a smart turnout, paint and all. Bright-coloured tramcars will draw passengers, and swell the income.
- (5) The uniforms worn by the running staff must be tidy. The starter must see to it that no one is allowed to be on duty if his uniform is slovenly.
- (6) The fare : A flat rate of one anna for any journey is the lowest fare you have anywhere. The cost of laying a new track is very high. The income from the route may be too small for it. Therefore careful thought must be given to every proposal to start a new route. In this connection, the trolley and the motor bus are worthwhile alternatives for consideration.

This brief story of the early tramways in Mumbai will not

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be complete without a mention of some of their characteristic features.

From the beginning the city transport was modelled on that of London. Horse-drawn tram-cars had started running in London in 1870. Four years later Mumbai adopted that mode of transport. This was the first time an Indian city had such an organization. Mumbai was the first again in the use of double-decker tramcars. This Bombay Tramways all along gave the lead in securing efficiency and punctuality in the service, and in charging low fares.

Change is the law of life. It has been very much so in modern life. Every aspect of human activity has to keep pace with the times. Mumbai's tramways were no exception. They kept growing and changing in response to the environment, with new routes to serve localities that had grown, enlarged capacity to meet greater pressure of traffic, better designed vehicles, and reforms in administration. Then another World War was on us. The city's population suddenly started soaring, as never before. And soon it all gathered at such a pace that the tramcar was out of step, and seemed out of date, and it faded out one night. That was the night of 31st March, 1964. Those modest, if rather noisy, vehicles had devotedly carried Bombayman up and down the city for ninety years. The last of them, packed to capacity, left Bori Bunder for Dadar at ten that night. Crowds lined the route all the way at that late hour to bid farewell to the much-loved, if old-fashioned, transport of the common man. It was a sad farewell.

CHAPTER 3

THE MOTOR-BUS APPEARS IN MUMBAI

One of Mr. Dalrymple's recommendations, made in 1925, was that the trolley bus should be tried out on some routes. However, the idea had occurred to Mr. Remington as early as in 1913. But with the outbreak of World War I, it had to be shelved like many other bright ideas. It was taken down from the shelf in 1919, and a trolley bus service between the Dadar Tram Terminus and King's Circle was planned as an experimental measure. But the plan ran into difficulties, with its financial aspects causing disagreement with the Municipality. And finally, it was given up.

Simultaneous consideration was given to the feasibility of a motor-bus service. The two main objections trotted out against such a service were : (1) The service would be expensive and (2) The accident rate will go up. Even in a city like London, with the orderly ways of its pedestrians and its vehicular traffic, the accident rate for buses is comparatively very high. It would be much higher in Mumbai. However, the motor bus was allowed a few points in its favour :

- (1) It is not tied to the rails as the tram-car is.
- (2) The vehicles can be quickly moved to the points where they are urgently needed.

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- (3) It can operate on relatively narrow roads.

The Great Debate started in 1913 : the trolley bus or the motor bus? And it went on cheerfully till 1926, with the Municipality, the B.E.S.T. Company, the Commissioner of Police and the others concerned with the problem joining the fray. Finally, on 10th February 1926, the Company plumped for the motor bus. It was to run, as an experiment, on three routes. The routes were : Afghan Church to the Crawford Market, Dadar Tram Terminus to King's Circle, via Parsi Colony, and Opera House to Lalbag via Lamington Road and Arthur Road. The approval of the Commissioner of Police and the Municipality having been obtained, the service on the first of these routes was scheduled to operate from 15th July 1926. *The Times of India* of 14th July carried the following announcement.

PUBLIC NOTICES
THE BOMBAY ELECTRIC SUPPLY AND
TRAMWAYS CO. LTD.

MOTOR BUS SERVICE

On and from to-morrow, 15th instant, a regular 10 minutes service will be run from AFGHAN CHURCH to CRAWFORD MARKET via WODEHOUSE ROAD and HORNBY ROAD from 6.30 till 23.20.

<i>Station</i>	<i>First Bus</i>	<i>Last Bus</i>
AFGHAN CHURCH	6.30	23.00
CRAWFORD MARKET	6.50	23.20

C. LUCAS

Traffic Manager

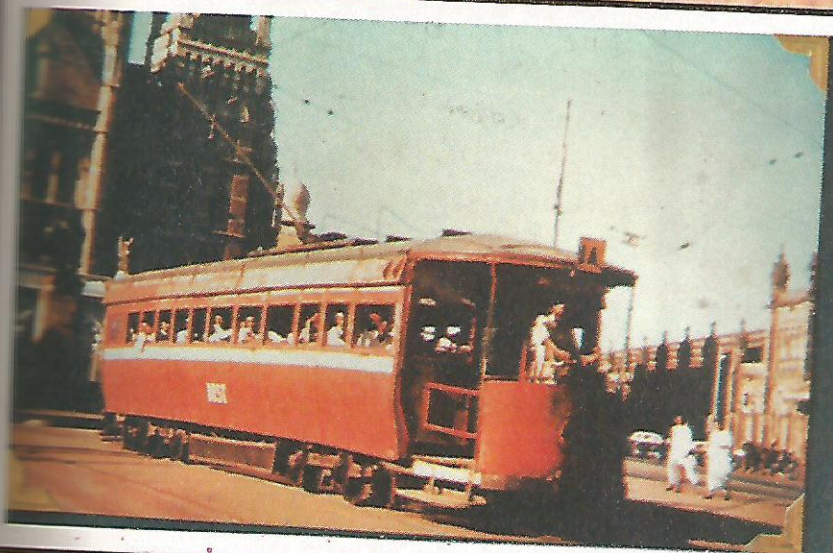
THE MOTOR-BUS APPEARS IN MUMBAI

As scheduled, Mumbai saw its first bus run on 15th July 1926. It received a hearty welcome from the people, just as the electric tram had. *The Times of India* of 16th July reported the inauguration of the bus service as under :

"The Bombay Tramway Company's new omnibus service commenced on Thursday, as already announced. A fleet of four buses plied from Middle Cola to Crawford Market and back at an interval of about 10 minutes. The public took to the service favourably and, even allowing some margin for the initial rush due to the novelty of the thing, the public patronage appeared to be encouraging. The drive from Middle Cola to Crawford Market occupied about 10 minutes and was generally comfortable.

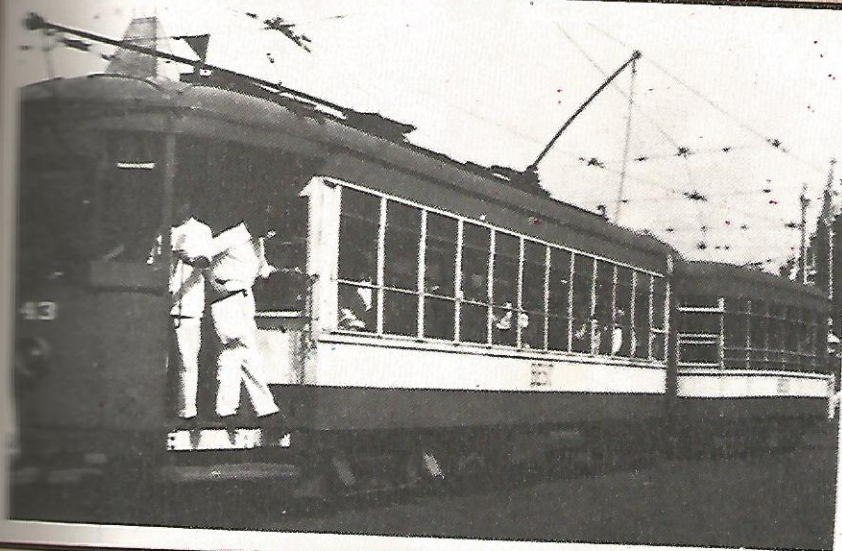
An officer of the Company told a representative of the *Times of India* that the Company were closely watching the service with a view to making it perfectly agreeable to the public. Any of the slightest inconvenience felt by the public, he said, would be attended to by the authorities.

The buses will be disinfected every day and kept neat and tidy. The quickness with which the distance is covered, the short intervals at which the buses are available and the regularity of the service, not to speak of the cheapness of the fares compared with a taxi or gharry, are factors which the public are likely to appreciate. Should there be adequate response and should the public demand warrant it, the Company are prepared to increase the number of buses. Two more are already in course of construction. The Company are also contemplating to run the service to the Parsi Colony at Dadar and it is expected the scheme will materialise in a month's time."



A Single Compartment – Electric Tram

Subsequent Two Compartment Trams were started to accomodate more passengers.





Double Deck Tram (Introduced in September 1920).

THE BEST STORY

As was only to be expected, there were protests against the service by those whose interests were affected by it, just as many years earlier the introduction of the horse-drawn tram had provoked drivers of 'reklas' and horse-drawn vehicles into agitation. This time it was the 'victoria-drivers and taxi-drivers'. But this agitation was mild and constitutional. The taxi-owners petitioned to the Commissioner of Police to give them protection against this fresh encroachment on their field of activity. They complained that the cheapness of the bus fare and the proximity of the bus stops to the taxi stands were depriving them of their income, and argued that the spread of the bus service to all the parts of the city would ruin the taxi trade, and also vest in the Tramway Company the practical monopoly of vehicular communication in the city.

The Police Commissioner rejected the taxi-owners' representation firmly, if also persuasively. He stated that the competition of the bus service was absolutely legitimate, and that the police were under no obligation to help one class of public conveyance against another. He also pointed out that in all the big cities of the world taxi-cabs are in demand side by side with the buses, and that the class of people who ride in buses are different from those who use taxis. He added that if any kind of conveyance was going to suffer it was the victoria.

The victoria-owners followed the taxi-owners in their attempt to have the bus service withdrawn. The Chairman of the Victoria-Owners' Association sent up a petition to the Standing Committee of the Municipal Corporation in this regard. It expressed the fear that the bus would soon drive the victoria off the roads, as the latter had already been facing serious difficulties on account of the rise in prices.

This petition too was ineffectual. Bus service started on

THE MOTOR-BUS APPEARS IN MUMBAI

15th July 1926. The *Times of India* of 20th July 1926 commented on the bus service in its 'Current Topics' column. It pointed out that buses were a particularly convenient mode of transport during the rainy season. It would seem from the note that in the first few days the service was largely patronised by the 'Sahibs'. The taxi was expensive, and one could not be sure of getting it when one needed it. The victoria, of course, was much too slow a vehicle. Moreover, it had no fixed schedule of fares. All this seemed to make the *Times* feel confident that the bus was soon going to be popular.

This confidence of the *Times* was certainly not misplaced. The bus service did better and better, and within a year it started expanding. From January 1927, the Company started hiring out buses for private use.

Like the tram, the Mumbai bus established several 'firsts'. For the first time in the country, the city had a bus running on diesel oil, a double-decker bus and an eight-foot wide bus.

In the early days the bus fare used to be from two annas to six annas. There were no half fares for children till 1928. For some time return tickets used to be issued.

Another interesting feature : Between 1928 and 1930 each bus carried a letter-box for the convenience of the passengers, and the postal service as well.

PEOPLE TAKE TO THE BUS

The people of Mumbai received the bus with enthusiasm, but it took quite some time before this means of conveyance really established itself. For several years, it was looked upon as transport for the upper middle class. Those were the days when the tram was the poor man's transport. It carried you all

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the way from Sassoon Dock to Dadar for a mere anna and a half. The bus fare for the same journey was four annas. The organisation had to struggle to make the ends meet by drawing more and more passengers. However, they did come in growing numbers and the company kept expanding its service with confidence. In its first year — that is, by 31st December 1926 — about six lakhs passengers used the service; for 1927, the figure was about 38 lakhs. The Company started its operations with 24 buses. In 1927, the fleet had expanded to 49.

The next few years were uneasy years, with strikes (1928), communal riots (1929) and, most important of all, the Civil Disobedience Movement (1930-32). Inevitably, these events affected the transport system. 1930 was a particularly difficult year. The number of passengers carried by the service dropped rather suddenly, what with the strikes, the frequent 'hartals' and the trade depression. The Company had to be on its toes to meet all these difficulties. It also kept up its efforts to provide a faster and more comfortable service. In March 1930 concessional rates were introduced on short journeys. This worked immediately, sending up the number of passengers. It also enabled the company to fit in more trips per vehicle. Even then the income kept lagging behind the expenditure. But the company bravely kept the service going, for with its sense of commitment to the citizens it had always looked beyond the balance sheet. And it soon turned the corner. More and more passengers were attracted to the bus service. In those days of economic depression a large number of car-owners found that this public transport suited their pockets better.

In response to the pleas made by the Government and the Municipal Corporation, the Company extended its service to the northern part of the city in 1934. The first routes to be

THE MOTOR-BUS APPEARS IN MUMBAI

added were : (1) Byculla Bridge to King's Circle, via Dadar and the Parsi Colony. (2) Lalbaug to Worli via Curry Road and Fergusson Road. (3) Dadar to Mahim. Whatever doubts the Company had about public patronage were now set at rest. The number of passengers carried by the buses kept steadily increasing, and so did the income. The total expenditure, which had not increased at the same rate, was distributed over more vehicles. The Company was soon in a position to reduce the fares, particularly for the longer journeys. The bus routes were reorganised with a view to meeting the needs of the travelling public. An interesting experiment was the issue of a Whole Day Ticket during the Christmas Holidays. The ticket entitled one to travel anywhere in the city on the day — and that for just twelve annas. Started in 1935, this scheme achieved great popularity. It was withdrawn when the Second World War broke out.

Double-decker buses were introduced in 1937 in order to cope better with the growing traffic. The single-deck vehicle carried 36 passengers, the double-decker could take as many as 58. This, and its sheer size and look made the double-decker popular as soon as it was put on the roads.

The Second World War started in 1939. It had a sharp and immediate impact on the life in a city like Mumbai. There were the inevitable shortages. Road transport was hit by the shortage of tyres and the rationing of petrol. Owners of motor-cars found it rough going, and many of them switched on to the bus service. This created a problem for the service : too many passengers and too few buses. It was almost impossible to procure more vehicles. And the cost of running the buses, and maintaining them, kept on mounting. The Company however faced this situation resolutely.

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Ways had to be devised to minimise the inconvenience caused to the passengers, and they were. The structure of the single-deck bus, for example, was so modified as to provide seats on top of it — without a roof, above them, of course. This enlarged the capacity of the bus to sixty, but the unlucky ones riding on the top were exposed to sun and rain. The sun they could brave, but not the rain. Why not put up a temporary roof, suggested the Regional Transport Authority. But the Engineering Department of the Company was sceptical : Could the chassis take all the additional weight? This should give some idea of the woeful insufficiency of buses in relation to the volume of traffic. The Company then came out with a novel proposal. The office in the city, it suggested, should stagger their working hours so that the pressure on the service during rush hours would be distributed a little more evenly. The pressure had, by pre-war standards, become almost alarming. Intending passengers would storm a bus when it had hardly pulled up at a stop. There would be sharp exchanges between conductors and passengers, and they did not always remain purely verbal. As a result the buses were often held up. The overcrowding put a strain on the vehicles, and they were soon in a sorry state. Something had to be done about it, and that too quite soon. The Motor Vehicles Act had no provision for imposing a limit on the number of passengers a bus might carry. The very necessity for the provision brought it into existence before long. Accordingly no more than six standees were allowed on the lower deck. Those breaking the regulation were liable to prosecution. The regulation, a creation of the war years, became a permanent feature.

LIMITED BUS SERVICE

The first Limited Bus Service in Mumbai, and probably the

THE MOTOR-BUS APPEARS IN MUMBAI

first in the country as well, started running in February 1940, between Colaba and Mahim. It was specially designed to provide quick transport for those living at or near the northern end of the city. In its early days the service was restricted to the office-goers' rush-hours in the mornings and evenings. To discourage short-distance passengers from using the service, a minimum fare of two annas was charged. Such was the response to the Limited Buses, however, that soon their confinement to the rush hours was lifted, and they started running the whole day.

TROLLEY BUSES

A trolley bus service for the city was thought up for the first time by Mr. Remington in 1913. Once again, in 1937 one Shri S. R. Prasanna proposed to the Mayor that the trams and motor-buses should be replaced by trolley buses. The Mayor forwarded the proposal to the B.E.S.T. Company for its opinion. Scrapping of all the trams and motor-buses and acquiring a whole fleet of trolley-buses to take their place would have landed the Company in very heavy expenditure. Apart from it, it would have been impossible for a trolley-bus service to cope with the heavy traffic in a city like Mumbai. There was also a practical difficulty : Unlike a tram car, a trolley bus cannot change its direction without actually turning round. A trolley bus service would have been financially feasible only when new rails had to be laid to replace the worn-out ones on all the routes. But with the efficient way in which the tram tracks were maintained, this was not likely to happen in the near future. As for their capacity, three trolley buses would have been required to carry the load of two tram cars. The much-appreciated convenience of 'Transfer Tickets' would have to be withdrawn. The fares would have to be increased. A trolley-bus is more

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prone to breakdowns than is a tram car, as its electrical mechanism is more complicated than that of a tram car. If a road was under repairs the trolley bus service using it would have to be suspended. These and other objections of the kind were raised by the Company. They worked, and the trolley bus project once again came to nothing. And it all confirmed that the motor bus had come to stay and would stay for a long, long time in Mumbai.

The B.E.S.T. Company launched its motor-bus service on 15th July 1926 with a modest fleet of twenty-four vehicles. On 7th August 1947, the Municipal Corporation took over the Company. During the twenty-one years in between, the fleet had swollen to 242 vehicles.

CHAPTER 4

ELECTRICITY ARRIVES IN MUMBAI

Mumbai saw electric lighting for the first time in 1882. The place was the Crawford Market. The following year the Municipality entered into an agreement with the Eastern Electric Light and Power Company. Under the agreement, the Company was to provide electric lighting in the Crawford Market and on some of the roads. But the Company went into liquidation the following year, and the Market reverted to gas lighting. Thus ended the first scheme to provide electric lighting in the city.

Another scheme was taken up for consideration in 1891; and in 1894 the Municipality sanctioned funds for installing a plant to generate electricity. The current was to be supplied to the Municipal offices and the Crawford Market. It was, and the two places were fitted up with electric lights. But by 1906, with the wear and tear of all those years, the machinery at the plant was in a bad way. The current would stop off and on. So, once again, the Crawford Market went back to gas lighting. The Municipal offices, however, arranged to get the electricity it needed from the newly established "Bombay Electric Supply & Tramways Company".

This Company was originally established in England, as a subsidiary of the British Electric Traction Company, which had been trying since 1903 to bring electricity to Mumbai. The Brush

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Electrical Engineering Company was its agent. It applied to the Municipality and the Government of Bombay in 1904 for a license to supply electricity to the city. With the Municipality approving the Company's schedule of rates, the Government issued the necessary license : 'The Bombay Electric License, 1905'. When the Bombay Electric Supply & Tramways Company came into being, it entered into a contract with the original licensee to take over the right of supplying electricity to the city.

The Bombay Electric Supply & Tramways Company (B.E.S.T.) set up a generating station at Wadi Bunder in November 1905 to provide power for the tramway. The capacity of the station was 4,300 kws. The needs of the city and of the tramway in respect of electric power were bound to grow. At a rough estimate the full capacity of the Wadi Bunder plant was not going to be adequate beyond 1908. The plant could not be expanded much either. So it was decided to set up another generating station, one with a higher capacity, near Mazgaon (Kussara). It started functioning in 1912. The pace at which the demand for electricity grew can be gauged from the fact that within three years the Wadi Bunder Station proved to be inadequate. The tram service had been expanding, and more and more power was needed for the industrial and commercial establishments, as well as for domestic purposes.

Within a year since the B.E.S.T. Company started generating electricity, the Government proposed to issue a license to another concern for the supply of electric power to the city. It was the Tata Company. Its capital and resources were such that the B.E.S.T. Company could hardly stand up against it, as a competitor. The B.E.S.T. Company had cause to worry as to what was going to happen to what it had set up, and its shareholders. Its interests were going to be very badly affected

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if the Tatas were given a license. It therefore asked for the appointment of a Local Inquiry Committee, under the Electricity Act of 1903, to which it would submit its objections in detail. The Chairman of the Municipality too expressed himself against the proposal to grant a license to the Tatas. There were informal discussions between the representatives of the Tatas and Mr. Remington, Managing Director of the B.E.S.T. Company, with a view to finding out if the differences regarding the proposed license could be settled. A settlement was finally arrived at. Under it, only those whose requirement of electric power was above 5,00,000 units were to be served by the Tatas. This agreement was to be effective for a period of ten years, to begin with. The Tatas were given a license, and they started generating electricity in 1911. The B.E.S.T. Company itself drew on the Tatas when its own production was inadequate. The generating station at Kussara was, of course, functioning. In 1918, owing to insufficient rainfall, there was not enough water in the dam which fed the Tata plant. The B.E.S.T. Company had to come to the help of the Tatas to maintain their power supply.

Though the B.E.S.T. Company had to take some of the electric power it needed from the Tatas, it was trying to be self-sufficient in this respect. But with the outbreak of the First World War, the whole situation changed. The price of coal shot up and the generation of electricity became an unprofitable business. This led the Company to close down its Kussara Station; and it began to get all the power it needed from the Tatas.

The agreement, under which this was done, was made in 1923. It was to be in operation for a period of fifteen years, initially. It could then be extended by a five years' notice for further ten years. After that an annual renewal of the agreement

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was provided for. The supply of power under the agreement actually started in January 1925. When the first renewal was due there arose sharp differences of opinion between the Tatas and the B.E.S.T. Company. The most important of these related to those customers who needed more than five lakh units. The Company maintained that the condition in respect of such customers applied only to factories. Whether those whose needs of power increased to more than five lakh units in course of time were customers of the Tatas or of the Company was a disputed point. About the same time, the Bombay Port Trust invited tenders for the supply of power. This set off a fierce competition between the Tatas and the Company for the contract. The Tatas quoted a lower rate than they were charging the Company, and the Company quoted almost the same rate. But the rate could have only meant a loss. And the Tatas would have run into legal trouble too, for the Port Trust was not a 'factory' as required by the old agreement. Moreover, the rate quoted by the Tatas was unfair to the Company. Both the sides now recognised the need for a compromise, and the dispute was settled by leaving to the Company all the customers, except factories, who required more than five lakh units.

Even the Port Trust, which indirectly served as the cause of the compromise had to secure a 'distributing license' from the Government to avoid possible legal complications.

1905 to 1911 formed the first stage of the use of electricity in Mumbai. It was not so easily available then. And, of course, the common man could not just afford it. An electric bulb cost two ruppes. To have electric lights in your home was a status symbol. The luxury was within the means of only the affluent, and most of even those were not mentally prepared to bring this strange thing into their homes.

ELECTRICITY ARRIVES IN MUMBAI

The second stage was from 1911 to 1920. It made the people of Mumbai fairly familiar with electricity. Electric lighting, everybody agreed, was a good thing, but the importance of electric power to industries was yet to be accepted. The textile mills and other industries still continued to use steam and oil engines for the power they needed. Once electric motors of high power were available, the resistance of these industrialists to recognise electricity as a blessing and a convenience weakened. The Company appointed load canvassers to visit homes and factories for this purpose. The impact of their persuasion was particularly registered by the domestic consumption, which went up considerably. Electrical appliances used in the kitchen and elsewhere drew more and more people to them.

The next phase — 1930 to 1947 — saw tremendous progress in the supply of electricity. A variety of electrical appliances were to be had in plenty. The common man realised what a great help electricity was, and yet, how cheap. The efforts of the B.E.S.T. had achieved their objective. An important development was the setting up of a show-room.

THE SHOWROOM

A show-room was set up in 1926 on the ground floor of Electric House, to give advice to customers on the use of domestic electrical appliances and of electric power, in general. The service was free of charge; but it was aimed at promoting the use of electricity. This service was modelled on similar lines as in England.

A good deal of useful work was achieved by the showroom, apart from instructing people in the use of gadgets. For example, it designed a special kind of electric iron for

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dhobis, and the tribe of dhobis took to it enthusiastically. Similarly, the showroom fabricated for individual consumers such apparatus as air blowers, sizing tanks and drying cabinets, according to specifications suited to their particular needs. These were not easily available in the market, as the demand for them was limited. With the import restrictions brought by the Second World War, such apparatus were even more sought after, and therefore the service offered by the show-room was even more appreciated.

The Lighting Bureau of the Showroom used to give special advice with regard to the lighting arrangements in offices and factories. The experts on the staff of the showroom would visit the place to see things for themselves before giving their advice. The showroom also started renting out electrical appliances. Refrigerators, which were included in the scheme, became so popular, right from the beginning, that the demand for them could hardly be met. Soon after the inauguration of the showroom, *The Times of India* of 14th July, 1926 carried a letter about the new service from a reader who signed himself 'Electric'.

The letter said :

ELECTRIFYING THE HOME

To
The Editor of *The Times of India*,

Sr,

The Bombay Electric Supply and Tramways Company deserve to be congratulated on their organisation and speedy inauguration of an up-to-date motor bus service for the City of Bombay. Close upon this comes the news of the arrangements that are being made by the same concern to convert, "the poor

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men's cottages into prince's palaces". The report that the company is shortly opening a "showroom" at their Head Office at Colaba for the demonstration of domestic electrical appliances fit for Indian conditions will be received with great joy by all who, though poor, yet possess sufficient "sanitary conscience" to wish to do away once for all with the foul odour of coal and charcoal gas. The millennium does not seem to be far away when one reads that even at "Hackney, one of the most unattractive and depressing parts in London, the local authorities, by assiduous service, have so developed the use of electricity for cooking and heating in these small homes that it is becoming the universal agent, and the supply system contributes between thirty and forty thousand pounds a year to the relief of the rates". But how far the citizens of Bombay will avail themselves of the facilities offered greatly depends upon the efforts the organisers make to spread the "electrical idea" into the home of every family as well as upon the economic efficiency of the "new order of things".

— ELECTRIC

STREET LIGHTING

It was in July 1921 that the Municipality proposed for the first time that the B.E.S.T. Company should undertake to provide street lighting. A scheme was drawn up for installing electric lamps at 47 street junctions. On 1st August 1923 the first lot of 36 lamps was on. They had tungsten filaments. Sodium vapour lamps were tried out on the Hornby Vellard (now called Dr. Annie Besant Road) in 1938.

The Indian Electricity Act of 1903 was repealed in 1910, and the new Act took its place. In 1922 the Indian Electricity Rules came into force. The State secured greater control on electric power. The generation of electricity came to be ranked

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among the major industries. One of the Rules required every concern producing electricity to supply it to whatsoever applied for it.

WHAT ELECTRICITY COST TO THE CONSUMER

In its application to the Municipality for permission to supply electricity, the Brush Electrical Engineering Company proposed the following tariff :

- (1) *For lighting* : eight annas per unit upto a specific limit (maximum demand). Three annas per unit for consumption in excess of it.
- (2) *For Power for Industries* : eight annas per unit upto a specific limit (maximum demand). An anna and a half per unit for consumption in excess of it.

The tariff was approved. However, the Company's method of fixing the specific limit was quite complicated. Somehow the pace of growth of consumption fell short of expectations. So an expert was invited to examine the tariff. Following his recommendations the rates were reduced in 1907. For lighting, the basic rate was kept at eight annas, but the subsequent rate was reduced from three annas per unit to two annas; and for industrial power the rate was slashed down to a uniform two annas per unit.

But the Company's billing procedure continued to be complicated. And the consumers too continued to complain. Finally, in 1908, the Tramways Committee of the Municipality, which had Sir Pherozeshah Mehta as its Chairman, invited Mr. Rimington, Managing Director of the B.E.S.T. Company, for a discussion of the matter. Apart from the billing the rate schedule was unfair to those consumers who did not have to keep their

ELECTRICITY ARRIVES IN MUMBAI

lights on late into the night. For them, electric lights cost one and a half times as much as gas lights. The Tramway Company therefore wanted the specific limit to go and a uniform rate to be introduced. There were further discussions, and proposals and counter-proposals were bandied, for a good two years till a new tariff emerged. It was as under :

- (1) Four and a half annas per unit for lighting, fans and small appliances. Per every 250 units consumed in a month, one per cent discount in the bill, 35 per cent being the maximum discount so allowed.
- (2) 3 annas per unit for hospitals.
- (3) 2 annas per unit for industries.

This schedule was based on the assumption that the payment for the bills would be made at the Head Office of the Company on the Colaba Causeway and that it would be punctual. It was therefore specially stated in the schedule that those consumers who failed to pay their bills promptly would have to pay a deposit.

This schedule was introduced as an experimental measure for two years. It was then confirmed by the Tramways Committee after careful deliberations.

An interesting suggestion was made by the Greaves Cotton Company in 1912. It was regarding the use of electricity to supply heat. If concession rates were offered, the Company pointed out, dhobis would readily use electricity for ironing clothes, and so too would many industrialists. The prospect persuaded the B.E.S.T. Company to lower the rate to one anna per unit for such consumers. This was in 1913.

About the same time Mumbai had its first cinema houses.



First bus in Mumbai started on 15th July, 1926.

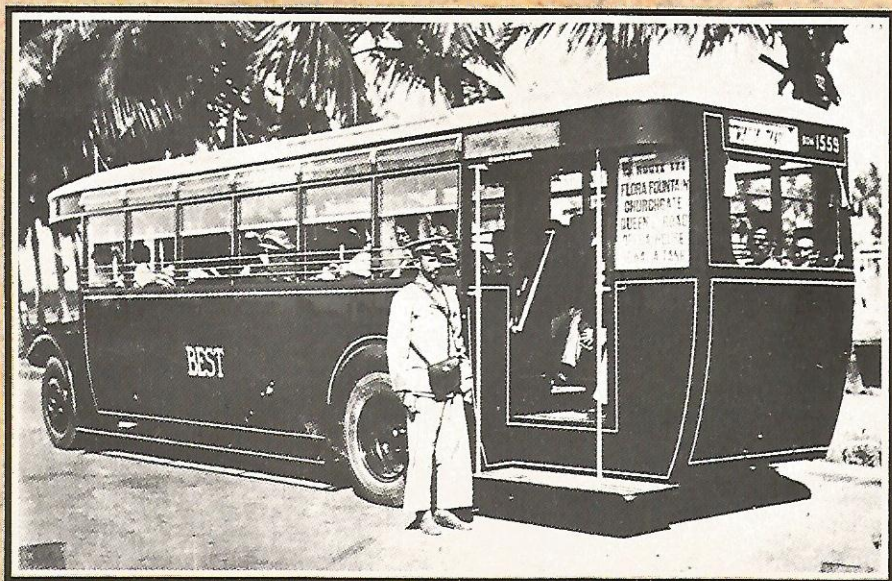
The bus which was hired is tourists (1928)





Limited Stop Service (Introduced in 1940).

The bus which was started in 1930.



THE BEST STORY

Four of them — the Alexandra, the Coronation, the Edward and the Gaiety — used to get their electric supply from the B.E.S.T. Company. It first struck the management of the Edward that putting up their own generating plant would mean a cheaper current. It promptly said that it would discontinue the use of its electric power unless a concession in the rate was granted. The Company, realizing what the loss of such customers would mean, promptly reconsidered the matter, and brought down the rate to three annas a unit. Electric illuminations at weddings were coming into vogue; they also were put in a special category for concessional rates. In 1915, the rate for cinema houses was further brought down from three annas to two annas per unit.

Then there was the shortage of electric metres in 1917. It meant that no new connections could be given. Undeterred, the Company announced that it would charge a rupee per point. If your flat had four points, you would have to pay four rupees to the Company every month, no matter how much current you consumed. The rate had been fixed on the basis of the average of all the bills for six months. This exposed the Company to the possibility of a loss, but it preferred some loss of revenue to the loss of consumers, the only alternative in the situation.

Soon the cost of generating electricity started going up, and in 1922 the B.E.S.T. Company approached the Municipality for permission to levy a 15 per cent surcharge on its bills for the supply of electricity. The Tramways Committee of the Municipality refused to oblige. In 1930, the Municipality asked the B.E.S.T. Company to lower its rates on the ground that an essential item like electricity should be available to the people at a cheap rate. The Calcutta Electricity Company was cited as an example in this respect.

ELECTRICITY ARRIVES IN MUMBAI

The Company's stand in this respect was explained by its General Manager in his letter to the Municipality in 1930. The points he made were : (1) The rates in force had been fixed in 1910, and there had been no increase in them since. In Bombay, electricity was the one item of which the price had not gone up for years together. (2) The Company got its electricity from the Tatas at so much per unit and it supplied it to its consumers as so much per unit. It was naively thought that the difference between the two rates was the Company's profit per unit. It was not all that simple. The voltage of the power received from the Tatas had to be reduced, and this operation cost the Company quite a bit. Then there was the leakage on the lines carrying the current to the consumers. Such wastage ordinarily amounts to 15 per cent. That is, for every 100 units drawn from the Tatas, only 85 actually reached the consumers.

There was yet another point. What profit the company made on the supply of electricity helped it run its tramway service, which charged a flat rate of one anna, the lowest for any transport service in the world, as had been pointed out by Mr. Dalrymple. The bus service too was a liability, but it was being run to supply a real civic need. The attention of the Municipality was drawn to this fact.

Meanwhile, an expert was invited from England to examine the Company's schedule of rates. He arrived in Mumbai in December 1929. His conclusion was that the rates were generally fair. Some modifications were made in the schedule on the lines suggested by him. Those were the days of a trade depression, and the Company showed its awareness of it by cutting down its rates wherever it could.

The State Government appointed a committee in 1938 to

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study the Company's tariff and advise the Government on what the maximum rates should be for the various categories of consumers. The Government accepted the Committee's recommendations and asked the Company to give effect to them from 1st April, 1939. The revised rate were : 2 annas per unit for lighting and fans, three quarters of an anna per unit for electrical appliances; and four annas per month as the meter rent. There was a similar reduction in the rates for the other categories.

However, the Governemnt gave an undertaking to the Company that it would not ask for further reduction for five years, and that the Company would be exempted from the Sales Tax during this period.

Any organisation supplying electricity tries to encourage its use by offering attractive rates. So did the B.E.S.T. Company. But it had to abide by its agreement with the Municipality which stipulated that such reduction in rates should apply to all the types of consumers.

The Company's agreement with the Tatas regarding the supply of electric power was renewed in 1938. Now the power cost less to the Company, which in its turn passed the advantage to the consumers. For example, till 1934 the rate for lights was four annas per unit. By 1938 it had come down to 3 annas upto 14 units, and two and a half annas thereafter. There was a similar lowering of the rates for the other types of consumption.

Electricity was generated for the first time in Mumbai in 1905. During the next forty years its consumption went up from 1,50,000 kilowatts to 60,00,000 kilowatts. Used for a variety of purposes, both domestic and industrial — and that at a low rate

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— electric power assumed an important place in the life of the people. This underlined the necessity for some kind of a state control on its use, in the interest of the consumer, as well as of the producer.

TAX ON ELECTRICITY

The Government imposed a tax on electricity for the first time in 1932. The tax was imposed to help the State tide over the financial difficulties created by the trade depression, as the official explanation went. However, like several other taxes, the tax on electricity settled down to become a regular feature. The Municipality, as well as many other public bodies, protested strongly against the new imposition, but it was of no avail. With the tax added, electricity bills went up by more than fifty per cent and, as an inevitable result of it, the growth in the consumption of electricity slowed down. In 1936, and again in 1940, representations were made to the Government for repeal of the tax. Actually, the half anna impost of 1932 moved up to three-quarters of an anna in 1938, and to an anna and a quarter in 1939! The latter jump was designed to cover the expenditure on prohibition.

This is the story of the early days of electricity in Mumbai — of its arrival and the expansion of its use. In modern life electricity is next only to air, water, food and shelter as a necessity. Electricity is certainly a blessing, but it can very nearly be a curse if man depends too heavily on it. All that he can do is to take every precaution against the blessing turning into a curse.

CHAPTER 5

THE B. E. S. & T. COMPANY

It has been stated in the last chapter that the B.E.S.T. Company Limited purchased from the Bombay Tramways Company the right to run the road transport services in the city. However, it was not a direct transaction between the Bombay Tramways Company and the B.E.S.T. Company. On behalf of A, B bought some rights from C, and the rights finally came to D — D, in this case, being the B.E.S.T. Company Quite a circuitous operation, wasn't it?

On 12th March 1901, the Municipality informed the Tramways Company that it was taking over the transport system under the agreement concluded between the Company and the Municipality on 12th March 1873. Simultaneously, by a contract, the civic body gave the Brush Electrical Company of London the sole right to run an electric tram service in the city as well as to supply electricity. The Tramways Company then filed a suit, its plea being that the Municipality had not given it a proper notice as required by the agreement between them. But the plea failed, although the matter went up in appeal to the Privy Council. Meanwhile, on 27th June, 1905, the Bombay Electric Supply and Tramways Company was established in London under the English Companies Act, and on 22nd July 1905, it was registered in Mumbai under the Indian Companies Act of 1882. The Bombay Tramways Company, the Bombay

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Municipality, the Brush Electrical Company and the B.E.S.T. Company signed an Agreement on 31st July 1905 by which the B.E.S.T. Company was granted the monopoly for electric supply and the running of an electric tram service in the city. The B.E.S.T. Company bought the assets of the Tramway Company for Rs.98,50,000. They included horse-drawn tram cars and horses, bullock-carts and bullocks, immovable property, tramway lines and goodwill. The deed of sale was executed in London on 1st August 1905, and the very next day the B.E.S.T. Company started functioning in Mumbai.

Some of the important items in the agreement signed by the Municipality and the B.E.S.T. Company, granting the latter the monopoly of road transport in the city, were as follows :

- (1) All the existing tramway routes will be taken over by the Company.
- (2) The Company will have the right to start new routes, with the prior approval of the Municipality and the permission of the government.
- (3) If the Municipality desires that a new route should be started, and the Company is not prepared to lay the track, the Municipality will get it laid at its own expense, and it will be handed over to the Company for operation on mutually agreed conditions.
- (4) The tram fare between any two points on the system will be one anna.
- (5) The maximum charges for lighting will be six annas per unit.
- (6) The Company will be required to provide transport for the Municipality, if necessary. The rates for it will be special. They

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will cover the cost of the electric energy consumed, the wear of the machinery, and the incidental expenditure on the transport, and no more. Transporting night soil will not however be included in this agreement.

(7) For the existing routes the ground rent will be rupees three thousand per mile for a double track, and rupees two thousand per mile for a single track. When new routes are started, the rent will be fifty per cent less.

(8) The Municipality will have the right to purchase the Company 42, 56 or 63 years after the date of the agreement. Notice of intention to purchase will have to be given at least six months in advance. If there is no mutual agreement on the price to be paid, the matter will be left to the decision of an arbitrator. If the Municipality exercises the right of purchase after 42 years, it will pay, as compensation to the Company, rupees forty lakhs, over and above the price; after 56 years the compensation will be twenty lakhs, and after 63 years nil.

THE B.E.S.T. BECOMES MUMBAI-BASED

The B.E.S.T. Company had been established in England under the Companies Act of that country. Its registered office was in London and its Board of Management met there. As a result, the Company had to pay income-tax to the British Exchequer on the profits it earned in India, and as it was registered in Mumbai it had to pay a similar tax in this country too. This double taxation hit the shareholders in India rather badly. The Directors of the Company in London, drawing the attention of the Chancellor of the Exchequer to this in 1909, pointed out the likelihood of the Indian shareholders insisting on shifting the Head Office of the Company to Mumbai. Nothing came of it. And, later, the Indian shareholders did insist on the

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winding up of the B.E.S.T. Company in London. The First World War started about the same time. The rates of the British income tax went up sharply, as did those of the other taxes. This made the double taxation even more unbearable to the Indian shareholders. The Company's Directors made another fervent plea to the Chancellor of the Exchequer stating that there would soon be no alternative to closing down its London Office. They further argued that the Company made all its purchases in England, thus contributing handsomely to the country's Treasury. Nothing came of this plea too.

And the London Directors' apprehensions proved to be right! The Indian shareholders met, with Sir David Sassoon in the Chair, and passed a resolution to the effect that the Board of Directors in London should be abolished and the affairs of the Company should in no way be managed from London.

The British shareholders, meeting in London, passed the following resolution :

- (1) The direction, control and management of the company's affairs will vest in the Mumbai Office, from 1st April 1916, and meetings of every kind of the General Body, the Board of Directors and the shareholders of the Company will be held in Mumbai.
- (2) From 1st April 1916 the Board of Directors of the Company will be constituted by Sir David Sassoon, Sir Shapurji Bharucha, Sir Ibrahim Rahimtoolla and Mr. G. S. Wardlaw. A Local Board will be set up in London to look after the Company's legal affairs there.

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REORGANIZATION OF THE B.E.S.T. COMPANY

As a result of handling the entire management of the Company from Mumbai the Board of Directors planned to convert the Company's capital in pound sterling into its corresponding value in rupees; but, under the Company Law, the only way of achieving its was by winding up the old Company in London and establishing a new one in Mumbai. As the B.E.S.T. Company was registered under the English Companies Act, the law required that the shareholders meet in London in order to wind it up. Thus they met in London on 9th June 1920, and passed a resolution to wind up its affairs. The shareholders in Mumbai met on 30th June 1920, and approved the resolution passed at the London meeting.

The newly established B.E.S.T. Company had a total capital of Rs.3 crore and 90 lakhs, divided into 6 lakh ordinary shares of 50 rupees each, and 1 lakh 80 thousand preference shares of the same value.

The new Company got the formal approval of the Municipality. During the next twenty-seven years it underwent no fundamental changes. It is just a story of expansion. The city kept growing, and the Company's activities kept pace with it, as was inevitable. The growth of the Company in fact provided a fairly accurate measure of the growth of the city, so closely linked they used to be. So they are even today.

BEST HOUSE

It was an all-round expansion. There were more and more people working in the Company's head-office, and the need for a spacious enough building for them became more and more pressing. So the Company purchased a plot of land situated on the Ormiston Road, and next to the Electric House, for one lakh

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and forty-four-thousand rupees from the Municipality to whom it belonged. Soon a modern structure started coming up on the plot.

This office building had Messrs. F. Mekint as the architects and Gannon Dunkeley & Co. as the contractors. The building work was supervised by Shri G. G. Lazaras and Shri K. M. Khareghat, the Company's engineers.

The new building, named BEST House, was very modern in more than its facade. It was so in a variety of items from the doors and windows to the minor fixtures, not to speak, of course, of the furniture. On the first floor was a spacious auditorium equipped for the screening of films. An up-to-date device was an electric indicator on the ground floor which repeated, from the name plates outside the chambers of the officers, the 'engaged' or 'out'sign. Near the indicator was the inquiry clerk's counter. Another special feature was that the entire office building was air-conditioned. It was the first office building in Mumbai with this convenience, and served as a model to many in the years that followed.

The building was ready for occupation in 1936. Into it moved all the departments accommodated in the Electric House till then. Such departments as Consumers' Services, Cash, Shares, Provident Fund, Audit and Accounts, which had to deal with the public, were housed on the ground floor, and the office of the General Manager on the first floor. The Traffic Department was housed in Electric House. When the BEST House was inaugurated, it received warm praises from the newspapers and leading city architects as a handsome structure.

It was an American who first thought of setting up such a concern in Mumbai to provide electricity and transport. Messrs

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Sternes Hobart, an American Company, first applied for permission to set it up. That was in 1865. The permission was granted. But it proved to be unavailing, because the economic life of the city was badly upset following the end of the American Civil War. The application was renewed in 1872, but there were two more applicants this time : Messrs. Lawrence and Company, and the British and Foreign Tramway Company.

By 1905, the British seem to have become more alert and enterprising, for in that year a British concern bagged the twin monopoly of supplying electricity and transport to the city. Oddly enough, Mr. Remington, the Managing Director of the Bombay Tramways Company, the American concern, was British — and he became the Managing Director of the B.E.S.T. Company.

The B.E.S.T. Company won reputation as a model organisation. It served the city well, by efficiently supplying two very real needs of its people. But 'service' was no more than a means to it, the end being making profit. And profits were made using every legitimate way! Legally an Indian concern, the B.E.S.T. Company somehow always bore a British impress! The 'Sahib' cast a long shadow on it, — this was understandable, considering those days. All the equipment the Company needed used to be imported from England; so were the technical experts! Even when, after the reorganization, the London Office was closed down, Mr. A. T. Cooper was appointed Agent to the Company in London, in 1924, to make purchases on its behalf. Mr. Cooper had been earlier Managing Engineer of the B.E.S.T. Company. On retirement he went to London, where the Agent's job seemed to be the very thing for him! There was another assignment for him too as consulting Engineer to the Company! The emoluments were generous; and, of course, there were the

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other benefits like gratuity and provident fund. Finally on 1st January 1945, Mr. Cooper retired from these posts. But by then, the times had changed. A new era was round the corner. May be because of this, or perhaps because it was more convenient, the London agency of the Company was entrusted to the London Office of an Indian concern, the Tata Company.

The Company had "Sahibs' raj" till 7th August 1947, and that not merely in its administration. Even the social and festive occasions showed it. The New Year was ushered in with a ball dance in a big way, and a large number of Indian officers joined it, several of them with dutiful zest! Nowadays the Dassera is celebrated in the Head Office with lovely *rangoli* patterns decorating the floor. Times have changed indeed! One 'Peel Sahib' was the lord in the Kingsway Depot area. The Officers' Quarters now house twelve or thirteen families. In those days, just three officers used to occupy all the space between themselves, each one being allotted about three thousand square feet of area! Even their poultry enjoyed spacious accommodation, right next to the masters' flats. To enable Peel Sahib to reach the Workshop directly from his residence, a special staircase was put up.

This is not intended to cavil at it all, but to bring you the flavour of those spacious times. We must not forget that these 'Sahibs' did not just enjoy the good things of life, they also put in hard work. And in work, they laid down valuable traditions, and they gave the organization a strong foundation.

In course of time, the Board of Directors of the Company had a majority of Indians on it. But they did not meddle with the structure of the Company or with its norms of working.

It would seem that, on the whole, the 'Sahibs' had little

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faith in the efficiency of the 'natives'. A glance at a list of the Company's employees in those days will make it clear that a 'native' occupying a responsible position was an exception. In the Workshops, even such relatively lower posts as foreman or assistant foreman were virtually reserved for whites. In fact, outside the administrative section, all the important posts were occupied by 'Sahibs'.

The B.E.S.T. Company came into existence on 7th August 1905; it was dissolved on 6th August 1947, to make room for the B.E.S.T. Undertaking. Once before there had been a similar taking over when the Bombay Tramways Company ceased to exist. But this take-over was not quite 'similar'. Now the ownership of the concern came to the Municipal Corporation. This was a week before the country became free. It was therefore a significant event in several ways. The B.E.S.T. Undertaking was the first 'public' enterprise in the country. To run it successfully was a national duty.

CHAPTER 6

THE BOMBAY ELECTRIC SUPPLY AND TRANSPORT UNDERTAKING

One of the terms of the Agreement of 7th August, 1905 between the Municipality and the B.E.S.&T. Company gave the Municipality the right to buy the Company at the end of forty-two years. It was also laid down that if the right was exercised — on 7th August 1947 — the Municipality would have to pay forty lakh rupees as goodwill, in addition to the agreed price of the Company's assets; and that the notice of intention to make the purchase would have to be given by the Municipality at least six months in advance.

However, the Municipal Corporation started considering the matter as early as 1941. On 11th December of the year the Municipal Commissioner expressed himself against it in the report he submitted to the Corporation. The report doubted the feasibility of raising a loan to buy the B.E.S.T. Company in view of the serious financial situation in which the Corporation was, with several of its important schemes regarding water supply, drainage, education and medical aid having to be shelved for want of funds.

According to the Commissioner the inordinate rise in prices, owing to the war, also argued against the purchase. By the then ruling prices, the total valuation of the B.E.S.T. Company would have been anything between six and ten crores

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of rupees. In these circumstances, the Commissioner thought, it would be wiser to wait for ten years, by which time he expected the prices to slide back to their old level. Finally, he suggested that consideration of the matter be postponed for two or three years.

The right to buy the B.E.S.T. Company did not cover its Bus Service, which had been granted a permit by the Commissioner of Police under the provisions of the Motor Vehicles Act. However, as the permit did not imply a monopoly, the Municipal Corporation could operate its own bus service. This would have been perfectly legal, as the Commissioner pointed out, but not practicable.

The Municipal Corporation appointed a committee with the following persons on it to discuss the matter with the Government : the Mayor, the Chairman of the Standing Committee, the Chairman of the Law, Revenue and General Purposes Committee, Shri S. K. Patil, Shri Nausher Bharucha, Shri D. V. Pradhan, Shri A. P. Sabawalla, Shri Nagindas T. Master and Shri Mirza Akhtar Hasan.

This Committee discussed the matter with the Government at Pune on 14th August 1946, the latter being represented by the Home and Revenue Minister, Shri Morarji Desai, the Minister for Local Self-Government, Shri G. D. Vartak, the Minister for Public Health and Public Works, Dr. M. D. Gilder, and the Finance Minister, Shri Vaikunthlal Mehta.

The Corporation's Committee presented the viewpoint of the body at the meeting. The main points they made were :

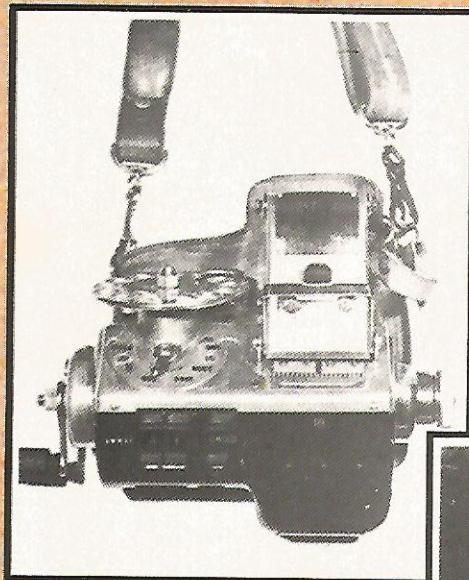
- (1) The price of the Company will soar high on account of the steep rise in prices generally. A very big loan will have to be floated to meet it.

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- (2) The Company's vehicles and machinery are in a ramshackle condition. For their repairs, renewal or replacement a lot of money will have to be set aside.
- (3) In these circumstances, should the proposal to buy the Company be postponed by fourteen years, that is, to the next stage for exercising the option to buy? But such postponement would suit the Corporation only if the Agreement in force was revised in some particulars. The particulars were :
 - (a) The period of fourteen years laid down for the next stage for exercising the option to buy should be reduced to ten years. By then the prices will have come back to their former level.
 - (b) The Corporation should be given effective representation on the Board of Directors of the Company and in its actual administration.
 - (c) Since the right to buy the Company devolves upon the Government in case the Corporation does not exercise it, the Government should approve of the revision.
 - (d) If the Government gives such approval, the revised Agreement should include the right of the Municipal Corporation to buy the bus service.
- (4) If the Governemnt does not approve of the proposal to revise the existing Agreement, the Municipal Corporation wishes to exercise its right to buy the

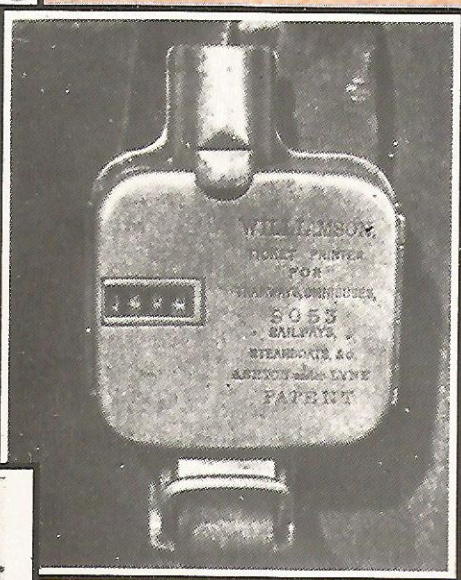


The then Consumer Department's Office.



Ticket Issuing
Machine of Old Time

A Bell Punching Machine
(1944)



No. B 958781

UP		DOWN
1	1 ANNA B.E.S. & T.CO. ISSUED SUBJECT TO COMPANY'S BYE- LAWS & NOTICES.	4
2		3
3		2
4		1

The Tram Ticket used in
the Bell Punching
Machine

The Tram Ticket used in
the Bell Punching Machine

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Company on 7th August 1947. The bus service should be included in the deal.

- (5) The Corporation will have to raise a loan of rupees ten crores in order to effect this deal.
- (6) One item in this deal is particularly favourable to the Corporation. The Company has to pay rupees forty lakhs every year as income tax. The Corporation will not have to pay it. Out of this amount the debt charges can be met easily.

The Government's views on the matter were as under :

- (1) It is unsafe to predict if, and when, prices will fall.
- (2) That the Company's vehicles and machinery are in a ramshackle condition is to the advantage of the Corporation, as it will have to pay a lower price for them.
- (3) If the Company were to know that its ownership was to last for only ten years, it would be inclined to put its vehicles and machinery to the maximum use to augment its profits.
- (4) The Government has been contemplating taking over all the road transport in the State. Once such a decision is taken, the Mumbai bus transport cannot be treated as an exception. However, if it is already acquired by the Municipal Corporation when the Government makes the decision, it will remain with the Corporation. The Corporation should buy the Company's vehicles, only if they are offered for a reasonable price; else, it should buy new ones. In any case, the Government intends to restrain the

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Company from profiteering. The Company does not have a monopoly of the bus transport in the city. The permit given to the Company is valid for only four months at a time. If the Municipal Corporation takes over the bus transport, the B.E.S.T. Company's permit will not be renewed.

- (5) If the Corporation does not exercise the option to buy the Company, the Government will exercise its right to do it.

Finally, on 21st October 1946, the Municipal Corporation resolved to buy the Bombay Electric Supply & Tramways Company with its bus transport section. On 16th January 1947, the Municipal Commissioner wrote to the B.E.S.T. Company as follows :

"Pursuant to Clause 24 of the instrument known as the Deed of Concession dated the 7th day of August 1905 and entered into between the Municipal Corporation of the City of Bombay and the Bombay Electric Supply & Tramways Company Limited, and others, and with the sanction of the Standing Committee of the Corporation recorded by Resolution No.1463, dated the 3rd December 1946, and with the sanction of the Corporation recorded by Resolution No.1198, dated the 6th January 1947, I hereby give notice on behalf of the Corporation of their intention to purchase the combined undertaking (as defined in the said instrument) with all lands, buildings, installations, plant, machinery, rails, rolling stock, mains, apparatus, stores and property of every description belonging to the Bombay Electric Supply and Tramways Company Limited, or held for the purpose of or in connection with the combined undertaking or any part thereof, with effect from the 7th day of August 1947.

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VALUATION OF THE B.E.S. & T. COMPANY

The valuation of the B.E.S.T. Company was a very complicated matter. It was to be referred to an arbitrator in the event of a difference of opinion between the Corporation and the Company. On the basis of the valuation the amount of the loan to be raised to buy the Company was to be fixed. It was most necessary that an expert agency should do the valuation. Accordingly, Messrs. Mulleneuy and Mulleneuy Ltd., Electrical and Mechanical Engineers and Technical Investigators, were engaged for the purpose for a fee of Rs.22,000. The assignment was twofold : (1) To draw up a record of the assets of the Company, with the necessary technical notes. (2) To settle the value of each item of the assets on the basis of the technical details and notes.

This was one part of the valuation. Another was to keep a justification of the valuation ready, in case the valuation prepared by the Corporation were to be submitted to an arbitrator. This was a highly responsible job. It was a complicated one too, so far as the engineering and the financial details were concerned. The Associated Engineering Firm was entrusted with this job. Messrs. Kennedy and Donkin, the renowned consultants of London, were a subsidiary of the Associated Engineering Firm, which therefore had the best experts available to it. The firm charged its fee on a percentage basis. It was two and a half per cent on value upto twenty thousand rupees. Then it scaled down by stages till it was one-fourth per cent on value above one crore. There were in addition to the fee, the expenses on the experts' travel from England and back, and on their stay here.

The valuation of the B.E.S.T. Company's buildings was complicated. It was entrusted to Shri G. P. Dandekar, an

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Assistant Engineer in the Corporation's service.

VALUATION OF THE BUS TRANSPORT SECTION

By his letter of 18th April 1947 to the Municipal Commissioner, the General Manager of the B.E.S.T. Company offered to sell the B.E.S.T. Company along with its bus transport section to the Corporation; but he wanted that since the original Agreement did not include the bus service in the item concerned, the deal should be regarded as 'an obligatory sale', and that an amount equal to twenty per cent of the value of the bus transport section should be paid to the Company as goodwill. But this demand was rejected in view of the Government's policy of nationalising transport and its intention of withdrawing the permission given to the B.E.S.T. Company to run the bus service if the Corporation wanted to run it. However, the payment of goodwill was accepted in principle. The Corporation proposed that if there was no agreement on the quantum of compensation, the matter should be referred to arbitration.

THE VALUATION

According to the advisers of the Corporation, the value of the total assets of the B.E.S.T. Company, including its buildings and the land on which they stood, was Rs.5,39,81,000. The Company's advisers pitched it at Rs.15,80,28,287. This amount was inclusive of the value of the bus service and the goodwill, which came to Rs.40,00,000. With this wide gap between the two valuations, it was inevitable that the decision should be left to an arbitrator. Meanwhile, the Corporation paid to the Company Rs.6,35,00,000, against the final valuation.

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THE ARBITRATION

By a resolution passed on 4th March 1948, the Corporation appointed Sir John Kennedy as the arbitrator. He was the Chairman of the Electricity Commission of Great Britain, which looked after the supply of electricity to the country.

The arbitrator's work was started on 21st February 1950, and it was over on 11th March 1950. The arbitrator gave his award on 16th March. On the opposite page is a comparative statement of the three valuations : the Company's, the Corporation's and the arbitrator's.

The total expenditure on the arbitration came to Rs.57,000. It was shared equally by the two parties. Beside this, the Corporation spent about Rs.88,000 on the experts it had invited to present its case before the arbitrator.

The Municipal Corporation had to raise a loan of seven and a half crores of rupees for this deal.

VALUATION OF THE B.E.S.T. CO. LTD.

Category	Valuation of the B.E.S.T. Co. Ltd. (in lakhs) Rs.	Valuation of The Muni- cipality (in lakhs) Rs.	Valuation as per the Award (in lakhs). Rs.
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① Combined Undertaking

(Tramways and
Electricity)

1) Land and

Buildings

371.17

161.76

268.98

2) Other Assets

1,155.17

263.74

556.41

3) Goodwill

40.00

40.00

40.00

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(II) *Bus Undertaking*

1) Lands and Buildings	32.01	27.63	23.73
2) Other Assets	110.57	42.35	77.46
3) Payment for taking over a running concern	20% of the total value	10% of the total value	20.00 (works out to 19.7)
		Total	986.58

COMPANY'S STAFF

Once it was decided that the ownership of the B.E.S.T. Company was to be transferred to the Municipal Corporation, a decision about the Company's staff had to be taken promptly. The Municipal Commissioner wrote to the General Manager of the Company on 22nd February 1947 to explain the Corporation's standpoint on the question.

Accordingly, it was decided to absorb the entire staff of the Company in the Corporation's service on 7th August 1947. The Municipal Commissioner suggested that the staff should be given an assurance to that effect, their attention being drawn to the following :

- (1) Since the Share Department was not to continue, its staff would not be absorbed.
- (2) Those who had attained the age of 60 on the date would not be accepted. Those who were more than 55, would be allowed to remain in the Corporation's service for two years or till they were 60, whichever was earlier.
- (3) The age of retirement will be 55.

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- (4) On 21st October 1946 the Corporation resolved to take over the Company. It will grant the absorbed staff the pay and pay-scale on which they were on that day.

Acting on the above letter from the Municipal Commissioner, the General Manager of the Company issued a circular to the members of his staff. It stated that as the Company was to be taken over on 7th August 1947 by the Corporation it would not need the services of its staff after 31st August 1947, and that as the Corporation had offered to take over the staff too, with the exception of those above a certain age, the Company would release on 6th August from its service those who would avail of the offer.

The provision that the members of the Company's staff taken over by the Corporation, would be given the pay and pay-scale on which they were working on 21st October, 1946 was intended to stop improper promotions as the Municipal Commissioner explained later. He also gave the assurance that it would not affect any normal and justifiable promotion.

GENERAL MANAGER

Mr. A. L. Guilford was the General Manager of the B.E.S.T. Company when its ownership passed on to the Municipal Corporation, which retained him in the post. The main terms of the appointment were :

- (1) The salary to be Rs.4,500 per month during the first year and Rs.5,000 during the second year.
- (2) A house-rent allowance equivalent to ten per cent of the salary, free electricity for domestic use, and a motor car allowance of Rs.200 per month.

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- (3) One month's full-pay leave (to be spent in India) for every eleven month's service, and two month's half-pay furlough leave (for going abroad) for every twelve months' service, with the expenses on travel paid; one month's sick-leave per year, on full pay.
- (4) Such benefits as Provident Fund, Gratuity and Saving Fund, according to the rules of the B.E.S.T. Company.
- (5) Permission to assist the B.E.S.T. Company or its liquidator, and to accept remuneration for the work.

LONDON AGENCY

The B.E.S.T. Company had to import equipment of various kinds from other countries. It had appointed Tata Limited, London, to represent it in this behalf — to negotiate with manufacturers, to purchase plant and other equipments, to ship it to Mumbai, and to advise the Company on technical matters after consulting the persons and institutions concerned. The Corporation continued the same concern as its agent.

GOVERNMENT ORDINANCE

The various departments of the Municipal Corporation of Mumbai were administered under the City of Bombay Municipal Act of 1888. But as the B.E.S.T. Company was not one of them, the Corporation had proposed some additions to the Act, and they were awaiting legislative sanction. Meanwhile to ensure a smooth transition of the services from company management to municipal management, legal sanction was necessary. So the Governor of Bombay promulgated the Government Ordinance II of 1947. The Ordinance provided for the constitution of a statutory committee of not more than nine persons to look after

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the affairs of the B.E.S.T. The Corporation set up the first B.E.S.T. Committee with the following as members :

(1) Sarvashri A. P. Sabavala (Mayor), (2) S. K. Patil, (3) D. V. Patel, (4) D. B. Desai, (5) D. M. Khatav, (6) S. H. M. Premji, (7) M. S. Master, (8) R. K. Ruia, (9) V. B. Gandhi (Chairman of the Standing Committee).

The Committee met for the first time at 2.30 p.m. on Saturday, 2nd August 1947, at the Head Office of the Corporation, and elected Shri A. P. Sabavala as its Chairman. It was resolved that the Committee would meet at 10.30 a.m. on alternate Fridays at the B.E.S.T. House. The other important decisions taken at the meeting were :

- (a) Mr. A. L. Guilford, the General Manager, was given the power of attorney.
- (b) The General Manager was given the authority to delegate work.
- (c) Sanction was accorded to the following matters, which were subject to further sanction by the Corporation :
 - (1) The grading schedule of the B.E.S.T. Company.
 - (2) The Standing Orders of the B.E.S.T. Company.
 - (3) The Provident Fund Rules of the B.E.S.T. Company.

On 7th August 1947, the General Manager of the B.E.S.T. Company wrote as follows to the Municipal Commissioner regarding the change of hands in the ownership of the company.

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"The General Manager on behalf of the B.E.ST. Co. Ltd. gave the possession of the Company to you on 7-8-1947 in presence of the representatives of the Corporation."

On that day, the newspapers carried a public announcement to the same effect, and at the meeting of the B.E.S.T. Committee held on 8th August the General manager of the Company made a similar statement.

Although, thus, the deal between the B.E.S.T. Company and the Municipal Corporation went through without a hitch, there was some discontent among the employees of the B.E.S.T. No decision had been taken on the Rules and Conditions of Service applicable to them in the new set-up. In fact, a rumour had been going around that the employees were to go on strike on 7th August. Finally on 6th August, Shri Abid Ali Jafferbhoy, President of the B.E.S.T. Workers' Union, met the Mayor in this connection, and a compromise was arrived at. *The Times of India* of 7th August reported it as under :

B.E.S.T. Change Hands Today

Buses and Trams as Usual

The buses and tram services of Bombay will function as usual on Thursday (to-day) although the service conditions of the workers remain to be settled by the Municipal Corporation which has taken over the combined Undertakings of the bus and tram services of the B.E.S.T.

This follows a decision reached at a conference held at the Corporation on Wednesday between the Mayor, Mr. A. P. Sabavala and Mr. Abid Ali Jafferbhoy, President of the B.E.S.T. Workers' Union to discuss the service conditions under the new management.

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The agreement on service conditions with the old management expired on Wednesday. It was agreed at the Conference that the Mayor, who is the Chairman of the B.E.S.T. Committee and the Corporation, will put the case of the workers effectively before the Committee and bring about a fair settlement.

As such, there is no suspension of work by the workers as contemplated earlier, announces Mr. Abid Ali Jafferbhoy.

On 15th August, 1947, the country achieved freedom. On this joyous occasion the B.E.S.T. Committee announced a bonus for the employees of the concern, as a token of its good will towards them. Those in permanent service, as also the temporary employees who had served for over a year, were to get a month's pay as bonus.

The B.E.S.T. House and the Electric House, like several other public buildings in the city, were gorgeously illuminated on the night of 15th August to celebrate the historic event. Historic, if in a minor way, was also the nationalisation of the first concern in the country — now the Bombay Electric Supply and Transport Undertaking — which had just got under way, and one may say that it shared the celebration!

CHAPTER 7

PROGRESS OF BUS SERVICE

No urban transport service can hope to escape problems; they keep on cropping up all the time. And they have to be tackled! Else the press and the citizens will not leave you in peace.

Knowing this full well, the B.E.S.T. Undertaking took charge of the bus and tram transport in the city in 1947, and it soon ran into a whole lot of problems. There was a big spurt in the number of new industries; refugees poured in. The Regional Transport Authority invited the Undertaking to run the bus transport in the suburban area — and that at a twenty-four hours' notice. Innumerable housing colonies had sprung up, all over the suburbs, the Government Colony at Bandra (East), the Dhake Colony on the Andheri-Versova Road, the Malavani Colony on the Malad-Marve Road, the Nehru Nagar at Kurla, the Tagore Nagar and the Kannamwar Nagar at Vikhroli, the S. G. Barve Nagar at Ghatkopar and the Sardar Nagar Near Antop Hill.

Actually, Mumbai had started changing in a big way since World War II. Its population in 1941 was about 14 lakhs; in the next ten years it shot up to 28 lakhs; the next ten years took it to 41 lakhs, and in 1970 it was 56 lakhs. This population explosion, as far as the city was concerned, was most unexpected. Oblong in shape, Mumbai has most of its Government, professional and commercial centres of work

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concentrated in its southern part. This sets a peculiar traffic pattern : The rush is north-south in the mornings, and in the reverse direction in the evenings.

Mumbai has thus changed a great deal from what it was about fifty years ago. But the changes, and the difficulties of adjustment that changes usually bring, did not come suddenly. They were spread over the years. In its early years the Undertaking tried ad-hoc solution to every problem that cropped up. The available buses were re-allocated amongst the various routes, according to the pressure of traffic. The seating arrangement in the buses was altered to squeeze in a few more passengers. The procedure for repairing the buses was streamlined so as to reduce the number of buses on 'sick list', and more buses were acquired. But the Undertaking also gave a thought to long-term measures like getting a scientific survey of the bus-routes made with the help of computer, or getting experts to study the possibilities of using alternative means of transport like underground railway, mono-rail, water-bus or mini-bus. These fifty years the Undertaking has been conscientiously trying to plan for and provide as efficient a service as it can. It discovered that a short-term measure can only bring a temporary cure. Every increase in the pressure of traffic rendered such measures futile. But the experience was not futile. It strengthened the Undertaking's resolve to pursue its problems to their roots, and also to equip itself for the task. And thus we have a much improved bus service — and the people appreciate it!

THE GROWING FLEET

The Undertaking applied itself to improving its service in many of its aspects, but the prime need was for increasing the number of buses. Since its inception in August 1947, the Undertaking has been making a well-planned effort to meet the

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need. Every year brought new vehicles. In 1947, 242 vehicles were on the roads. In ten years the number swelled to 582.

A double-decker bus was more suitable than a single-decker one, for occupying no more road space than the latter and with only one driver, it carried one and a half times as many passengers.

In the early days of the Undertaking a pressing need was to increase the carrying capacity of the buses. The 'standee' bus system introduced in 1955 was one attempt in that direction. It was restricted in the beginning to vehicles of a particular type. In these buses, ten standees were allowed in the city, and seven in the suburbs. In 1958, the permission was extended to some double-decker buses; these were allowed to take eight standees.

ALL-STANDEE BUS

Another innovation came in 1967 : the 'all-standee' bus. It had only a few seats, the rest of the space being for strap-hanging passengers. These buses were put on short routes. It was hoped that they would reduce the period of waiting in the queue for the passengers. But the passengers were not impressed. Finally, in 1970, the buses had to be withdrawn.

ARTICULATED BUS

1967 saw yet another type of bus put on the roads : the articulated bus. There were ten of them. The Undertaking was the first transport organisation in the country to use such a bus. The engine was separate from the bus in this vehicle, and the two were joined together. The vehicle was of entirely Indian make, with the Ashok Leyland of Madras manufacturing the tractor-engine, and Mahindra Owen of Poona building the 'bus' part of it.

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TROLLEY BUS

In the days of the B.E.S.T. Company, the proposal to run trolley buses was seriously considered. The Undertaking too gave a thought to it. Its tramcars had been ageing fast. Could a convenient substitute be found? So it decided to go in for trolley-buses. Twelve such vehicles were imported, and they replaced the tramcars on the Gowalia Tank-Mazgaon route on 11th June 1962. Somehow, the service did not do well. The trolley buses would go out of order again and again. They were finally withdrawn on 24th March 1971 in favour of ordinary buses. One reason for the failure of the service was that as it passed along very congested roads its speed had to be kept much below its maximum; and the trolley-bus had to run at a good speed in order to be profitable, as experience showed. As such speed is impracticable on any of the old tram-routes, it seems very unlikely that trolley-buses will be tried again in the city.

COACH SERVICE

The Undertaking had eight luxury coaches, and they were open to hire at three rupees per mile, but the demand for them was very limited. Therefore, to put them to profitable use, the Undertaking started a 'Coach Service' in 1966. The service operated every day between Electric House and Sion, and between Dadar and Juhu on Sundays and holidays. There was a special fare for this service : 8 paise per kilometer. Once the novelty of riding in a luxury coach wore out, the higher fares tended to discourage passengers from using it, unless they had no time to wait for the regular service bus.

The service lasted for hardly a year. With more 'limited' services introduced on the Sion-Fort route, the Coach Service

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was patronised even less. The income from the service started dwindling, while the operating costs kept rising. Finally, in June 1967, it was discontinued.

MINI-BUS

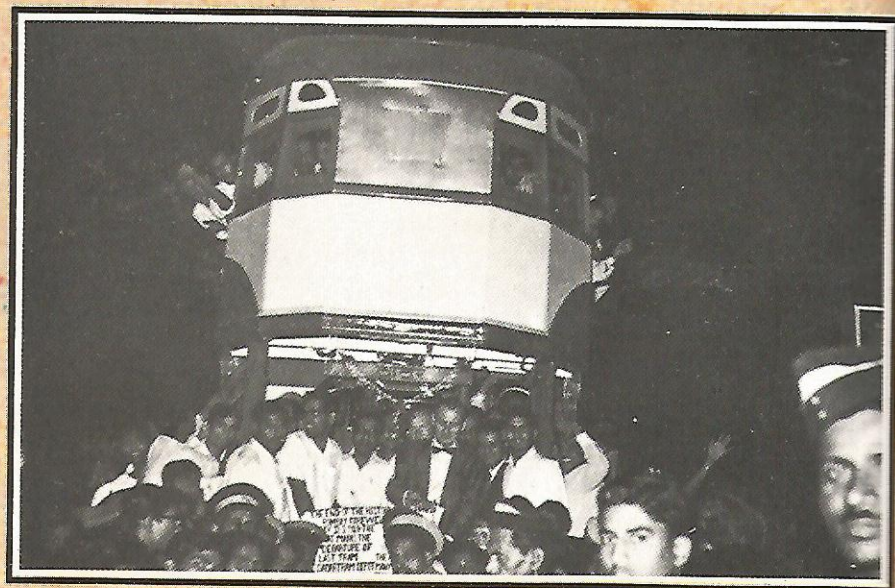
The idea of using mini-buses was first mooted in March 1969. The vehicle was to be something between a taxi and a bus, and it was to be used for short runs. According to the initial scheme, for a flat charge of 30 paise, mini-buses were to ply on the following routes : Strand Cinema to Nagar Chowk (Bori Bunder) or Ballard Estate or Churchgate; Colaba Bus Station to Churchgate; Museum to Mahatma Phule Market (Crawford Market); and Pydhoni to Dhobi Talao. In addition to using the bus stops, the mini-buses were to set down or pick up passengers on request. The driver was also to act as the conductor. It was intended to use station wagons for this service.

A year before the proposal started taking shape, some public bodies approached the Undertaking with the request that it start a mini-bus service on certain routes as between the Ghatkopar Railway Station and the S. G. Barve Nagar, for example.

The demand for mini-buses kept growing. Meanwhile, all the aspects of the proposal were under scrutiny. Two points were newly stressed : (1) Some of the undeveloped areas in the suburbs have narrow and *kutcha* roads, which cannot take ordinary buses. Mini-buses would be particularly useful in such areas. (2) Mini-buses could be used to provide direct and speedy transport between the suburbs and the central parts of the city.



The Building of the Brihan Mumbai Municipal Corporation.



The last Tram left Bori Bunder on 31st March 1964.
Thus the Tramway in Mumbai came to an end.

Trolley bus was introduced in 1962.



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BUS TRANSPORT IN SUBURBS

The Bandra Bus Company used to run the bus service in the western suburbs. As the Company refused to comply with the Regional Transport Authority's order that only the main road in those suburbs should be used for the service, the Authority requested the B.E.S.T. Undertaking to take it over immediately. That was on 30th September, 1949. The request was more of a challenge — for it meant assuming the responsibility of providing transport for 50,000 passengers at twenty-four hours' notice. The Undertaking accepted the challenge. And on 1st October 1949, B.E.S.T. buses started plying in the western suburbs. Twenty-six buses were spared for the service, which was hailed by the residents of the suburbs as a boon. The Undertaking was overwhelmed with expressions of praise and gratitude. The Undertaking bought eleven of the buses the Bandra Bus Company had been using.

The Undertaking also took over the employees of the old company. The old fare, in the suburbs, was 12 pies per mile; the Undertaking changed it to 9 pies per mile, which had been its fare for the city.

In January 1955, the Undertaking launched its bus service in the eastern suburbs. Thus it came to serve the entire suburban area, carrying nine lakhs of passengers every day. This was about the same as the number of suburban passengers using the two railways. However, the eastern suburbs had some private bus services still plying. The Undertaking asked for their closure. The matter dragged on in a court of law for four years. The verdict, given in February 1959, was for the closure of the private services.

The Undertaking applied to the Regional Transport

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Authority for permission to extend its bus service to the areas newly included in Greater Bombay — that is up to Mulund in the east and Dahisar in the west. Meanwhile the operators of private buses had moved the High Court for permission to appeal to the Supreme Court. On the High Court turning down their plea, the Authority granted the necessary permission to the Undertaking, from 1st December 1960.

INCENTIVE BONUS SCHEME FOR THE EMPLOYEES

To provide the passengers with a comfortable bus service needs a sufficient number of vehicles. The Undertaking has always been trying to achieve such sufficiency. But then what does 'sufficient' mean? You cannot define it. The vehicles are just one factor in a bus transport system. There are others like the conductors, the drivers, the maintenance staff and the repairs staff in the workshops. If all these employees are not up to the mark, no increase in the number of buses is going to make it 'sufficient'. So much depends on the proportion of vehicles stabled for repairs.

Similarly, the efficiency of the service depends a good deal on the conductor and the driver not unnecessarily holding up the movement of their vehicle, the conductor issuing tickets promptly, and taking care to avoid altercation with the passengers. Efforts to secure such efficiency have to be made methodically. Some efforts made by the Undertaking in this direction in the beginning were as follows :

- (1) The system of granting an efficiency bonus of Rs.25 every quarter was started in 1951. It applied to both the conductors and the drivers. To be eligible for the bonus, the employee had to attain a certain level in attendance and in efficiency.

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(2) Absenteeism among employees is epidemic in the March-June period. For lack of conductors and drivers, the usual number of buses cannot go out on the roads. A special bonus scheme had therefore been instituted for this period, to dissuade them from going on leave.

(3) A scheme called 'Model Unit' was started in 1961. To find out the defects in the maintenance of vehicles, and to decide on the remedies for them, fifty vehicles of the same make were grouped together, and their maintenance was to be carried out according to the methods and time-table laid down by the manufacturers. On the basis of this, a model maintenance system was to be finalised, and then applied to all the vehicles of that make. To operate the scheme, fifty double-decker buses of Leyland Titan make were grouped together in the Central Depot. Similar groups were made in the other depots, one by one. Selected drivers were put on these vehicles.

(4) Sometimes it is minor defect which put a bus out of action. In order that such a bus should not get stuck on the road for long, mechanics were stationed specially for the job at some of the starters' chowkies at the important termini. To deal with major defects there is a 'Breakdown Lorry or Van'. The van goes to the ailing bus, and sets it right as quickly as possible.

(5) The schemes like 'bus running control', the wireless van, etc. were in operation. The wireless van is a special feature. It does important jobs like reporting breakdowns of vehicles to the staff concerned or asking for extra buses at points where there are inordinately long queues of passengers.

These schemes were definitely instrumental in increasing efficiency. And yet they seemed to fall short of the requirements.

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There were not enough vehicles. The proportion of absentees came down, but even then it was large enough to affect the working. Would the recruitment of women conductors bring about an improvement in the attendance? This was considered in 1951.

Then there were the sick vehicles. Although their proportion was gradually coming down, it was still considerably higher than in the bus systems in cities like London, New York and Tokyo. There was much scope for improvement in the maintenance of vehicles. The rainy season brought in its wake a flood of complaints about leaking roofs and windows that got stuck. The population of the city kept growing. It was a trying situation, and it called for more throughgoing and fundamental improvement. 'The Incentive Bonus Scheme for Bus Transport instituted in April 1967 proved quite effective in combating some of the troubles mentioned above.

BONUS SCHEME FOR CONDUCTORS

Under this scheme, a conductor was to be granted a bonus for extra 'work'. The fare collected by him during the month was taken as his 'work'. Some of the immediate benefits of the scheme were as follows : (1) The number of complaints received from passengers dropped from 600 to 400 per month. (2) The Undertaking could cope with the traffic without increasing the number of buses. (3) Passengers had to wait for a shorter time in queues. (4) The proportion of absentees among conductors came down.

New Incentive Bonus Scheme

Like the conductors, the three categories of staff namely Bus Drivers, Workers in the Traffic and Engineering Departments

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and the Maintenance Staff are important in a bus-transport system achieving maximum efficiency. But, in their case, the efficiency is not of an individual; it is the result of the co-operative effort of workers from each of the three categories. Such joint effort enables a bus to run smoothly and punctually. This scheme was designed to keep more buses running — that is, to reduce the number of 'sick' buses.

In 1969, this scheme brought down the percentage of 'sick' vehicles by 2 to 3 per cent — which meant 100 vehicles more on the road. In that year about 4,000 drivers, 200 of the traffic supervisory staff and 2,000 maintenance workers joined the scheme.

The workshops too came under a similar scheme from 1st October 1969. The measure of efficiency in this case was the number of vehicles lying idle in the workshop waiting for repairs. This scheme too had proved effective, the percentage of vehicles under repairs dropping.

MORE FACILITIES FOR JOURNIES BY BUS

You have read of the various schemes operated by the Undertaking to augment the efficiency of its transport service. Simultaneously, more facilities, besides the daily bus service, were being made available. Since the days of the B.E.S.T. Company, schools and private parties had been hiring out buses, and the practice continued. Some facilities tried out by the Undertaking were given up after a while as unworkable. The Luxury Coach Service was one of these. It was started in August 1955. The coach was fitted up with all manner of conveniences like Dunlopillo cushions for the seats, adjustable backs, a reading light for each seat, and fans. The coach was mainly meant for the use of foreign tourists. They were taken

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round in the coach on a guided tour of the city. Accompanying them was a guide to tell them about the important places. As the Coach Service failed to get sufficient response, it was closed down in 1971.

There was a 'Sunday excursion', specially meant for visitors to the city. The bus left from the Taj Mahal Hotel every Sunday morning, and stopped at Hanging Gardens, the Juhu Beach, the Aarey Colony, the Powai Lake, Ghatkopar and Chembur, before returning to the Taj Mahal Hotel in the evening.

In 1961, the 'Travel-As-You-Like-Ticket' was introduced. Rs.1.50 was the price for adults, and 75 paise for children. It was issued for Sundays and holidays only. This ticket entitled the holder to travel anywhere in the city and the suburbs. But as it was found that the facility was misused, the Undertaking abolished it in 1967.

DEPOTS AND BUS STATIONS

The Undertaking had to build more and more depots and bus stations at suitable places in the city and in the suburbs as its bus service went on expanding. In a depot, a vehicle is cleaned up, its machine is oiled, and minor repairs are done. For major overhaul, of course, the vehicle has to be sent to the workshop. During the last fifty years bus depots came up, one by one, as under : (1) Bombay Central, 1950; (2) SantaCruz, 1950; (3) Kurla, 1955; (4) Tardeo, 1960; (5) Wadala, 1961; (6) Worli, 1961; (7) Poisar, 1966; (8) Marol, 1968; (9) Deonar, 1969; (10) Vikhroli, 1972.; (11) Ghatkopar, 1974; (12) Backbay, 1976; (13) Goregaon, 1978; (14) Bandra, 1980; (15) Dharavi, 1980; (16) Dindoshi, 1985; (17) Anik, 1988; (18) Oshiwara, 1990; (19) Malwani, 1991; (20) Magathane, 1992; (21) Govandi, 1992; (22)

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Kalakilla, 1993; (23) Majas, 1995; (24) Gorai, 1996 and (25) Pratiksha Nagar, 1996.

FERRY SERVICE

The BEST Undertaking started a ferry service at Manori in 1981. The Brihanmumbai Municipal Corporation entrusted the running of this service to the Undertaking acknowledging its excellent bus service, as it were. The Undertaking has justified the trust placed in it by making a success of the Marve-Manori ferry service.

BUS-FARES

Even after the B.E.S.T. Company was taken over by the Municipal Corporation, the bus fares continued unchanged till 31st March, 1951. For the city the fares were telescopic, that is, as the distance increased the fare per mile came down. For the suburbs, the fare was 'flat', that is, it remained the same whatever the distance. For one anna you could go a mile and a half in the city, but only one mile in the suburbs.

Then came the changes in the fare-structures. From April 1951, bus travel in the city became even cheaper, with the basic fare of one anna taking you a mile and three quarters. However, the fractional fares, like 1.1/2 anna or 2.1/2 annas and 3.1/2 annas, for the fare 'stages' were rounded off to the full anna. In the suburbs too the fare was brought down from one anna per mile to nine pies, that is three quarters of an anna.

The disparity in the fares for the city and the suburbs was brought to an end in October 1955. The suburbs naturally profited from this. For an anna you could now travel a mile and three quarters, instead of a mile and a quarter. But the fractional fares were restored.

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In 1959, with decimal coinage coming into force, except for the 7 paise fare for the first stage, all the fares were multiples of five, that is, 10, 15, 20 and so on. These came into effect from 15th January 1959. From 21st April 1963, the minimum fare was raised from 7 paise to 10 paise.

The Undertaking revised its bus fares from time to time strictly according to the provision made under Govt. notification. The details of revised bus fares from 1963 onwards are given below :

Fare Revised w.e.f.	Ordinary		Limited	
	Ps.	Kms.	Ps.	Kms.
21-04-1963	10	3.6	15	5.5
07-11-1966	10	2.0	15	2.0
28-05-1974	15	2.0	20	2.0
23-12-1975	20	3.0	25	2.0
21-08-1980	25	3.0	30	2.0
23-03-1981	30	3.0	35	2.0
01-04-1982	40	3.0	50	2.0
01-06-1984	40	2.0	50	2.0
14-09-1984	50	6.0	50	2.0
01-04-1987	50	4.0	50	2.0
22-06-1989	50	2.0	65	2.0
04-05-1990	70	4.0	95	4.0
16-11-1990	95	3.0	95	2.0
08-01-1991	95	3.0	95	2.0
15-05-1992	95	2.50	120	2.5
11-05-1994	140	2.50	165	2.5
06-08-1996	140	2.0	165	2.0
10-08-1996	190	2.5	235	2.5

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The nutrition surcharge is 10paise on ticket upto Rs.2/- & 15 paise on tickets above two w.e.f. 1-4-1994.

Every day the Undertaking's buses run about 6.51 lakh km. and carry about 47 lakh passengers. These figures are an index of the vastness of the transport system. It would be wrong to expect that everything will run smoothly in such an organization. Troubles have to be taken for granted; difficulties will arise. The organization has to take them in its stride. A trivial incident touches off a lightning strike. There is hectic running-about. The complaint is traced to a misunderstanding. It is set right, and normal working is resumed. In 1950, the Undertaking had a serious problem to face. Conductors in those days carried a 'ticket-issuing' machine, specially designed to print and produce a ticket of the required denomination at the turning of a handle. The machine recorded the amount automatically. At the end of his day, the conductor had to pay in the day's takings as recorded. This sounds smooth and fool-proof. But some conductors, who were obviously anything but foolish, found a way of so manipulating the machine as to make it record less than the amount collected. How much the Undertaking was fleeced of was anybody's guess. However, the moment the trick was discovered, the Undertaking took swift action, and in twenty-four hours the ticket-issuing machine with every conductor was replaced with a ticket-box.

These are 'internal' troubles; not all of them cause disturbance to the transport service. But 'external' troubles invariably do, and sometimes they can be serious. The dislocation caused by the first heavy showers of the rainy season is almost a matter of habit. The low-lying parts of the city are flooded, and buses have to be diverted. To make it worse, the railway services too are disrupted. That puts further

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responsibility on the bus service. The buses, of course, do their best, but the best in such circumstances can never be good enough. Then there are the railway accidents, and man-made troubles like strikes, riots and *hartals* (or *bandhs*). They put a heavy strain on the bus service, but it has not been found wanting.

Strikes and political agitations usually aim, among other things, at disrupting communications. Buses, on such occasions, are exposed to the risk of being damaged; the driver's cabin has to be fitted with wire meshes to protect him from different types of flying missiles. On some of these occasions not many people move out. Should the bus service be suspended then? The Undertaking does not opt for it; it owes a duty to the community.

There is always a limit to the number of buses a transport organization can run, and to its efficiency as well, for there is a limit to what the city roads can carry. Other means of conveyance too keep increasing in number. In Mumbai, for instance, in 1951, the number of vehicles, leaving out buses, was 45,000. In 1961 it was 85,000, and in 1971 it reached 1,80,000. Today there are over 6 lakh vehicles on Mumbai roads. The number continues to grow; but over the years the roads have been the same, except for a few additions, and some widening here and there. In such a situation, the vehicles have to move slower and slower. The average speed of our buses has been falling down. At present it is 12 to 15 km. per hour. In the congested localities it is as low as 6 km. per hour.

CHAPTER 8

ALTERNATIVE MODES OF TRANSPORT THE END OF THE TRAMWAYS

Transport is a very important factor in the economic organisation of a modern city. With the concentration of industrial and other employment in a city, there is tremendous increase in the movement of men and goods. The pace of such movement has an impact on the economic of the organisation. Transport is like the lungs of the organization. Transport in the city of Mumbai is handled by the two railways and the B.E.S.T. Undertaking. The Undertaking carries more passengers than the two railways put together, and yet, it must be admitted, there is considerable scope for improvement in its bus service.

The B.E.S.T. Undertaking is always thinking to use other modes of transport. It gave consideration to the following alternative means of transport, having obtained expert advice on them :

- (1) Aerial Ropeway,
- (2) Underground Railway,
- (3) Overhead Railway (Aerial Monorail), and
- (4) Water Bus

AERIAL ROPEWAY

The idea of installing an aerial ropeway in Mumbai first came up in 1953. It was to connect Chowpatty and Malbar Hill.

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Coaches each with four seats were to slide up and down the steel ropeway. To enable the passengers to get a panoramic view the coach was to be fitted with glass windows. A German expert helped finalise the details of the scheme. The Corporation approached the Government for permission to operate the aerial ropeway. But somehow, in spite of all efforts, the scheme never materialised.

UNDERGROUND RAILWAY

This form of transport for Mumbai was first thought of as early as in 1924. As conceived at first, it was to be a circular route joining Bombay Central, the Khada Parsi Statue (Nagpada), the J. J. Hospital, Pydhoni, Crawford Market, Bori Bunder, Marine Lines, Charni Road and Kennedy Bridge. Later, a straight north-south route was proposed. In 1954, the scheme was submitted to the State Government for approval. The government thought it impracticable as the outlay on the railway would be huge. But the population of the city kept growing so fast that the need for such a railway was felt more and more keenly by the Corporation, the B.E.S.T. Undertaking, and by the Government as well.

In 1956 the scheme came up, once again, with much impetus this time. During his visit to Japan, Shri T. S. Rao, the then Chief Engineer of the Undertaking, made a study of the underground railway system in that country, and on his return submitted his report on it. In the light of the report, the scheme for an underground railway in Mumbai was considered at a meeting attended by the members of the B.E.S.T. Committee, the representatives of the Central and the Western Railways and the Special Engineer of the Municipal Corporation. The meeting decided to conduct a geological survey of the city for this

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purpose, and assigned the job to Messrs. Higashi and Tsuji, a Japanese firm. This was the first actual step taken in direction of providing Mumbai with an underground railway. After the report of the survey was received, the General Manager of the Undertaking drew up a plan to build an underground railway from Museum to Dadar, via Mohamadali Road and Dr. Ambedkar Road. Then the Government was approached for financial assistance for the preliminary work on the scheme; but the Government would not give it, and the scheme got stuck once again.

The next time the scheme moved was in 1962, when the then Engineer-in-charge of the Undertaking, Shri P. G. Patankar, was sent to Berlin and Milan to study the underground railway systems there, and for training. He recorded his observations and suggestions on underground railway in great detail in the report he submitted. His plan for the proposed underground railway for the city envisaged five stages. In 1964 the Japan Consulting Institute invited the Undertaking to send its representatives to see the working of Japan's underground railway system. Accordingly, the Undertaking's General Manager, Shri G. A. Sharma; the Chief Engineer of its Electric Supply Department, Shri K. N. Rao and its Engineer-in-charge, Shri P. G. Patankar, visited Japan. On their return, they submitted their report to the Undertaking. However for want of huge capital investment it could not be materialised.

OVERHEAD RAILWAY (MONORAIL)

Having examined the underground mass rapid transit system, the Undertaking also gave thought to overhead rapid transit which principally comprises of electric rolling stock with pneumatic tyres running on a single wide flanged concrete rail

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instead of the two conventional narrow steel rails and supported on elevated pylons. This system is popularly called 'Monorail'.

The idea of monorail dates as far back as the 19th century. There were certain patents, designs and achievements though they are not much known to-day. These achievements did gain much ground but ultimately fell into the greatest disrepute, except a few short lengths probably in Germany. There were mainly two reasons for this disrepute. Firstly, they made unbearable noise for the inhabitants of the streets over which they ran and, secondly, the elevated lines encumbered in an abusive manner the sky over the streets.

WATER BUS

With the city of Mumbai surrounded by the sea on three sides, water bus transport for it was bound to suggest itself, and it did in 1958. In December that year the Bombay Steam Navigation Company decided to close down its launch service linking the city with Uran, Rewas and Dharamtar. This naturally agitated those who used the service daily, and they could be counted in hundreds. A meeting of citizens passed a resolution requesting the Municipal Corporation to take over the launch service. It was intended that the B.E.S.T. Undertaking should run the service, and extend it later to more places in the Kolaba district, like Mandva and Alibag. The sponsors of the proposal argued that if a safe, convenient and punctual service of this kind was available it would help reduce the congestion in the city — and the strain on its transport systems — by encouraging industries and people to migrate from the city to the mainland across the harbour. In 1959, the Corporation submitted the proposal to the Undertaking for consideration. The Government too was interested. In March 1969 the Director of Transport

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suggested that a water bus service should be run on two routes : one, starting from the Sassoon Dock and going up the creek to Chembur, touching Ballard Pier, the Ferry Wharf and Wadala on the way; the other, on the western side, starting from the Foreshore Road and terminating at either Bandra or Versova, touching Chowpatty, Walkeshwar and Mahim. The Undertaking however pleaded its inability to work such a scheme for lack of funds.

But the Undertaking could not be indifferent to the water bus scheme, with the strain on its bus service growing worse year by year. So in 1969, a committee was appointed under the chairmanship of Shri G. H. Lalwani, the then General Manager, to examine the scheme in all its aspects. More important aspects were : the financial viability; whether it could be an all-weather service or would it have to be suspended during the rainy season, with the financial repercussions, if the latter were the case; the traffic the service was likely to draw; and the precautions to be taken to ensure safety for the passengers.

Mumbai is not the only big city harassed by the problems of providing adequate transport for its people. It is the same all over the world. The pressure of traffic is heavy only during certain hours. And it is only in one direction. A transport service therefore has to have enough vehicles to cope with the peak-hour traffic. During the rest of the time the vehicles don't have enough passengers. It is not so with a State Transport bus. It has evenly distributed traffic. Moreover, a city transport service, in catering to the needs of its passengers, has often to operate unprofitable routes.

EXIT THE TRAMCAR

Horse-drawn tramcars had been running in Mumbai since

ALTERNATIVE MODES OF TRANSPORT

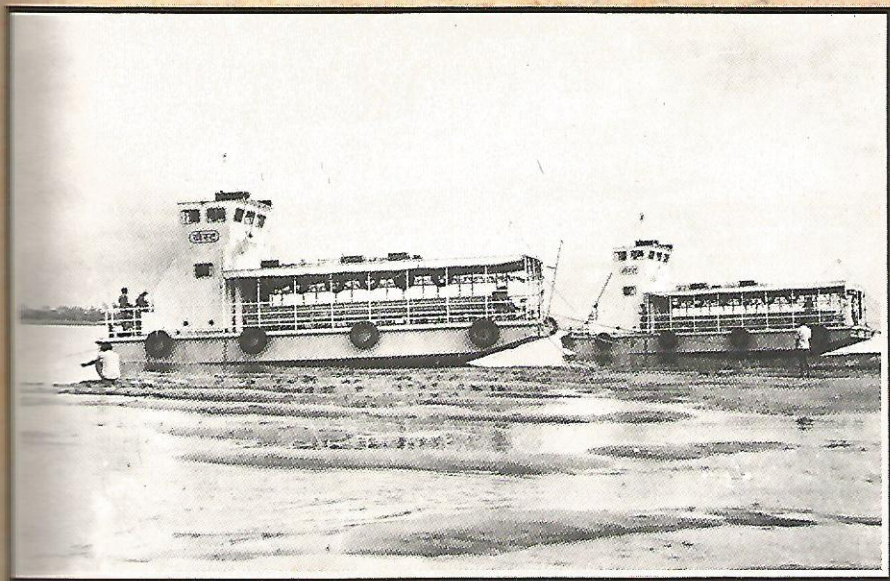
1874. When the electric tramcar appeared for the first time in the city on 7th May 1907, it was given a warm welcome as a very modern mode of transport. When the bus arrived on the scene in 1926, the tram-car ceased to be modern; but this did not affect its usefulness. In fact it became quite important as 'the poor man's transport' and continued to be so till the Second World War. The years that followed brought dramatic changes in the life of the city. Its population started growing rapidly. The people wanted faster transport. The tramcar was, however, innocent of the fast-changing environment and it continued to rumble up and down, in its 1907 manner. There was, of course, little scope for improvement. If anything, it moved at an even slower pace, thanks to the congestion on the roads. It found the crowds bothersome and the crowds found it a clumsy, lumbering impediment to the smooth flow of traffic. The poor thing had no place in this swift-changing city. It had to go. The city had already started thinking of quicker substitutes for it.

When the B.E.S.T. Undertaking took over the tramway in 1947 it was quite decrepit. Eight days later, Mumbai went gay in celebration of the advent of freedom. There were illuminations on two consecutive nights, and almost every Mumbaite was out on the streets to enjoy the dazzling sight. Every available vehicle was pressed into service by the people, and it was made to carry the maximum number. The poor tramcars had the worst time of all, with crazy persons riding on the top and hanging on to the windows, when their inside was jam-packed. Ill-treated thus, many of the tramcars became 'sick'. The city soon recovered from its delirium of joy and got back to its normal life, but somehow the tramcars continued to be abnormally crowded. Their number too kept dwindling, with more and more of them being withdrawn from service. The



Articulated Bus.
BEST was the first in India to introduce this bus in 1967

Malad to Marve-Manori Ferry Service.





Vestibule Bus introduced from 7th August 1996.

Environment Friendly Bus run on compressed Natural Gas (CNG) (Introduced on 15th January 1997)



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Undertaking tried to get the Government to impose a limit on the number of passengers a tramcar might carry, but to no avail. By the beginning of 1948, only 186 of the total fleet of 258 tramcars were fit to ply.

The tramway system had been running at a loss when the Undertaking took it over. The losses kept on mounting year after year and something had to be done about them. It was not quite so easy to raise the fares. So other methods were tried. One of them was to abolish the transfer ticket. This concession had been there since the tramway started. It was an interesting concession and this is how it worked : Suppose, you had to go from Colaba to Dadar. You boarded a tram bound for Pydhoni. The conductor would give you a ticket for Dadar, punched for 'transfer' at Dhobi Talao. You got off at Dhobi Talao, did what work you had there, and took a tram bound for Opera House. The conductor now punched your ticket for 'transfer' at Girgaon, where you got down for some work you had there, and then boarded a tram for Dadar. And all this for just one anna! Not more than two 'transfers' were allowed. To get the best out of one ticket, through two 'transfers', used to be looked upon by practical people, as a test of your ingenuity, and of your knowledge of tram-routes! The concession was withdrawn from 2nd January 1951.

But this did not improve matters appreciably for the Undertaking. The service continued to incur losses. In 1952 a survey of tram traffic was conducted. Acting on it, the Undertaking put fewer trams on routes with insufficient traffic.

This did not go far enough, either. The truth was that tramway had come to be an outdated mode of transport and the Undertaking had to face this squarely. So, in 1953, it started

ALTERNATIVE MODES OF TRANSPORT

closing down the uneconomic routes. The one plying between Null Bazar and Jacob Circle (Route No.12) was the first to be closed down, its place being taken by a bus route. That was on 6th April 1953. Then a few others went, one by one : No.19 from Ballard Pier to Sandhurst Bridge; No.20, from Dhobi Talao to Reay Road; No.21, from Sandhurst Bridge to Tank Bunder; No.2 from Golpitha to Tank Bunder; No.22, from Museum to Tank Bunder. They were all replaced by bus-routes. More and more tram routes were closed down in the years that followed. Finally only one remained : the one between Bori Bunder and Dadar. And the last tram on this route left Bori Bunder at 10 p.m. on 31st March 1964. Thus the tramway in Mumbai came to an end!

CHAPTER 9

A STRENUOUS TRACK

Mumbai has been growing fast. The Management of the BEST Undertaking was well aware that this was what the future held. And also aware that this would call for firm remedies. The last twenty-five years, for instance, saw no less than fifteen bus depots come up, to take their total number to twenty-five. The pressure of population has been rising relentlessly. The Navi Mumbai formerly had their own transport organisation. But, in the fast changing circumstances, the transport service linking the Navi Mumbai region with Greater Mumbai was virtually on the point of collapse. In order to tackle this basic problem, the BEST services were extended to Navi Mumbai, in response to the pleas of the Government and the CIDCO. Bus route No.501 (Limited) started plying between Anushakti Nagar and Vashi. This extension did not quite come within the area of operation of the BEST. The capital expenditure involved in this extension should have, in all fairness, been borne by the Government and the CIDCO. But the BEST had to shoulder the responsibility. Today, the Undertaking runs no less than 136 buses on fewer than 13 routes in the Navi Mumbai, Belapur CBD and Konkan Bhavan region.

Then there are the thousands who have to commute every day to the metropolis from the fast opening up townships like Mira Road, Bhayander and Kashimira. Considering the travails they are required to face day in and day out, the

A STRENUOUS TRACK

Undertaking has extended its operations to that region. 64 buses ply on 8 routes there. We realise that in the near future this will prove sadly inadequate, and the services will have to be strengthened.

The BEST crossed yet another boundry of Greater Mumbai Municipal Corporation in October, 1995 with the launching of the service between Jijamata Udyan and the Thane Fly-over. With the Press carrying information, from time to time, about the expansion of the bus services, Mumbaites are well posted with it all. But, how far beyond the city will the extensions get? Bhiwandi, Panvel? No exaggeration here, or play of fancy! Housing colonies are mushrooming all over. And the direction and the destination of most of these far-flung residents is one : Hutatma Chowk (in the South). However efficient and enterprising the Management, can it prove equal to such unbounded growth? The Management will have to keep struggling. Unceasing efforts have been on, however daunting the task. Midi buses were introduced to negotiate narrow roads. In the suburbs, where housing colonies sprang up away from the railway, short-distance, bus-routes were provided. The last fifty years kept throwing up occasional difficulties, as well as needs, to meet. And this is bound to continue. And however daunting the challenges, the Undertaking will have to accept them, and devise ways out of the apparent blockades as they threaten it. How many of us realise this? Most citizens will have one reaction "Well, well, its your headache. You better find the remedy for it. We have plenty of worries of our own, But some times, for no rhyme or reason, a menacing problem rears Undertaking's head. The Gulf War, for example, forced a 33 per cent cut in the fuel. Now, what can the management, however capable, do in such a crisis? 714 buses had to be just stabled. That came suddenly in October 1990. The Public was, of course

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gravely inconvenienced. But it was the Mumbai Public. It understood. What darkened the crisis was that the Central Government had to impose an additional 25 percent tax on the fuel. Inevitably, the bus fares shot up. But Mumbaites still understood. Not that the management was taking it passively.

The alert management pressed the matter with the Central Government : "This is too much. How much are the people of Mumbai to suffer?" This worked and the management could put 205 vehicles back into service. The fuel cut was withdrawn after a month. The old situation was restored.

Another trouble hitting the service from time to time and all of sudden is the dislocation of the local railway system : a serious one, not the brief sort our brave citizens take lightly, with a shrug of the shoulders. Yet another is heavy rains rendering some roads unusable. During such difficult times, the Undertaking has had one immediate objective : to minimize the inconvenience caused to citizens by taking prompt recourse to alternate ways.

A major threat to the smooth functioning of the service is communal rioting. The losses, it causes the Undertaking, run into crores of rupees. To make it worse, the employees life and limbs are exposed to danger. As many as 64 of them were injured on 9-2-93. The bomb explosion at 'SEEPZ' killed five of our employees. Not a man-made disaster though.

The bomb explosions in 1992-93 will live in history. A large number of buses were either completely destroyed or badly damaged, the total loss being of the order of 17.71 Crores including revenue loss. The relatives of each of the workers of the Undertaking who had succumbed were paid one lakh of rupees

From such disasters to the irritations of coin shortage are

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all taken in their stride by the people of Mumbai. They realize the enormity of it all only when like a jigsaw puzzle it falls into shape.

The number of bus passengers has been swelling. The Undertaking has to keep in step. New types of vehicles have to be brought. Mumbaites forget it after a while : Which vehicle appeared when. The trolley bus, for instance. When did it appear and when did it disappear – this did not properly register in the public mind. Introduced with high hope, the vehicle proved to be unpractical. Some innovations are tried out experimentally. Some of them come off; the others don't. The semi-articulated vehicle showed up in Mumbai for the first time. The Jumbo bus is one such experiment. Mumbaites are very likely to recall photographs of its inauguration in the local dailies. Its length of 15.5 metres and width of 2.5 metres justify the jumbo tag. It can carry 101 passengers : 70 of them sitting and 31 standing. The ordinary vehicle is 10.7 meters by 2.4 metre, and carries 71 passengers : 49 sitting, and 22 standing.

The management is ever striving to serve the citizens better and better. Consideration for passengers is the prime consideration. To list some of the conveniences : front door entrance for the lame and the blind, concession in fares for students; reserved seats for the handicapped persons and for women; free journeys for freedom fighters, and a mere one rupee fare to carry a blind person from any point to any other. In this you can never tell how, when and where new housing complexes will make an appearance. Then the number of passengers in such an area beats all limits. A route has to be provided between the complex and the railway station and some times a new depot has to be set up. On 1st August, 1997, the BEST ran 3401 buses on 399 routes, carrying 47 lakh passengers. It is a familiar sight for the Mumbaites to see our

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buses running. These figures should give him, and others too, a fair idea of how the operations of the BEST have proliferated. For him to read that the service has 'collapsed' or even gone haywire, will be 'news' not just information. For model management the Undertaking ranks first in the country and an eloquent proof of it is the list of awards, given below, which the Undertaking has won during last some years.

The Awards received by the Undertaking :

- 1984 :** The prize for the second best production achievement by an Urban Transport body in the country for the year 1982.
- 1985 :** The second prize for production achievement in Urban transport during the year 1984.
- 1986 :** A memento for the administrative report and statement of Accounts of the Undertaking for the year 1983-84 awarded by the Selection Committee nominated by the Institute of Chartered Accountants of India.
- 1988 :** The first place and the Best Production Achievement Award in the category of Urban Transport for the year 1986-87.
- 1991-92 :** National Productivity Award.
- 1994 :** Award for the best passenger-safety record.
- 1995-96 :** The prestigious award for the Best Passenger-safety performance in Urban Transport in the whole country instituted by the Association of State Road Transport Undertaking [ASRTU].

TICKET AND CASH DEPARTMENT

Every Depot of the Undertaking has this department. Its

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jobs are : to give each conductor his 'blocks' of tickets, to receive the cash brought in by him, to keep an account of the tickets issued by him and the difference, if any, between the collection and the actual payment. It has also to calculate the bonus to be paid to each conductor under the Incentive Scheme, and to disburse the salaries of the conductors and the drivers.

The office of the Department at each Depot sends up the cash collected by it to the Central Cash Section at the Head Office. The amount is then deposited in the State Bank of India. The offices of the Department work round the clock.

NIGHT SAFE SCHEME

Till 1959 the procedure for collecting the cash from conductors used to be somewhat different. The conductor would hand in his collection to the Cash Clerk. This often meant, particularly during the night, several of them thronging at the counter thus causing waste of their time. Sometimes there used to be wrangling between the cash clerk and the conductor over the currency notes brought in being soiled or the coins being fake. It was to avoid these irritations that the Night Safe Scheme was introduced. Under the scheme a night safe is placed at every depot. Each conductor puts the purse containing his collection in a leather bag and deposits the bag in the safe placed in the office for the purpose. The next morning the contents of the purses are counted in the presence of a senior conductor. If there is any shortage in the cash, or any fake coins or any soiled notes, they are brought to the notice of the senior conductor and the conductor concerned is informed regarding the particular deficiency.

ONE TICKET BOX TO EACH CONDUCTOR

Another innovation concerned the box of tickets carried

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by conductors. It was introduced by the Undertaking as recently as 1970. Till then a conductor used to be given two boxes, to be carried on alternate days. At the end of the day he would leave the used box with the Ticket and Cash Section. It was returned to him the next day, after the Ticket Clerk had noted down the numbers of the tickets issued. This procedure sometimes resulted in some tickets being found missing and the conductor had to pay for them. There was no way of finding out how and where the tickets had disappeared! Under the new procedure a conductor keeps his box in the steel locker allotted to him. He takes it out when he goes on duty and refills it with the blocks of tickets he needs at the Ticket and Cash Section. So tickets are not found missing any more and there is no need now for a category of employees called box-fillers. Another saving was effected : one box less was needed per conductor. The new system was first tried out at the Colaba Depot and it was then extended to the other depots.

LOST PROPERTY DEPARTMENT

Leaving one's articles behind in the bus is not a new thing to most of us. We do it quite often. But not all of us know, however, what happens to the articles we have thus left in the buses. We give them up for lost, but if we optimistically visit the Lost Property Department, we may be able to retrieve them in many cases.

When a bus reaches its destination, passengers get out; so does the driver. But the conductor is expected to go round the vehicle before leaving it. He does it very carefully looking at each seat, and under the seats, and more often than not he spots something. The conductor deposits his 'finds' with the starter, who enters the items in his register.

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Every morning the Lost Property Department van from the head office visits the depot and takes charge of the articles thus lodged at the depot. Details such as on which route, when, where and by which conductor the articles were found, as well as a description of the articles, are noted down by the men of the Lost Property Department.

The Lost Property Department's office, where the articles collected by the various depots are finally brought together looks like a Departmental Store. The variety is most impressive : saris of all kinds and hues, cameras, goggles, fountain pens, bangles, typewriters, shoes, toys, books, watches, umbrellas, rain-coats, blank-cheque-books, bank-books and even diamonds.

With all this variety in the articles thus lost and found, there is a striking variety of the persons who lose them. There are those who come to claim a lost article promptly; there are others who forget that they have forgotten an article. There are still others who forget where they forgot the article and there are also those who remember that they left an article behind in a certain bus but do not know where to inquire about it.

Under the Maharashtra Motor Vehicles Rules 1989, every conductor is required to check his vehicle at the end of a trip and hand over to a responsible official whatever he has found in it. He is rewarded by the Undertaking for this honest action. For every article thus found a registration fee of Rs.5/- is charged. In the year 1995-96, the total number of articles found in buses was 9247; out of which 2449 articles were claimed and 6798 articles were unclaimed. Likewise in the same year the total cash of Rs.4,36,128.88 was found as 'Lost Property' out of which Rs.2,29,314.56 was claimed and an amount of Rs.2,06,814.32 remained unclaimed which is credited to Staff Benefit Fund.

CHAPTER 10

TRANSPORTATION ENGINEERING

The origins of the Kingsway Workshop go back to the Colaba Causeway Workshop of the Bombay Tramways Company as it then was. The workshop was opened there in 1886. People living in the surrounding area complained of nuisance from the workshop in 1910 and the Company (by now the B.E.S.T. Company) decided to shift the workshop to a convenient spot in the north of the city. Accordingly, in June 1915 land was acquired from the Improvement Trust at Kingsway, between Dadar and Matunga, on a 999-year lease. A workshop was soon erected on the plot.

The workshop undertook the repairs of both the coachwork and the electrical machinery of trams. It was equipped with all the necessary machines, such as a heavy-duty shaping machine, a tyre-cutting lathe, a tyre-heating furnace, an armature-winding plant, a coil-testing machine, etc. The work was carried out in sections such as the truck shop, the paint shop, the machine shop, etc.

When bus services were introduced in 1926, a bus workshop was opened in Colaba. Transportation engineering was now divided into separate sections for trams and buses. When the Colaba workshop began to prove inadequate to the needs of buses, another bus workshop was opened at Dadar

TRANSPORTATION ENGINEERING

near the tram workshop. This workshop had various sections for repairs to chassis (base-frame, engine and wheels), body and ancillaries, and seats and windows; a paint shop, a machine shop, an electrical section, a unit section, calibration and lubrication, a tyre section, etc.

After 1947, the workshop space was found to be inadequate with the expansion of the bus service. In 1950, further land was acquired next to the Kingsway Tram Workshop and the new Workshop was planned to maintain a fleet of 600 buses.

When trams were abolished in 1964, the tram sheds in the Kingsway Workshop were taken over for the expansion of the Bus Workshop. This was a useful temporary expedient; but these sheds had been specially designed for trams and did not permit a scientifically planned expansion of the Bus Workshop.

UNIFICATION OF TRAM AND BUS WORKSHOPS

When the trams were abolished, the tram and bus workshops were merged. The pits in the tram sheds (for under-carriage repairs) were filled in and levelled and the space was allotted to bus body repair sections. Machines no longer useful were sold. Some of the tram workshop staff were redundant under the new arrangement and under the regulations, could have been retrenched on payment of compensation. They were, however, suitably re-trained and absorbed in the bus workshop.

The rearrangements at unification were carried out as methodically as possible. The space needed for each section was calculated as for an assumed fleet of 1500 buses. The layout of the Shops was arranged, so as to avoid unnecessary movement of materials. The work of shifting of machinery and

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equipment and merging of shops was carried out without affecting the daily production.

At the time the Municipality took over the B.E.S.T. Company double deckers buse constituted 65 to 70 per cent of the fleet; the rest were single deckers. Economically, this was a sound proportion.

The chassis (and spare parts of the chassis) of D.D. buses were imported from England. However, in 1961, the Government of India laid down restrictions on the import of D.D. chassis, as it was proposed to manufacture the chassis in India. The import of spare parts was also severely restricted.

The Undertaking's buses were in a grave state at this period. Most were old. New chassis were not available. The fleet utilization was 81 per cent, i.e. out of every 100 vehicles only 81 were available for actual service; the other 19 were in the workshop awaiting repairs. Shortage of spares delayed their repair. In the circumstances, two alternatives were open : one, to purchase the uneconomic single-deckers, for they were being manufactured in India; the other, to strive for self-sufficiency by repairing the existing double-deckers with maximum efficiency and putting them on the road again.

Transportation Engineering accepted the challenge and started methodical work. About 50 vehicles in the available fleet were temporarily withdrawn from service and brought into the workshop. their units were dismantled and the parts were thoroughly inspected for the degree of wear and tear. Then they were sorted into reparable and condemned.

Inquiries were set on foot about the possibilities of having replacements for the condemned parts manufactured in the

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country. Indian manufacturers were induced to undertake the manufacture of parts which were needed on a large scale, such as pistons, piston rings, valve guides, rocker shafts, main and big-end bearings for Gardener engines, etc.

The same solution could not be adopted for parts which were not needed in large quantities. Attempts were made to repair them in the workshop. With processes such as welding and metal-spraying, sleeving, metal-stitching, such parts as valves, crank-shafts, master-cylinders, wheel-cylinders, tappets, flywheel housings, cam-shafts, etc., were given a new lease of life.

Until the B.E.S.T. Company was taken over by the Municipality, only the Colaba Depot was available for the maintenance of buses and minor repairs. As the fleet grew, the need for more depots was felt. In 1961 the fleet comprised 1045 buses in all. Six new depots were constructed for their maintenance. The Wadala Depot was equipped for the maintenance of 300 buses. At this time it was the largest depot in Asia. After this, taking long maintenance experience into account, the authorities decided that no depot should be called on to look after more than 125 to 150 buses. Accordingly, small depots were built at convenient spots in the city and its suburbs.

Standardization of Bus Construction : From an engineering point of view, a bus has two main components : the body or coachwork and the chassis (together with the engine and the transmission) on which the body is built. Both were standardized as far as possible.

In the period up to 1960 different manufacturers built varying bus-bodies. Some bus-bodies were of composite type and some were built of steel and aluminium. These variations proved troublesome and costly in maintenance. A decision to

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have complete metal bodies was taken and brought into effect from 1962. Another early step was to standardize the various fitments on bus-bodies.

In 1967, with a view to standardizing bus construction, buses were classified into three types. Type A comprised single-deckers, steel-built throughout. Type B comprised double-deckers, also steel-built throughout. Type C included both single-deckers and double-deckers and used both steel and aluminium in their construction.

Manufacturers build these types of buses in conformity with special designs prepared by the Transportation Engineering Department. The demands of city transport are different in some respects from those of other transport. In the city gear-changes are far more frequent and brakes must be extremely efficient. A large diesel tank is required; medium horse-power is adequate for the engine. Transportation Engineering takes all these requirements into account in designing a chassis to suit the special needs of city traffic. Efforts are being made to improve the bus-bodies and make them better looking.

Unit Replacement : It used to be a practice to maintain a record of each vehicle individually, for maintenance purposes. Now a bus is assembled out of important units such as the engine, the gear-box, differential, etc. Maintenance of the bus actually means the maintenance of these units. In the light of previous experience, Transportation Engineering decided that it was a record of each unit that was really needed for good maintenance. This was put into effect immediately. Now it is not the bus that is considered in the workshop : its place has been taken by the units mentioned above. It is the unit that is serviced. Sets of unit-spares are maintained for immediate replacement. When a vehicle is taken in the depot for repairs,

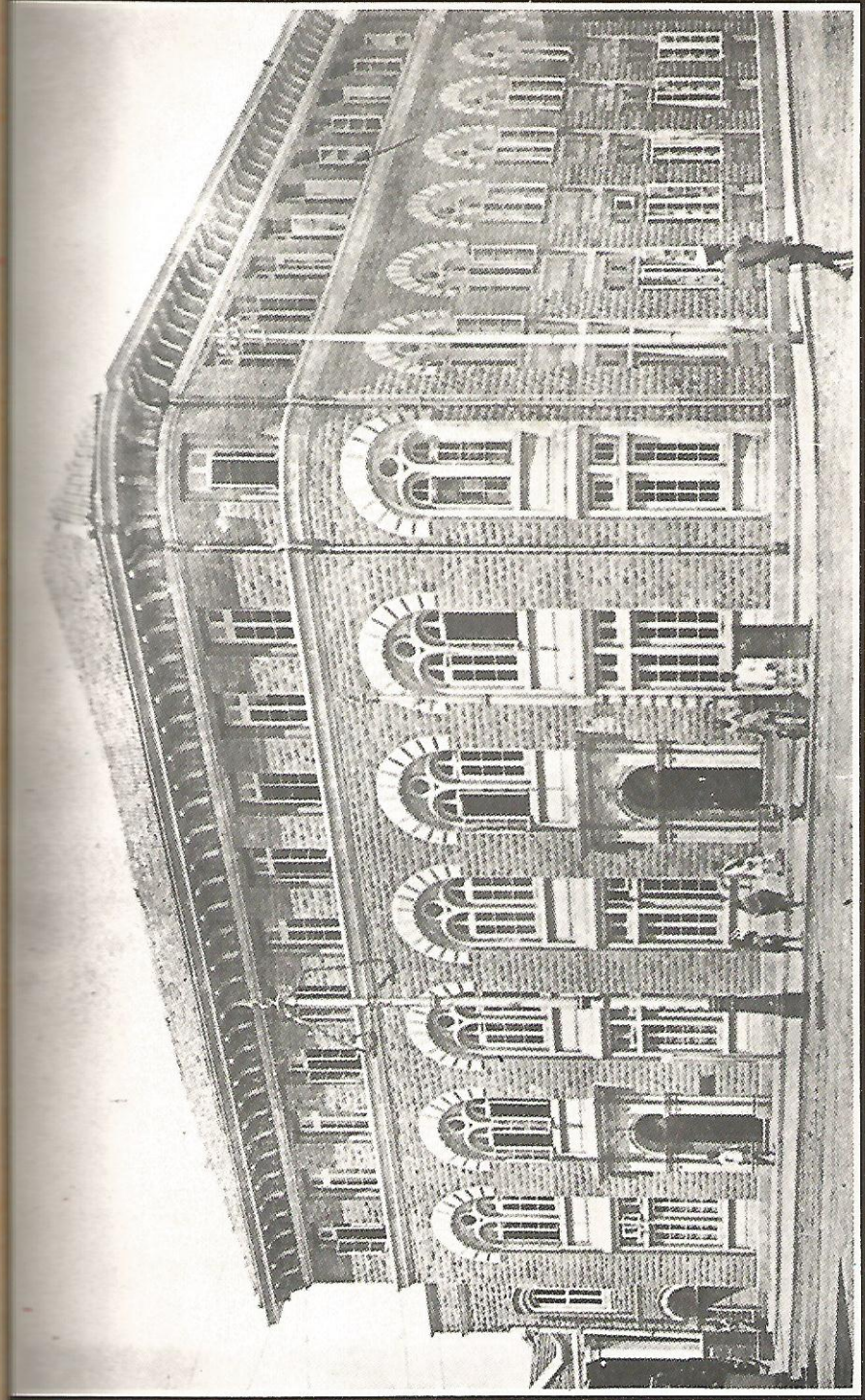
TRANSPORTATION ENGINEERING

any defective unit is removed and replaced by another unit. This maintenance technique is known as the Unit Replacement System. It has greatly reduced the time needed for repairs to buses

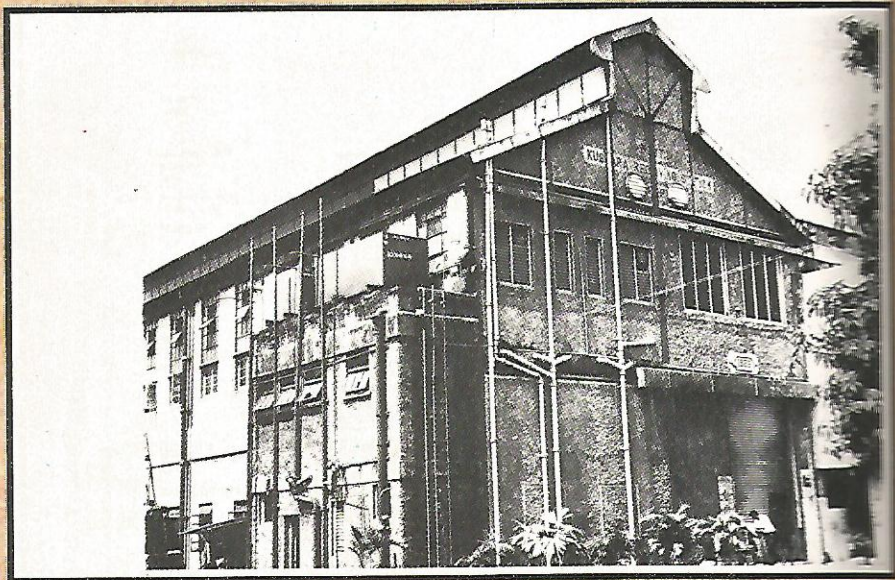
Depots are kept supplied with sets of various units. This makes it possible to carry out most of the repair-work within the depot. At first sets were gathered by removing units in good order from vehicles which as a whole were not serviceable. When new chassis are purchased, however, spare units are secured from the manufacturers. These generally include engines, gear-boxes, front axles, rear axles, steering gear, aircompressors, starters, dynamos, and so on.

Preventive Maintenance : The care and servicing given to a bus to keep it in good order and avoid faults developing, is known as preventive maintenance. It consists mainly in inspection of various parts of a bus — irrespective of the development of faults — at fixed intervals. Till 1967, the intervals were fixed in terms of days. But in the same period suburban buses run more kilometres than city buses. It was found, therefore, that it would be more scientific to fix intervals for preventive maintenance in terms of distance run, rather than in terms of time. From 1967, instead of time-schedule a kilage-run was adopted to carry out the various stages of preventive maintenance. This made it possible to give equal servicing to all vehicles.

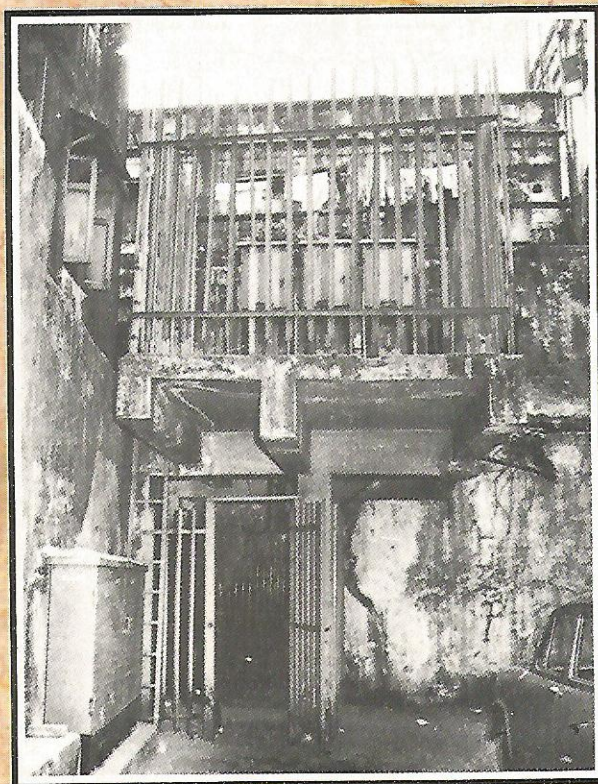
Control of material and spare units became necessary as depots multiplied. The Material Control Section was created in 1965 for the purpose. Defective parts are turned over to the Material Control Section from each depot, and these were replaced by "O.K. Units" supplied by the Section to the depot. The depot's stock of spare-units is, thus, maintained all the time.



Electric House



Kassara Receiving Station (1925)



Two Tier Substation
A solution to space
problem.

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Instrument Section : This Section was opened in 1959. It looks after the repairs and maintenance of the instrument panels, speedometers, etc., fitted in buses. When imports were freely permitted, it was concerned only with replacing damaged instruments with good ones. After imports were restricted from 1967 onwards, gradually Indian-made instruments were substituted.

Reclamation Store : It is more economic to undertake repairs to damaged parts in accumulated batches rather than singly. For this purpose, the Reclamation Store acts as a link between the depot and the machine shop. Defective and worn-out parts come from a depot first to the Store. The Store issues serviceable parts to the depot in exchange. The worn-out parts are accumulated with the Store until there are enough to form a batch for repairs in the machine shop.

Plant and Maintenance Section : This Section was opened in 1963. The machinery and equipment at the various depots, which are standardized, include air-compressors, washing machines, greasing machines, hydraulic jacks, air-pressure gauges, tachometers, etc. The Plant and Maintenance Section is responsible for maintaining all these in good order.

Renewal of Oil : When a bus has run 5,000 km, its engine oil needs to be changed. The used oil is generally discarded as useless. As a measure of economy, Transportation Engineering formulated a process to make this oil usable again. Such reclamation of oil was carried out till 1971. However since then the composition of new engine oil was changed by the oil manufactures. As a result the reclamation process became inapplicable. A new process was devised, and the equipment needed for was manufactured in the bus workshop.

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Technical Training for Staff : Facilities for technical training were nominal, when the B.E.S.T. Company was taken over by the Municipality. Apprentices were accepted for training, but they were left to themselves to acquire knowledge while they worked with the staff on the shop-floor. Proficiency in the trade-skills demands theoretical as well as practical knowledge.

To provide a better level of training to apprentices and to the regular staff, the Undertaking started a Training Establishment in 1963. Well-trained instructors were appointed. Under this scheme practical demonstration is combined with theoretical teaching. There are three-year courses to train apprentices into various trades such as, motor mechanics, fitters, turners, blacksmiths, sheet-metal workers, etc., all of which are required in the workshop. Training facilities are provided also for the staff, viz. motor-vehicle fitters, wiremen, greasers and vulcanizers already in the Undertaking's service.

Supervisory Training : Special training courses are devised to make the supervisory staff better acquainted with relevant technology and in general to improve their efficiency as supervisors. The courses include lectures on technical subjects and on supervision techniques, besides case studies.

Training in job methods, job instruction and management is provided in programmes devised for the officers and the supervisory staff. The training covers modern management methods, productivity-improvement techniques and statistical analysis.

For demonstrations in the course of training for the apprentices and the staff the necessary tools, plant and equipment, including machine tools, are provided at the training centre. To give students a thorough understanding of the

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mechanisms involved cut-out sections and models of machines have been prepared. The machines include bus engines, fluid flywheels, gear-boxes, etc. Tape-recorders and film-projectors are used at the training centre.

Work Study : When any establishment works with optimum efficiency, an important enabling factor is the mutual relation of actual productivity and staff emoluments, besides good management, technical skill and modernity of techniques. The economic health of a business depends more on how much an employee has actually contributed to production than on how many hours he has been at work. This is why modern management tries to establish a definite relationship between the worker's wages and his actual productivity. It is not easy to establish such a relationship, for it means certain restrictions for the workers and the co-operation of workers and their unions is not easy to obtain in such schemes. And yet, if the relationship can be established realistically, more productivity can be obtained, which also gives higher earnings for the worker. When workers and their unions are reasonable, they do co-operate with the management.

The concept had taken root in Indian industrial life some time back. As far as transport organizations are concerned, the B.E.S.T. Undertaking is the first in India to put such a scheme into operation. Such a scheme requires the determination of what should be a base-line of productivity in any particular "trade". It is in fixing this reference level that the co-operation of workers and their unions is needed. The analysis that goes into such determination is technically known as a "work study".

STRESS ON MODERNISATION

From the beginning, the BEST has been in the top

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position in the matter of modernization and efficiency. We have traced so far how it had to keep in step with the moving times in achieving this distinction. A special emphasis in its effort was on modernization.

Besides this, in the day-to-day working, several ad hoc steps are taken. Cleanliness, safety, are matters in which efficiency calls for the employees' active co-operation. In order to secure that, the General Manager himself puts out guidance bulletins through the medium of the depots and buses.

The needs of urban transport are different from those of other transport systems in some matters. In urban transport, the gears have to be changed constantly. The brakes have to be in perfect working order. The diesel tank has to be large. The horse-power of the engine has to be medium. In view of these requirements, the Department has designed the chassis of its vehicles. And it is always trying to improve the bus-bodies and make them more attractive.

This department of the BEST is ahead of any other urban transport system in the country. Its workshop was the first to achieve standardization of the various components in the body of the bus and in unit replacement and work-study. Other transport organizations have since followed it.

The Transportation Engineering department employs a two-tier system for looking after the buses. The two tier of operations are carried out at the bus depot and the Central workshop. Maintenance of the buses, fitness certification, and minor repairs are the responsibility of the depot, and the overhauling jobs – like those of the chassis and engine, as well as unit overhauling are carried out by the Central workshop. It is because all these are performed efficiently every day that the

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Undertaking is able to keep 98.5 per cent of its fleet of buses running from its 25 depots. Before making them available to the transport department, this department has to take every care of the cleanliness, proper attention and satisfactory condition of the vehicles. All this keeps the department busy for twenty-four hours a day. In inspecting and checking a vehicle to ensure that it is in a satisfactory condition and is fully roadworthy and that every day and every night, the following receive particular attention :

(1) The fuel in the vehicle; (2) the water in the radiator; (3) topping of engine oil. (4) Checking the air pressure in the tyres; (5) the cleaning up and washing, both the inside and the outside; (6) correct the defects recorded on the bus-card by the driver after arriving at the depot; (7) maintenance and inspection; (8) Unit replacement; and (9) running/breakdown repairing.

JOBS IN CENTRAL WORKSHOP

The central workshop of the Undertaking is at Dadar, and it occupies an area of 49,000 sq.metres. Units going out of working order in the depots are repaired in the Central workshop which, mainly does the following jobs : overhauling of units, repairing buses to remove routine defects, repairing buses damaged in accidents, repairing the chassis, changing the engine, painting buses, repairing tyres.

In order to improve the efficiency of the various departments, the work they have to perform is scrutinised. To tone up their working, new methods are devised and efficiency augmented. In order to decentralize the work of the central workshop and to make buses available from the depots on time, some jobs of the central workshop are distributed among the

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depots. As, for example : (1) Zonal body repairing; (2) engine replacement; (3) rear axle replacement (4) painting single decker buses; (5) starter repairs, clutch plate etc. (6) overhauling of spring slack adjuster, breakliners/radiators; (7) repairing/assembling of road-spring; (8) repairing the seats in buses.

The Transportation Engineering department is self-sufficient in doing all the jobs that fall under this category. Besides, with a view to increasing productivity and saving on labour, the department has fabricated the following machines in the Central workshop at Dadar. (1) Automatic bus washing machines; (2) Machines to clean chassis; (3) Machines to clean wheels and (4) Tyre-loading machine

QUALITY CONTROL

The department is running a quality control unit to assess quality and to improve the level of work. Under this system, a stage-wise supervision is done. The section has even a small laboratory for testing the components assembled and to test their quality. The components are submitted to chemical tests in this laboratory. For example, tests are carried out to check the quality on oil lubrication, rexine, the paint used on the buses and other items of the kind.

SAVING ON DIESEL

This unit makes every effort to save on diesel. Every drop of petrol and diesel being valuable, how to use them watchfully and effect a saving in fuel consumption has drawn the special efforts of the unit. To stop the waste and leakage of fuel diesel pumps. Nozzles that shut automatically, budget locks and spring-loaded caps have been in use.

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Besides this, bus drivers are given training in how to save fuel, using a special vehicle for training and through audio and video-cassettes. For this the training vehicle moves from depot to depot. And thus all the bus-drivers are able to realize the importance of fuel-saving.

SCRAPPING POLICY

It was once a policy of the Undertaking to scrap a bus, whether single-decker or double-decker, after it had completed a run of seven and half lakh kilometres and single-decker after seven years running and a double-decker after twelve years running. This meant that new buses had to be bought to replace them. But with the very modern improvements in the chassis of buses their life has increased by about five years.

BUILDING MIDI-BUSES

There are areas where the roads are narrow and there is not enough room for a regular bus to turn. In such areas midi-buses are used. Building such a bus calls for real skill. Some 'Viking' vehicles that had run their life-span as well as some 'Cash Vans' were transformed into midi buses. With changes in the structure and the arrangement these midi-buses have become attractive.

TECHNICAL TRAINING CENTRE

Trained personnel are an important factor in any efficient organization. In fact it is its backbone. With this in view and to improve the skills of the workers, the Undertaking established its Technical Training Centre in 1963. As a matter of fact it was under the Apprentices Act of 1961 that the scheme was first started. The Centre imparts theoretical as well as practical training. Under the head 'apprentice trade' come trades like

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vehicle fitter, bench and body fitter, tinsmith, turner, welder, blacksmith, cable jointer. The trainees are sent up for the N.C.T.V.T. examinations.

Under the Revised Apprentice Act of 1973, training is also given to diploma holders in engineering. And also to newly recruited probationary engineers. For the workers too there are programmes like 'refresher courses', advanced supervisory work, visits to industrial establishments, safety methods and diesel saving in a running vehicle. A notable matter, with regard to the technical training centre is that several candidates trained as 'apprentices' in the centre have been awarded gold, silver and bronze medals in their particular trade. And these medals were at the national as well as the local level.

BUS CONTROL CENTRE

This Centre is regarded as the most important centre in the transport department. If a bus suddenly breaks down during its scheduled run, or if any major fault develops in the vehicle, a message about the 'sick' vehicle is immediately sent to the Bus Control Centre and prompt action is taken to repair it on the spot. To enable the centre to carry out its work effectively, as many as 33 vehicles are made available to it. These include, among others, lorries and wrecker.

The Bus Control Centre is equipped with a wireless/VH set, and a telephone, to enable it to see that buses are running on their routes and to correct the faults detected during a run.

CHAPTER 11

CIVIL ENGINEERING DEPARTMENT

The earliest information we have about this branch goes back to 1920, when the Drawing Office and the Building Department formed a single department. Both this department and the Transportation branch were under the supervision of an officer designated as Deputy Engineer (Tramways). As the Building Department expanded it was constituted as a separate Department under the Planning Engineer. In 1938 the main office of the new department was moved to the first floor of BEST House.

At this time, plans for major work were drawn up by outside consulting engineers. The Building Department supervised the execution of the work under the general guidance of the consulting engineers. The Planning Engineer was responsible for the maintenance of records of the electric supply cable network as well as for the Building Department. There was no separate Drawing Office for this work. This distribution of functions continued till 1947.

After the takeover in 1947, the first major building works undertaken in 1948 were the Apollo and Grant Road receiving stations and the Bombay Central Depot. These buildings were completed in 1950. The planning and construction of these jobs was carried out entirely by the Building Department. About the

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same period, the section responsible for the cable-network records was transferred from this department to the Technical Engineer.

From this time onward, the responsibilities of the Building Department grew. Work on receiving stations, bus depots, bus stations and staff housing was undertaken on a large scale. With this expansion, changes became necessary in the structure of the Building Department. In 1959 it was organized into two parts northern and southern divisions

In 1962 the Undertaking decided to start a trolley bus service along a 4.7 km route from Mazgaon to August Kranti Maidan. The complicated overhead network required for this was set up by this Department with the help from Czech engineers. The trolley bus service could be inaugurated on 11th June 1962, the construction having been completed in the minimum time possible.

The head of this branch was the Engineer-in-Chief (Civil). Under him were various divisions, viz., the Drawing Office, the Estate Section, the Building Departments (South and North), the Sub-station Section and the Shelters Section. The Permanent Way Section was closed down in 1964 when the trams were discontinued and the Overhead Department was closed down in 1971 when the trolley bus service was withdrawn.

This department carries out planning and execution of all civil engineering jobs. The complex civil engineering work on receiving stations is entirely its responsibility. Each new bus depot is an improvement over earlier ones in construction and new facilities are provided as per modern requirements.

A standard design was prepared soon after 1947 for staff

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housing. It proved effective in providing both comfort and low cost. Each unit includes a kitchen, a living room, a balcony and a sanitary block. The Civil Engineering branch initiated the first hire-purchase housing scheme in the Undertaking. In 1953 the Transport House was built.

The Civil Engineering Branch of the Undertaking has to perform varieties of jobs, from the planning, designing, tendering, construction of Bus Depots to that of Bus Shelters, Relief Shelters, Receiving Stations, Distribution Substations, Housing Complex for Staff and Officers Quarters etc.

To set up a Bus Depot means spending as much as about Rs.7.5 crores for construction of various structures to facilitate and accomodate Transportation Engineering Department, Traffic Department and other concerned related departments of the Undertaking. Every attention is paid to Building Complex with all conveniences and modern requirements.

In the process based on the past experience over the years, the Department has adopted various new techniques, improved designs and land specifications for providing better services and amenities.

Due to acute shortage of accommodation, the Undertaking gave priority to provide accomodation for its workers. Wherever a depot or a receiving station comes up the Undertaking provides accomodation for the workers, as well as for the officers working there.

The Civil Engineering Department's offices are generally known as "Building Department". The departmental offices at Wadala, Mumbai Central and Oshiwara exercise control on working of this department. The department has a 'Building

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Department Sub-station' at Kussara, from where functions like planning, drawings, tenders for work are carried out.

PROGRESS OF WORK AND QUALITATIVE IMPROVEMENTS

1. "Yard Lighting" in the precincts of the depot : Before 1970 the lighting in the precincts of the depot was provided by suspending lamps from catenary wires. High Mast Lighting, a modern system, was introduced for the first time in 1980 in Dharavi Depot. The main advantage of this system is that it gives uniform illumination for better visibility to workers at night. This not only makes it convenient for night shift workers, but also for drivers to turnout or park the vehicle in the yard whenever they need to. 23 of the 25 depots of the Undertaking have now this "Hight-Mast Lighting System".

OTHER IMPROVEMENTS

Improvement in the docking pit : The old type docking pit in a conventional depot i.e. earthen docking pit, was in use till 1967. In that year the Undertaking built a docking pit of the modern type "the basement pit" in Marol depot. In "International Transportation Organisation" the BEST was the first to build a basement pit. The "basement pits" have been found to be most advantageous as they provide good ventilation, lighting to the workers and make larger working space available with easy access to carry out routine repairs and maintenance. In England such a pit was provided as late as 1973 by the London Transport. Out of 25 depots of the Undertaking, 19 depots have "basement pits". Other transport organisations and even the Central Institute of Road Transport have expressed appreciation of the Undertaking's "basement pits".

Improvement in the flooring of the docking pit sheds :

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Till 1991 the docking pit used to be of cement concrete finish. In the year 1991 "cast iron tiles" were substituted in place of cement concrete flooring and first introduced in Malwani Depot. These tiles last longer and they do not need constant attention for maintenance. 23 depots now have such tile flooring and remaining two depots would also be provided similar arrangement.

Improvements in the structure/design of the docking pit shades : When the Magathane bus depot was built in 1992, instead of the old-type steel structure, R.C. framed structure was built. And in the structure and building of the docking pit 'R.C. Beam flat Slabs' were provided.

Improvements in the Building work in the Worker's Colonies : In the housing colonies built before 1976, each floor had a common passage. As a result, they resembled chawls. And the common passage was not cleaned up properly. Taking this into account, the Civil Engineering department changed the designs of the colonies in 1976 and flats came up. This was first done in the Ghatkopar Colony. Workers welcomed the new pattern, because it afforded greater privacy and safety and meant less trouble by way of cleanliness of longer passages.

Substation of 110 KV : When in 1994, the Undertaking built a 110 KV sub-station at Backbay, it achieved a successful stage in the work of its planning and design section. The department has successfully completed this building work which is very complicated and is closely linked with the new advances in technology.

Commercial use of the Undertaking's Properties : With a view to letting the Undertaking's properties for suitable use and thus deriving regular income from them, the Undertaking

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decided to commercialise some of its properties. These were given on lease to financial institutions and commercial establishments. For example, the ground floor of the Officers' quarters at Dindoshi is given on lease to a bank. Similarly, some other Officers' quarters, the bus stations at Andheri and Walkeshwar, the space below the bus depot at Transport House have been given on a commercial basis.

Playing Adviser to Transport Institutions and Organizations: Advice and guidance were given, to the CIDCO in putting up their bus depot at Turbhe. In 1994-95, the Central Institute of Road Transport put up its 'Higher Test Laboratory' at Bhosri, near Pune under the guidance of the Department. The Library and Computer Building of the C.I.R.T. came up in 1993-94. The "Electrification Lay-Out" of the building was also done by the department.

CHAPTER 12

ELECTRIC SUPPLY

It has been already indicated that the erstwhile Bombay Electric Supply & Tramways Company started supplying electricity to the city in 1905. Until 1926, the Company had been generating its own electricity for distribution to its consumers. Later, the Tata Electric Companies started supplying electricity to the BEST.

The Tata Electric Companies (The Andhra Valley Power Supply Co., The Tata Power Supply Co., The Tata Hydroelectric-power Supply Co.) generated electricity from their reservoirs at Bhira, Bhivpuri and Khopoli in the Western Ghats. A major portion of it was transmitted through 110,000 Volts overhead lines to their Receiving Stations at Dharavi and Parel. In these Receiving Stations the voltage used to be transformed to 22,000 and 6,600 Volts for ease of distribution. The Tata Electric Companies provided, through their cables, electricity at requisite voltage to the industries and mills, the Railways, the Bombay Suburban Electric Supply Company and the BEST.

In 1947, when the Company was taken over by the Municipal Corporation, the Undertaking was buying electricity from Tatas at nine receiving points known as : Kussara, Mahim, Kingsway, Jamnadas, Suparibag, Lalbaug, Esplanade, Palton and Backbay. At all these points, except Kussara, Kingsway and Mahim, the supply was received at 6,600 Volts. The supply was

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received at 22,000 Volts and transformed through Tatas' transformers to 5,500 Volts at Kussara and to 6,600 Volts at Kingsway and Mahim. From these receiving points the cable network carried power to 247 Substations situated in different areas of the city. With the help of transformers at these substations, the voltage was further transformed to 400/230 Volts, suitable for use in the factory, shop and home. It was made available to the consumers through a low voltage distribution network and service cables to individual buildings. The major portion of electricity distributed was at Alternating Current (A.C.). But, in some areas of South Bombay, particularly Fort, Kalbadevi and Girgaum, Direct Current (D.C.) was supplied at a voltage of 460/230 Volts. To convert it into D.C., Rotary Converters were operated at Pathakwadi, Telwadi, Apollo and Palton Road Substations and Mercury Arc Rectifiers were used at Phirozshah Mehta Road substation.

PROGRESS SINCE MUNICIPALISATION

Soon after the Corporation took over the Company, India got its freedom. This meant a reconsideration of the major objectives of the Undertaking and a reorientation of its outlook in the context of the changing political situation. The Second World War had also given a new impetus to the utilisation of electricity.

The Undertaking not only continued many of the healthy traditions set by the Company but also improved its methods of working. The Undertaking is now well known in India for its service of providing electricity with minimum interruptions and at proper voltage, at the minimum cost. It is also known for the quick restoration of supply in the event of any faults developing in the distribution system.



**Automatic Bus
Washing Machines.**

An Accident Prevention Training Vehicle.





A Double Decker with Pneumatic Doors.

National Productivity Award 1991-92.



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In the fifty years since municipalisation, the maximum demand on the system has risen from 53,000 kilowatts to 6,33,000 kilowatts; the number of substations from 247 to about 1733; the length of underground cables from 1,263 kilometres to 6,966 kilometres; the number of consumers from 1,08,000 to 7,98,152; the number of street lamps from 2,215 to 33,534.

Refrigerators, air-conditioners, geysers, television sets and other electrical appliances are now being extensively used in homes. The use of air-conditioning and better standards of lighting in the office is also becoming increasingly popular. In the factories and entertainment centres the use of electricity is on the increase. Skyscrapers have come into being and so have hutments. All this expansion has necessitated the use of modern and sophisticated equipment. The responsibilities of the electric supply branch of the Undertaking have become correspondingly greater and more complex.

ELECTRIC SUPPLY SYSTEM

In the days of the BEST Company some parts of the network were supplied at 5,500 Volts and in some other areas the distribution voltage was 6,600 Volts. This non-uniformity led to considerable loss of flexibility. More important, it was realised that at the higher voltage of 6,600 voltage, 20 per cent more electricity could be conveyed and this without major replacement of equipment. So, after elaborate planning, in 1954, the 5,500 Volts system was changed over to 6,600 Volts. This major change was carried out with no interruptions in the supply to consumers.

In 1949 the Undertaking established its first 22000 volts receiving station at Grant Road. This was followed by 22,000 volts receiving station at Apollo. In 1955, two more receiving

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stations at Kingsway and Kssara were changed over 22,000 volts and all 6600 volts metering points were eliminated. As on today BEST has 35 receiving stations including two 110 KV receiving stations. The demands on the system were growing and further changes were necessary. Under an Agreement with Tatas in 1956, they established a third Receiving Station at Camac Bunder. This new station and the existing 2 stations at Parel and Dharavi, now became the Undertaking's only points of supply. The supply was now taken at these 3 points and metered at 22,000 Volts. The Undertaking laid 22 KV cables from these points to its own receiving stations, the voltage was stepped down from 22,000 Volts to 6,600 Volts through the Undertaking's own transformers for feeding into its 6,600 Volts system. The elimination of the old 6,600 Volts Receiving Stations was spread over a period of years. It was changed over to 22,000 Volts as and when new Receiving Stations were built by the B.E.S.T. Thus in 1956, the Worli Receiving Station was established at Fergusson Road. This was followed by many Receiving Stations at various places.

To supply electricity at a steady voltage is an important responsibility of the Supply Branch. There are considerable variations in the voltage received from Tatas at the different Receiving Stations. To compensate for these fluctuations, the Undertaking installed, on its 22 KV transformers, equipment known as "On load tap changers". This device absorbs the fluctuations and enables supply of a steady voltage to consumers.

D.C. TO A.C. CONVERSION

It has already been mentioned that Direct Current electricity was supplied to the Girgaum, Kalbadevi and Fort

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areas in South Bombay. An appreciable portion of the electricity distributed in 1947 was accounted for by this. An Alternating Current supply had many advantages over supply at Direct Current. It is more convenient and cheaper to transmit electricity at Alternative Current through smaller cables at a higher voltage than through larger cables at a lower voltage.

In 1952, there were 25,000 consumers using D.C. A change-over to A.C. meant changing their D.C. appliances where rotation was involved : appliances such as motors, fans, lifts, refrigerators. This presented a major problem. It required a considerable amount of special effort to persuade the D.C. consumers. As an inducement, they were offered partial compensation towards the cost of changing their appliances. The total compensation paid under the scheme was Rs.50 lakhs. But the expenditure was well worthwhile, as it enabled elimination of costly and wasteful equipment used for conversion from A.C. to D.C. As a result of persistent efforts, all the 25,000 consumers, except a hard core of 17, had changed over to A.C., by March 1972.

STREET LIGHTING

The Municipal Corporation had a contract with the Bombay Gas Company for gas lamps for street lighting. This contract was to expire in 1962. Until then, there were about 7500 electric lamps and 7000 gas lamps on the roads of Mumbai. The Municipal Corporation then decided to change over completely to electric street lamps and simultaneously to improve the level of illumination. A crash programme was taken in hand by the B.E.S.T. in 1966. When all the gas street lamps had been converted into electric lamps in July 1968, the number of electric street lamps had increased from 7500 to 19000. On 1st July 1968, Bombay wished a sentimental farewell

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to gas lamps when the Mayor switched on the "Queen's New Necklace" on Marine Drive. This was a string of the latest type of high-power, colour-corrected, mercury vapour lamps. Marine Drive is reputed to be the best-lit road in India and one of the best-lit in the world. It is one of the spots a visitor to Mumbai does not like to miss. Now with the introduction of sodium vapour lamps, it is called as 'Golden Necklace'.

CONTROL OF STREET LIGHTING

Initially, the Undertaking used to control each lamp separately by a switch, by a man going on his rounds every evening and morning to switch them on and off. This system had several disadvantages, especially in times of emergency. To provide central control points, it would be necessary to lay hundreds of kilometre of cables at enormous cost and dig up Mumbai's roads to lay them. Other methods had therefore to be devised. One method was to install time-switches which automatically control the street lights, depending on the time of sunrise and sunset, but the use of this device is also limited. Another method tried is that which uses photo-electric switches. These contain devices which are sensitive to light. When the natural light on the road falls to a particular level, this device actuates a switch which puts on the street lamp. When the natural light improves to a particular level, the device switches off the lamp.

RIPPLE CONTROL EQUIPMENT

A ripple control scheme for controlling street lamps from one or two central points in the city was then considered. The ripple control equipment is installed at predetermined places in the electric supply network. The equipment sends out high frequency signals over the existing underground cables. These

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signals are picked up by a special device installed on each lamp or a group of lamps. Thus by pressing a button at central control points one can either switch off or switch on all the street lights in the city. But this scheme was costly and involved import of much of the equipment; hence it was decided not to consider the scheme.

At present there are over 33,000 street lighting poles and most of them are on automatic control. The automatic control of street lighting poles has got two versions. Out of 93 Street Lighting Poles used for remote control for street light poles, 53 are provided with masters/slaves arrangement for efficient controlling. Remaining SLP's are provided with time switch which will switch on/off street lights at the specified timing.

In future, we are exploring the concept of pagers system for quick and efficient operation of street light poles throughout Mumbai.

Sodium-vapour lamps made an appearance in the commercial areas of Mumbai in 1980. To save on fuel and, as an alternative, considering the rising cost of oil, mercury-vapour lamps were chosen for street-lighting. Fluorescent mercury-vapour lights went up in large numbers in 1982. In 1990 came "Energy Efficient" lamps and "Energy Fluorescent" lamps followed them in 1993.

And the Electricity department does not work the magic only on the roads of Mumbai; Electricity is provided by the department for various public functions and religious celebrations. As many as twenty-five years ago, the department had made special arrangements for lighting at Girgaum Chowpatty, on the occasion of the immersion of the Ganesh idols. During the years the arrangements have kept improving.

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And now the devotees of Lord Ganesh venturing some distance into the sea are helped by strong shafts of light.

REMOTE CONTROL OF RECEIVING STATIONS

Prior to the success in implementing effective remote control of street lights, the Undertaking had started controlling Receiving Stations from two control points. There are now 35 receiving stations in the Undertaking where the voltage is stepped down from 110 KV to 11 KV, 33 KV to 11 KV, 22 KV to 11 KV and 22 KV to 6.6 KV.

On an average, each receiving station supplies power to 50 substations, feeding 21,000 consumers. The efficient operation of the equipment in these Receiving Stations is therefore vital, if the consumer is to receive reliable supply at a steady voltage.

With the help of this equipment we can control the circuit breakers, tap change control gear and the voltage. The Undertaking decided in 1966 to employ the Remote Control Scheme. It was possible to immediately implement this decision, because the control cables required for this purpose had already been laid. The manufacture of the equipment was entrusted to the Indian Telephone Industries at Bangalore. The two main control points are located at the Esplanade Receiving Station and the Kingsway Receiving Station from where all the Receiving Stations are monitored and controlled. The Remote Control equipment was installed in 1970 at the 'Vidyut' Building near the Esplanade Receiving Station and at Kingsway in 1972.

SCADA FOR RECEIVING STATION CONTROL

The system provided by the Indian Telephone Industries was designed on electro-mechanical relay principle. Due to this it had limitations for the speed of operation. There was no data

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acquisition also. These factors forced the Undertaking to keep the system to a minimum level.

In 1980 BEST replaced the Supervisory Remote Control system with micro processor based Supervisory Control and Data Acquisition System (SCADA). Additional to SRC System SCADA functions are data acquisition, analysis and report generation.

The communication between the master control and receiving station is through underground communication cables.

To further improve the reliability and quick restoration of supply BEST is going in for microware wireless communication in the years to come. A very-high-frequency radio link which was established in 1963 for quick communication is now getting outdated. This is being replaced by microwave system and cellular phones.

With the installation of this equipment, the restoration of supply when a fault develops in a system has become much more efficient and quicker. When a fault occurs in the system, a message is registered on the indicators at the central points. With the help of the links the operator at the control points can direct the field staff to quickly reach the places where the faults have occurred and restore supply with the minimum delay.

POWER POOL SCHEME

Shortages are caused when the supply does not keep pace with the demand. But in spite of whatever the Undertaking might do to expand its distribution system well ahead of the demand, it has ultimately to depend on the supply from Tatas. In the early fifties for three consecutive years the monsoon had failed. The low water levels in Tata's reservoirs, which are a source of power supply to Mumbai, had created a severe power

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shortage in the area. It became necessary to make alternative arrangements. Many industrial installations in the city had generators of their own to serve as a stand-by. These private owners were asked to operate their generators for their own requirements. The power thus released was utilised to serve the other consumers. This scheme came to be known as the Power Pool Scheme. The Undertaking had taken a lead and played an important role in implementing this Scheme, not only in Mumbai city but also in the entire State. Later the installation of more efficient generators in the Railways' generating station at Chola and a new generating station installed at Trombay by Tatas, considerably improved the position, and in 1961 the Power Pool Scheme was discontinued.

SOME SIGNIFICANT FEATURES

In the old days when plenty of space was available, nobody had perhaps ever heard the words 'Underground Substation' and 'Package Type Substation'. Due to the tremendous increase in the demand for electricity in all parts of the city, the need for Substations has been increasing. The procurement of sites for Substations, especially in the congested areas in the city, presents many serious problems. In the rural areas it is customary to have pole-mounted substations. Owing to the tall buildings around, the erection of such substations is dangerous in the city. Moreover, nobody would like the idea of building such pole-mounted Substations in a city like Mumbai, from the aesthetic point of view. In 1964, on an experimental basis, 5 vault-type transformers were imported. Our experience of them, since their installation in 1967 was not encouraging.

The population of Mumbai has been growing at a fast pace. Every day, hordes of people come to the city and the city

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accommodates them. Problems too have been growing fast; Slums, without the basic facilities, have been coming up alongside roads. In many cases, the slums have crossed the footpath to the bus-shelter. On the one hand, there is the lovingly nursed dream of a clean and beautiful Mumbai and on the other the depressing reality of a slum. On one side there is the slogan of a green Mumbai and on the other the sad sight of a footpath swallowed up by an ugly slum. When will this stop? The question has to wait for an answer. A voice is sometimes raised against this by the white-collared gentry. Efforts are made now and then to pull down or push back the ramshackle huts. But soon enough they re-appear on the same spots. As time passes, the huts come to be regularised and the Electric Supply branch had to instal a separate meter for every hut. Now the paths snaking through the huts have their lighting – like the huts themselves. The sensible Mumbaites have accomodated these huts too.

During last some years more and more of Skycrappers have been going up – and up! The sea has literally been pushed back in several places to make room for some of them. The Cuffe Parade, Nariman Point and the Backbay Reclamation areas are now virtually cement jungles. To provide electricity to these sky-scrapers and this ever-widening expanse, is not a simple job. There are the new buildings and the new technology : T.V. Sets, Video and Audio Sets, mainly to entertain and the washing machine and air-conditioning to make life easier. And a variety of machines, small and big, are coming into use on a larger and larger scale. And the computer age is upon us. Naturally, the demand for electricity has rocketed; the demand from sky-scrapers particularly for computers and air-conditioners. The demand for commercial use of electricity, too, has been growing fast.

ELECTRIC SUPPLY

The height of buildings creates several problems in reaching electricity to them. Therefore, the need for a high-pressure electricity set-up. One such set-up required for a Skycrapper is adequate for 400 residential and office buildings.

At present, the Undertaking buys its electricity from the Tata Electric Company. But if it produces its own electricity it will be more convenient, and will also effect a large saving. Its production cost will be less and the consumers demand can be met better. For this purpose the Undertaking is launching its own generation programme in the near future.

The BEST was the first organization in India to supply electricity through underground cables – and that too using the latest technology. Since 1989, the voltage of its receiving stations has been increased from 22 KV to 33 KV. Not only that, it built at Nariman Point that very year a receiving station of the capacity of 110 KV. In this country such a sub-station is normally outside a building and also far from a residential zone. This one is within a building. And, except for the lower floors, this building is used for private establishment. Most people working every day on the upper floors are probably not aware that below them is a power-station of the capacity of 110 KV. In 1993 the Undertaking also set up a receiving station of 110 KV at Khetwadi. This one also is inside a building.

SOME NOTABLE FEATURES

Switch-gears : It has already been stated that the Undertaking has been in the forefront in using the latest technology in the system of electric supply. At present the Undertaking uses switch-gears of various types and using various technologies. For example, airblast, minimum oil, circuit-breakers, SF-6 circuit-breakers, vacuum circuit-breakers and gas-

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insulated circuit-breakers. These circuit-breakers, being of the latest type, do not need supervision.

As these switch-gears occupy less space, it is possible to set them up where otherwise enough space is not available. Thus, the use of these gears has been quite profitable to the Undertaking.

Cables and their Testing : The BEST has the largest underground cable distribution system. As a matter of fact, compared to the 'overhead' system, the method of carrying electricity through underground cable is far more costly. But considering the congested housing and the crowded roads of Mumbai the 'overhead' system would be unthinkable. So, *although the underground system is costly, from the viewpoint of reliability and safety, it is advantageous.*

Later, the Undertaking started using up-to-date technology in the cable and jointing system. There was a shortage of the copper used in the cables. The government brought control on the use of copper. Finally, as an alternative, aluminium cables were brought into use. Then came "PVC". For high-power transmission. XLPE cable was brought into use in 1982.

The short-circuit test was employed on the underground cables. The BEST was the leading organization in testing low-pressure cables. Till 1980, high-voltage cables were tested by the "Bridge Method". During 1980 the testing of high-voltage cables BIECCO generators were purchased. And in 1990, the Undertaking got a "testing van", equipped with full apparatus. This van is able to detect the faults in both high-voltage and low-voltage cables. This van was bought although it costs a great deal. Its main advantage is that by removing the faults in an electrical set-up in the minimum time, it enables the

ELECTRIC SUPPLY

Undertaking to provide good, dependable and prompt service to the consumers. The Undertaking is using four of such "Testing Vans" at present.

Communication and Monitoring Systems : BEST is the first electric supply organization to start VHF communication and that it did in 1960. For the messages to be delivered promptly, the wireless message system was started in 1963. It has now become a simple operation to restore the electric supply by detecting the defects by going to the spot quickly in a mobile van.

For the efficient operations during the year 1967, the area was bifurcated into North and South. In 1991, the department concerned with the operations and maintenance activities was again bifurcated into four zones namely North, Central North, South and Central South. If there was any fault in the machinery, in order to spot it and to take prompt action to correct it, a "supervisory remote control" of the most modern kind was set up.

Meters and Relays : Over the years, changes have been taking place in the electric meters used. The old type of meters did not prove as efficient as they might have. Therefore, in 1994, the electricity section brought into use "electronic meters" and 'solid state relays'. As recently as 1995, with the help of modern technology and computers, the Undertaking proposes to launch the "remote metering system".

Computerisation in the Electricity Supply Departments: The computer is now used in a big way in the BEST Undertaking. Of, course, computerization has assumed importance in all areas of activity. Even then, it must be stated, the BEST was the first organization in the country to issue

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electricity bills to consumers through the computer and also use it on a large scale. The computerised billing has been going on since 1974 and within a fixed period the bills are delivered to the consumers at their houses, unerringly. In 1988 began the use of the Personal Computer in the department. As a result the work of the Department has been going on even more efficiently. It is easier than ever now to provide prompt service to the consumers. Consumers complaints are settled without delay giving them full satisfaction.

The computer gets you the details you want in a few moments. For example, the consumer's name, address, meter number, system number, the use to which the electricity is put – whether domestic, commercial or industrial – the pressure, capacity of the cable, etc. You don't have to go looking for the statistics or record.

The most important stage in the development of computerization of the Electricity Supply Department is the "digitizing" with the topographical map of the entire cable network.

Once the 'digitizing' with the topographical map of the cable network is accomplished, there will be complete change from A to Z, one might say, in the methods of operation of the Department.

Research, development and planning have been an integral part of the supply system from the beginning. Studies are continuously undertaken to see how the new advances in the science of electro-technology can be utilised and adapted to meet the constantly increasing needs of the electricity consumer in Mumbai.

CHAPTER 13

FINANCES OF THE UNDERTAKING

The Municipal Corporation acquired the B.E.S.T. Company Limited for Rs.9,86,58,765. The details were as under:

	Rs.
1) Immovable Property	8,61,08,765
2) Stores and Works-in-Progress	65,50,000
3) goodwill (with the Bus Section)	60,00,000
	<hr/>
Total	Rs. 9,86,58,765

This amount was raised mainly through a loan and the BEST Company was paid in instalments as under :

	Rs.
Upto 31-3-1948	5,35,00,000
Upto 31-3-1949	1,00,00,000
Upto 1-4-1950	3,51,58,765
	<hr/>
Total	Rs. 9,86,58,765

Under the Award of the Arbitrator, an interest at 4 per cent was to be charged on unpaid amount from the 7th August 1948 to the 31st March 1950. The total interest came to Rs.23,19,516. The goodwill of Rs.60,00,000 was written off by

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instalments, out of the year's surpluses. The last instalment of Rs.3,54,000 was written off in 1970.

During first fifty years from Municipalisation the field of operation of the Transport Services expanded a great deal, to cover the whole of Greater Mumbai. There was no similar expansion in the area of Electric Supply. But the old city itself needed more and more electric current. More Receiving Stations and Substations had to be set up. The network of cables had to be strengthened. During the same period, electric lighting replaced gas lighting on Mumbai's roads. This change took place by stages. In recent years, there had been much progress in the provision of accommodation and varied amenities and comforts for the employees.

A loan of Rs.7.5 crores was floated on the 1st August 1947. The total outstanding loan as on 31st March 1997 was Rs.38.01 crores.

FINANCIAL CONDITIONS

Though the income from the electric supply and transport sections had gone up impressively, the increase in expenditure was proportionately higher. The losses of the Transport Section were covered by the profits of the Electric Supply Section for some years.

This led to the drawing up of several plans for economy and for higher production. These were put into effect very carefully. For the first time in the history of the Undertaking, the representatives of the Union agreed to the principle that pay increase should be linked up with production. This enabled the Undertaking to meet partly the increase on account of salaries from what it got out of increase in production and economies effected.

FINANCES OF THE UNDERTAKING

To promote efficiency and to increase productivity, the following methods were used :

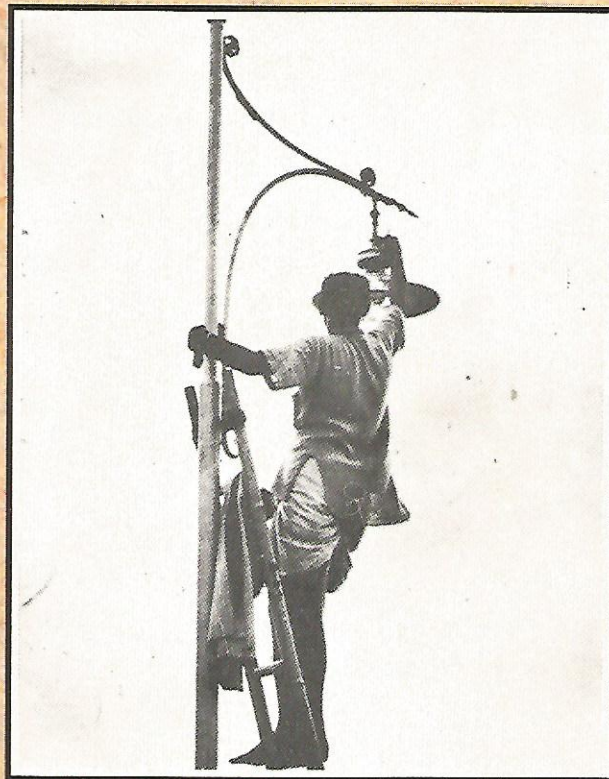
- (1) A rigorous check was kept on staff strength and on overtime working.
- (2) A control was imposed on the purchase and use of equipment and materials.
- (3) Improvement in the fleet utilisation with a variety of incentive schemes and changes in the procedures for work.
- (4) Economy was achieved in expenditure by better productivity.
- (5) The Funds of the Undertaking were utilised better and they were invested with a view to derive the maximum returns.

In the days of the BEST Company, the Municipal Corporation had to be paid ground rent for the tramway tracks. After the Company was taken over by the Corporation, this rent did not have to be paid. To compensate for it, it was laid down by legal provision that the Undertaking should pay annually Rs.40 lakhs to the Corporation. Curiously enough, the tramway tracks which gave rise to this item are no more used by the Undertaking, but the liability for payment is still there. It must also be mentioned that the Municipal Corporation has contributed nothing towards the capital expenditure incurred by the Undertaking.

PROVISION FOR DEPRECIATION

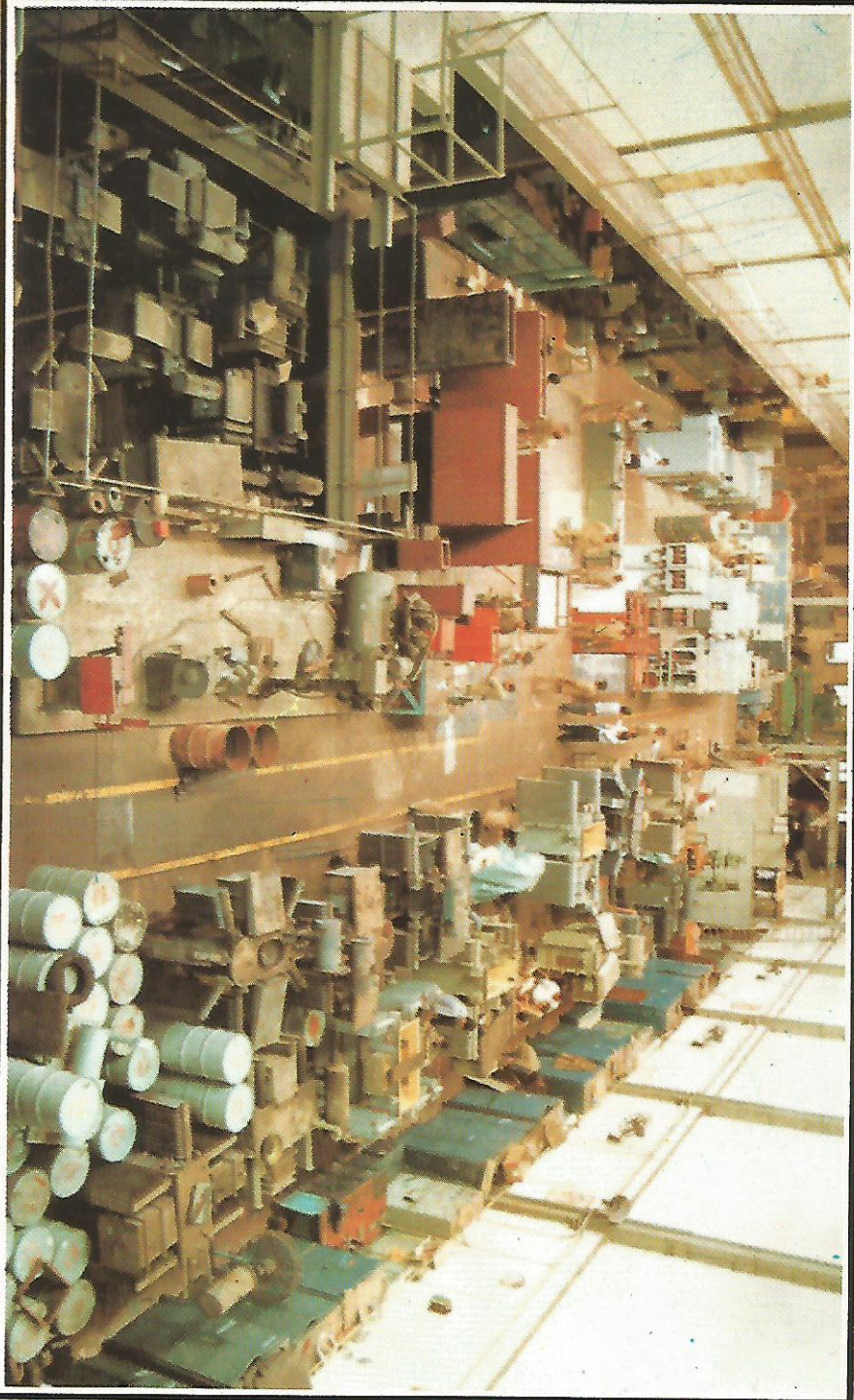
The Undertaking had previously resorted to *ad hoc* provisions for the depreciation of assets based on available surplus, etc. The annual depreciation charge did not measure

The Gas
Street Lamp



The Van for Repairing
of Street Lights

Workshop of Supply Branch at Kassara.



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the cost of service rendered by the fixed assets and as such, distorted the annual operating results and financial picture of the Undertaking. The procedure has now been revised under expert advice, so that the depreciation has now been linked with the original cost of the asset, is effective life and salvage value.

Since the replacement cost of an asset is generally higher than its original purchase price, depreciation provision alone would be insufficient to meet the replacement cost. Financial experts suggested the creation of the financial reserve by charging to revenue interest at 1 per cent above bank rate on internal funds used in the business of the Undertaking. This interest represents amounts, though not payable to any third party, a saved in a concern by the use of its own funds in lieu of borrowed capital. In addition to this provision for Special Depreciation Fund was created as per the financial expert advice. The provision under this fund was made @ 50% more than the normal depreciation. Both these funds were used to supplement the depreciation fund to meet the replacement of assets as well as for augmentation of capital expenditure.

FUNDAMENTAL CHANGES

Fundamental change has been made in the accounting system of the Undertaking as it obtained before its municipalization. Now all the accounts and all the related documents are examined at three levels; BEST administration, the BEST Committee and the Municipal Corporation. This has resulted in the financial administration being transparent.

The cost has to secure the assent of the Municipal Corporation for making an increase in bus fares or electricity charges. He has also to submit the budget for the year to the BEST Committee and to the Corporation. Without their sanction

FINANCES OF THE UNDERTAKING

the administration cannot incur expenditure not included in the budget. During the year 1950-51 the total size of the Revenue and Capital Budget Estimate was Rs.5.30 crores and Rs.1.52 crores respectively. Same has increased to 1656 crores under Revenue and Rs.254 crores under Capital Budget Estimates in the year 1997-98.

There being no share capital, the financial edifice of the Undertaking as we see it today stands entirely on its own income. Although more than eighty percent of its capital is raised from internal funds, there is a need for more funds to cope with the increasing capital needs.

The total assets of the Undertaking were 8.61 crores rupees in 1947. They had soared to 49.65 crore rupees by 1970-71, and on 31st March 1997, they have shot up to rupees 838 crore. This huge increase is nothing but the outcome of the diligent financial planning of the Undertaking.

WORLD BANK LOAN

A World Bank Loan was utilised for such important operations as the purchase of buses, machinery and equipment, construction of depots, renovation of the depots putting up of bus stations and the construction of the Wadala and Anik Workshops. As an alternative from the financial point of view, buses and electronic meters were taken on lease from time to time.

SUBMISSION OF ACCOUNTS

Since 1978-79, the Fire and Riot Insurance Fund has been named 'Property Insurance Fund' and the scope of the fund was enlarged to include the entire risk factor in the Undertaking's assets. Similarly, in 1990-91, the Financial Reserve Fund was renamed as 'The General Fund'. In 1994-95, a new fund called

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'Electricity Generation Fund' was set up to take care of the production of electricity in the near future. The closing stock has been bifurcated into Revenue Stock and Capital Stock.

The Institute of Chartered Accountants in New Delhi lauded the Undertaking's presentation of accounts in 1983-84, and honoured the Undertaking with an Award of High Commendation.

Keeping pace with the techniques of advanced skills, the Undertaking introduced computerization in some departments in 1994. To begin with, receipts and payments were recorded on a personal computer. Gradually, bills, monthly statements of income and expenditure, record of deposits, income-tax certificates and notes in the journal began to be taken into the computer.

It is the duty of the Provident Fund department to keep a record of the deductions from salaries towards the provident fund. As on 30th March 1997 there are 44800 employees covered under Employees Provident Fund Act 1952 as compared to 8500 employees approx as in 1947. The monthly deduction from the salary of the employee as contribution to his provident fund was at the rate of 8 per cent. Under the revised scheme that came into effect on 1-4-1989, the deduction from the salary (basic salary + dearness allowance + special allowance) rose to 10 per cent. The Undertaking has its own Trust fund and Undertakings subscription @ 10% amount is transferred to this fund.

The special provident fund known as 'Gratuity' used to be granted to all the employees at the rate of 15 days for one year of completed service. This rate was revised in August 1987, and again in April 1994.

CHAPTER 14

THE ADMINISTRATION OF THE UNDERTAKING

The acquisition of the B.E.S.T. Company by the Municipal Corporation meant no noticeable change in the Company's administration — not even to its employees. But changes of a basic nature were taking place.

The ownership of the B.E.S.T. Company was vested in its shareholders. The sole objective of the Company was to make profits and all the efforts of its directors were calculated to secure a handsome dividend for the shareholders. The Company's record in providing power and transport was certainly creditable, but the urge behind it all was to increase the revenue of the organisation by getting more and more people to use its services. If the Company had not been subject to Government and municipal control, there could have been increases from time to time in the transport fares and the electricity charges. There was nothing wrong about it, since such an enterprise has to make profits. Naturally, the General Manager of the Company had more powers in running its day-to-day administration than his counterpart has today. He could take quick decisions and they were carried out expeditiously.

A change came over it all on 7th August 1947. On that day the ownership of the concern passed on to the Municipal

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Corporation — that is, to the people of Mumbai. It was not a Company any longer; it became an Undertaking. Not profit-making, but serving the people, was now the objective.

B.E.S. & T. COMMITTEE

The BEST Committee replaced Board of Directors of the old 'Company'.

The BEST Committee have to take important decisions in respect of the proposals submitted by the Administration, as many of the proposals involve policy matters. Some of the important items in which decision/approval of the Committee/Corporation is required are given below :

- i) The approval of the Corporation is required for creation of permanent staff, having aggregate emolument exceeding Rs.400/- per mensem.
- ii) The approval of the BEST Committee for changes in rules and service regulations, as well as changes in structure of bus fare and electricity tariff before they are sent to the Municipal Corporation.
- iii) Proposals pertaining to the Undertaking's movable property worth more than Rs.2,000/- but upto Rs.10,000/- require sanction of BEST Committee; and those exceeding Rs.10,000/- require the approval of the Corporation.
- iv) The approval of the BEST Committee is required for purchase of items costing more than Rs. 1 lakh.

Formerly the BEST Committee had nine members. The number was raised to twelve in January, 1990. Now the number is 17, including the Chairman of the Standing Committee who is an ex-officio member. The corporation can appoint any

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person on the committee who has experience of working in such areas as administration, transport, electricity supply, engineering, industry, commerce, finance and labour; of whom atleast one shall be a councillor and remaining may and may not be councillors.

GENERAL MANAGER

Mr. Guilford was the General Manager of the BEST Company when it was acquired by the Municipal Corporation. The Undertaking continued him in the post. He retired on 13th May, 1949. On the following day, Shri J. P. L. Shenoy, of the Indian Civil Service, took charge of the post.

The Corporation appoints the General Manager of the Undertaking, with the concurrence of the State Government. The convention was to appoint an I.C.S. or I.A.S. officer to the post. It came to an end with the appointment of Shri P. B. Kerkar. However with effect from 29-1-1990, Shri Man Mohan Singh, IAS was appointed as General Manager of the Undertaking. He was followed by Mr. Suresh Chandra. Since December 1996, Shri Vinay Mohan Lal, IAS has been holding the post.

The earlier post of the Deputy General Manager was upgraded to that of Additional General Manager. Shri Madhav A. Shanbhag was appointed to this post on 24-6-1991. This officer looks after the General Manager's work during the latter's absence. His normal sphere of control extends to transport, transportation engineering, stores management and the computer section.

SECRETARIAL DEPARTMENT

The Secretary of the Undertaking heads this department. An important task entrusted to it is the preparation of the

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Agenda of the meetings of the BEST Committee and recording its minutes.

The office of the secretary is the most important link between the BEST Undertaking, the BEST Committee and the Brihan Mumbai Municipal Corporation. It looks after the correspondence with these two bodies, as well as other items of business. The Secretary is responsible to the General Manager.

A separate 'Marathi Section' was set up in this office to carry out the management's policy of using the Marathi Language in the administration of the Undertaking. It is the responsibility of this department to take appropriate steps to ensure the progressive use of Marathi in the day-to-day administration of the Undertaking. The department guides the other departments in preparing their various circulars, office orders and important instructions in Marathi. It gives them the necessary guidance in preparing various registers in Marathi and supplies required information.

CHAPTER 15

INDUSTRIAL RELATIONS

The labour management relationship in an industry primarily concerns the two parties directly involved. However, this does not apply to the B.E.S.T. Undertaking. As the Undertaking provides two essential services to the community, viz., transport and electric supply, the citizens of Mumbai are also interested in the relationship. Public reaction to any disruption in the services provided by the B.E.S.T. caused by strikes, has always been strong. It finds expression through letters and even editorial comments, in the Press.

While it is true that the state of industrial relations in an organization must ultimately depend upon the attitudes of both the parties-management and labour-it is primarily the function of the management to initiate the processes which would ensure effective utilization of all resources including human resources, with a view to achieving higher productivity. This is a challenge to the management. It may not be out of place here to quote the observations of Mr. R. L. Mitchel, Chief of the I.L.O. Mission for Management, Development and Productivity, from his report on the B.E.S.T. Undertaking :

"Achieving higher productivity is essentially a challenge to management. Labour can co-operate or not can promote or impede but it cannot ordinarily initiate. It is the management's

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role to supply initiative, both initiative towards creating better conditions and the initiative needed to apply technical skills to the attainment of higher efficiency and higher productivity". The efficiency and productivity of an industry, to a great extent, depend upon the state of industrial relations in the industry. Harmonious relations between labour and management provide a basis for higher productivity and better efficiency and are, therefore, an essential pre-requisite for the success of an industrial enterprise.

It is obvious that the management must create the climate necessary for the development of healthy industrial relations. Thus, for example, in respect of all the essential service conditions the management alone can, by adopting a policy of ensuring fair treatment to workers, establish a basis for sound relationship with labour. Besides this, the management must take initiative, in providing a system in which there would be adequate incentives to sustain and stimulate the employee interest in work. Such a system can work only through close association and involvement of employees with all the measures introduced by the management for attaining the objective of promoting and encouraging productivity for the benefit of all concerned.

The history of industrial relations in the Undertaking, as it appears here, seeks to assess if the management of the B.E.S.T., has been able, during the hundred years of its existence, to evolve a system and create conditions not only for the avoidance of disputes but also for establishing a positive basis for co-operation between the management and the employees.

To trace the history, we have to go back to the eighth

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decade of the last century when the predecessors of the present B.E.S. & T. Undertaking started the first transport service in Mumbai, with horse-drawn trams. In those days, the present-day concept of industrial relations did not exist. The relationship between the employer and the workers in an industry was based entirely on contract, the terms of which were determined by the employer. Miserably low wages, long working hours, lack of sanitary conditions and even essential amenities were, by and large, the common characteristics of conditions of employment in any industrial activity.

The findings of the First Commission appointed by the Government of India to enquire into the conditions of work in factories reveal the callous exploitation of labour. As a result of the report of that Commission, the first Factory Act was passed in the year 1881. The main provision of this Act was that employment of children below the age of seven was prohibited. There were no regulations relating to the working hours of adults and men and women could be made to work for as long as 12 to 15 hours a day. There were no holidays, no leave and if a worker remained absent from work, wages for 2 or 3 days could be deducted for one day's absence. The conditions inside the factory used to be harmful to health.

There is no record of the working conditions in the B.E.S.T. during this period; one has to infer the conditions from the various demands which the workers of the B.E.S.T. put forward from time to time, particularly after the year 1907.

The 'demands' were more in the nature of 'favour' humbly sought by 'petitioners' — like conductors, drivers, inspectors, starters and workshop men. In 1907, in order to cut out negotiations by correspondence, the management invited six

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representatives of such petitioners for a discussion. So often such discussions proved to be fruitless and then workers would suddenly go on strike. The Trade Union of the Company's workers was first mentioned in connection with a strike in 1920. Shri M. V. Pawar was the Secretary of the Union. In the records for 1922 there is a mention of 'the Bombay Tramwaymen's Union'. The strike in the Kingsway Workshop in 1931 was conducted by the 'Tramwaymen's Union' of which Shri V. H. Joshi was the Secretary. Interestingly enough, the Police Commissioner figured several times in these disputes in an odd role — that of a mediator. This probably means that a strike was much more of a law-and-order matter than an industrial matter.

Most of the strikes during the twenty-five years after 1907 failed to achieve their purpose; even the rest were only partly successful. Here is a brief record of the strikes and representations during the period:

1907 : About 160 conductors petitioned for increase in pay and other concessions. The monthly wages of the conductors and drivers depended on the trips made by their vehicle. On an average, they came to Rs.22/- for the conductors and Rs.17/- for the drivers. Their plea in this regard was accepted and a regular salary-scale was sanctioned. The conductors were to get Rs.20/- during the first two years, Rs.25/- during the next three years and Rs.30/- after five years of service. The corresponding amounts for the drivers were Rs.17/-, Rs.20/- and Rs.25/-. The request for a free Uniform was turned down. Instead of a free pass for trams, 60 free coupons were allowed per month. The hours of duty were not to exceed nine. The plea was granted partially and two week's leave was allowed,

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with one day's leave on full pay every month.

1908 : A memorandum signed by about 400 conductors and drivers was submitted through a firm of solicitors. Some of the demands made, regarding pay, overtime, holidays and uniform were partially conceded by the Management.

1910 : In that year an officer was appointed to reorganise the Traffic Department with a view to toning up its efficiency. It had been found that the work was upset due to the men absenting themselves without leave. Therefore a notice was issued warning the men that for a day's absence, two days' wages would be deducted. This was not enforced immediately and a month later the notice was re-issued. This created great unrest among the workers. On 26th November 1910, four hundred of them held a meeting behind the Girgaon Back Road Post Office, probably the first meeting ever held by the B.E.S.T. workers. They all thought it was a move to reduce their pay.

As soon as the management came to know of the meeting some senior drivers and conductors were sent for and the misunderstanding was sought to be cleared. But it was of no avail. The leaders of the workers made a collection for the strike and on 1st December 1910 a petition was sent up to the Managing Director setting out the workers demands.

After consulting the Police Commissioner, the Company announced on 8th September that certain employees had been removed from service. Some of the employees then met the Police Commissioner and the Management also called

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representatives of the workers to a meeting. This meeting was attended by the Deputy Police Commissioner as an observer. The Management firmly rejected the demand for an increase in the wages. It partly accepted the demand for the appointments of Inspectors and Starters being made from among the Conductors and Drivers. As for the deduction of an extra day's wages for absence without leave, the employees were assured that it would apply only to those who remained absent wilfully. The most important demand was for reinstatement of dismissed employees. It was rejected.

The strike lasted for four days. 10 per cent of the employees were dismissed from service. The employees who had attended work during the period of the strike were given 'Loyalty Medals' and cash prizes.

In the month of July, the drivers made a petition for pay increase, asking for the grade of Rs.19-22-25-28 (over 10 years) instead of the Rs.17-20-25 grade in operation. The conductors asked for pay increase, free uniforms, reduction in the hours of work and such amenities as a canteen, drinking water and a toilet room at the Dadar Depot. The conductors were now given a new grade of Rs.22-30 and the drivers of Rs.21-30.

1918 ; In December, the Inspectors and the Traffic Regulators made a representation setting out certain demands. Some of these were granted by the Management.

1919 : The conductors and drivers sent up to the Managing Director, in January, a representation about the Service Rules. The decisions taken by the Company were as under :

- (1) An increase was granted in the pay of the

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conductors and drivers in consideration of the rising prices. The employees in these two categories would receive Rs.35 per month at the end of 3 years service. It was pointed out that this was twice the pay offered by the Calcutta Tramway Company.

- (2) One month's bonus per year was granted. Similarly, pay was granted for the 3 days which had been declared as holidays to celebrate the Armistice at the end of the First World War.
- (3) One day's absence would mean deduction of only one day's salary.
- (4) Conductors who want to use a raincoat would be supplied one by the Company.
- (5) Since the World War was over, extra passengers will not be allowed into the tramcars any longer.
- (6) The hours of duty for a conductor would be 8.1/2, and for a driver 8.

The Managing Director concluded his statement with the following : "The employees should appreciate the liberal attitude shown by the Management. However, if they go on strike without having given a month's notice, the consequences may be serious."

1920 : The conductors and drivers held a meeting in January to discuss their grievances. A list of these grievances was submitted to the meeting by a conductor. The Managing Director immediately issued a notice, meant for the employees, which stated that the Management had already started an inquiry about the rise in prices. When the inquiry was complete,

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the Board of Directors would take a decision regarding the increase in pay for the conductors and drivers. It also assured the employees that a decision to build residential quarters for the workers had already been taken and that the necessary land had also been purchased. Soon afterwards, the conductors were awarded a new scale of Rs.33-50, and the drivers of Rs.32-50. The demand for the supply of free uniforms three times a year was also accepted by the Management.

This pay increase took effect from 1st January 1920. On 1st October 1920, a meeting of the employees, attended by about 2000 of them, was held at the Colaba Depot. Of these, 1600 were conductors and drivers and the rest of the employees were of other categories. The more important demands made by the meeting were :

- (1) The conductors and drivers should get a pay of Rs.40 per month for the first year; Rs.50 per month for the second year and Rs.60 per month for the third year.
- (2) Privilege Leave should be of 40 days.
- (3) No prosecution should be lodged for misappropriation.

These demands were rejected by the Management. The rejection was conveyed to the employees on 6th October. The next day, 250 workers of the Kingsway and Byculia Depots met at Colaba. They tried hard to persuade the other workers to come out. Finally, the police appeared on the scene and arrested some of the workers. The rest were made to disperse. The workers had planned the strike thoroughly and not a single tram-car could leave the Kingsway Depot and Workshop on the day, as all the workers there had joined the strike. There was

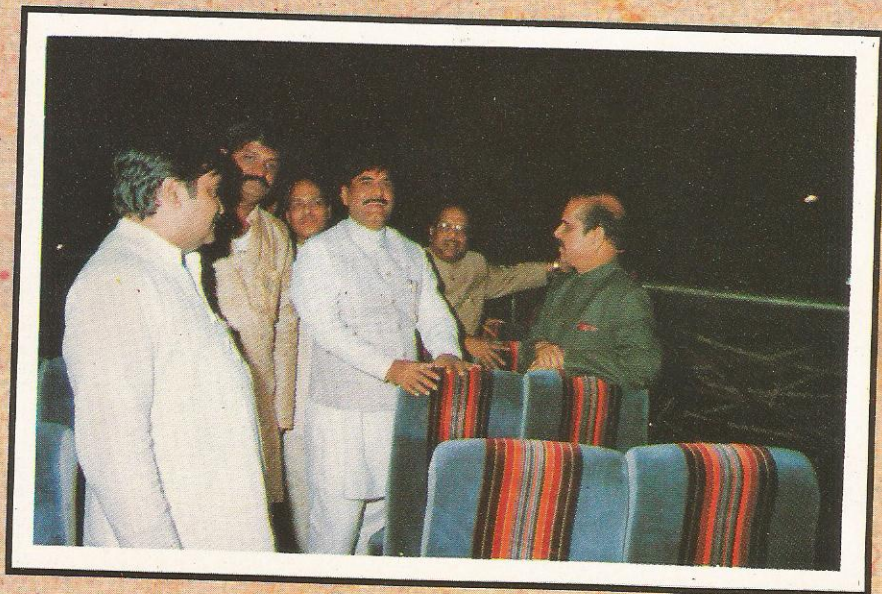
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a wave of strikes in the city in those days. The Municipal sweepers were on strike; so were postmen and the workers of the Oil Company and of the Gas Company. This was the result of the tremendous rise in prices at the end of the World War. As a result of the strike by the tramway employees, no trams could run on certain routes for some time. The Police Commissioner had requested the Management to operate only the main routes as he could not spare enough policemen for the *bandobast* in connection with the strike. Shri Pawar, Secretary of the Tram Workers' Union, presented to the management on the 13th October 1920, a list of the workers' demands. This is the first time a Union is mentioned in the records dealing with the management-and-workers' relationship. There were 10 demands on behalf of the conductors and drivers, and 7 on behalf of the workshop men. Mostly, the demands were about pay increase, leave, house rent, bonus and hours of work. On 19th October, Shri Pawar submitted another list. This set out the demands of the Inspectors, Starters, Regulators and Memo Writers. The Management replied to these demands through a Notice issued on the 22nd October. It stated that all those employees who would not resume duty immediately would be summarily dismissed. This strike continued till 21st November, i.e. for 45 days. The workers had to go back to work unconditionally. All the workers who had gone on strike were taken back in service, except those who had been prosecuted for committing violence.

1921 : The Union of Tram Conductors and Drivers submitted its demands, to the Management on 9th June. The main demands were about bonus, allowances and a 7-hour-working day. For one reason or the other, all these demands were turned down. Two of these demands were particularly important :



General Manager, Shri Vinay Mohan Lal receiving the All India Passenger-Safety Award 1996 at the hands of the Chief Minister of Karnataka Shri J. H. Patel.



Chief Minister Shri Manohar Joshi, Deputy Chief Minister Shri Gopinath Munde and Cultural Affairs Minister Shri Pramod Navalkar in a roofless 'NEELAMBARI BUS'.



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- (1) The workers' subscription to the Union should be deducted from their pay, or arrangements should be made to send the amount to the Office of the Union, or some employees should be granted special leave to enable them to collect such subscriptions. This was not accepted by the management on the ground that the union was not an officially recognised one.
- (2) The plea that Shri Ramchandra Bhikaji, an ex-starter, should not be prohibited from doing the work of the union in the Company's premises was rejected. The reason stated for the rejection was that Shri Ramchandra Bhikaji had been jailed for assaulting some of the workers of the Company.

1922 : The year saw a remarkable rise in the membership of the Bombay Tramways Union. The Company was prepared to give recognition to the Union, but there was difference of opinion about some of the conditions. The Union proposed that *this matter should be left to an Arbitrator and it also stated that* if no satisfactory reply was received from the Company within 5 days, the Union would ask the workers to go on strike. As no reply was received from the Company, the workers went on strike on the 18th September, without previous notice. This strike lasted for 13 days.

1931: On the 3rd September, the General Manager had put up a Notice in the Kingsway Workshop to say that for lack of enough work, the workshop would remain closed on Mondays. It added that the workshop superintendent would ask 50 men to work, for special jobs. Accordingly, on Monday, the 21st September, the workshop was closed, except for the 50 men specially asked by the superintendent. The Union objected to

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this procedure. It directed the 50 men not to go to work. The workers of the union picketed the workshop gates, making it impossible for the 50 men to enter. The General Manager then issued a Notice to say that if the 50 men, who were asked to work, failed to do so, there would be a lock-out in the entire workshop. This Notice did not seem to have any effect on the workers and the General Manager closed the workshop doors, keeping out all the 512 men. The union directed the workers to go on strike till the notice about the stoppage of work on Mondays was withdrawn. The employees went out in a procession to the Congress House, where the union leaders addressed the meeting. The Bombay Provincial Congress Committee too announced its full support to the workers. On the 30th, there was picketing at the workshop gate by the workers of the Union to stop clerks and mechanics from going in to work. The Union announced that if necessary it would launch a *satyagraha*. Those were the days, one may recall, of Mahatma Gandhi's Satyagraha Movement. The members of the Corporation asked for a special meeting of the body to consider the situation arising from the strike. A meeting was fixed for the 8th October. Shri V. H. Joshi, Secretary of the union, issued a statement addressed to the Corporators, listing such grievances of the workers as refusal to recognise the Union, insufficient pay, retrenchment and insecurity of service. The statement concluded with a suggestion that the Corporation should take over the B.E.S.T. Company. The Corporation met, as decided and resolved that since the citizens were put to great inconvenience because of the conflict between the Company and its workers, the Company be requested to arrive at a fair agreement with the Union.

Soon, there were talks between the Company and the Union and on the 16th October, on the advice of Shri J. B.

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Boman-Behram, the Mayor of Mumbai, a compromise was arrived at between the two parties. According to the terms of the compromise, the workshop would remain closed on 3 Mondays at the most during the month; that on such Mondays the workers would be asked to work by turns and that the question of giving recognition to the union would be considered after the publication of the Whitley Commission Report. The Workshop resumed normal work on the 21st October.

1946

This year there was a prolonged strike of the clerical staff which resulted in paralysing the administrative work of the Company.

1947

On the 25th March began the last of the strikes during the regime of the Company. The Corporation was to acquire, in August, this Company which was to get Rs.40 lakhs as goodwill. The main demands now were that half of this amount of goodwill should be given to the employees and that there should be a 50 per cent increase in the pay of every employee. They went on strike on the 25th March. Efforts for a compromise, made by Shri S. V. Joshi, Labour Commissioner and Shri Gulzarilal Nanda, Labour Minister, proved to be futile, when the Government considering the great inconvenience caused to the people of the city, decided to start its own transport service. The Union then withdrew the strike. The strike had lasted for 21 days and once again the withdrawal was unconditional.

Since the taking over of the B.E.S.T. Company by the Mumbai Municipal Corporation in 1947, there have been several

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strikes. The immediate cause may have been different for the different strikes, but the true cause has always been increase in pay.

PROGRESSIVE LABOUR POLICY

We must stress the fact that the B.E.S.T.'s attitude to labour has always been liberal, particularly in comparison with that of other concerns. The B.E.S.T. was probably the first organization in the country to provide for its workers such schemes as provident fund and gratuity. Most of the concessions regarding provident fund, as laid down by the Act of 1952, had been granted to the employees of the B.E.S.T. in 1914. The Provident Fund Scheme was immediately followed by the Gratuity Scheme. Under the latter scheme, an employee leaving the Company after fifteen years' service was given twelve months' pay as gratuity. It is almost taken for granted now, in the case of most industries, that on retirement one is paid gratuity. The BEST has been ahead of times in respect of its dealings with its employees.

The most important cause of strife between the employer and the employees is pay. In this respect too the B.E.S.T. Company used to be more enlightened than most employers.

As for the hours of work, the Factory Act of 1911 laid down restrictions for the first time. For adults, i.e. for those above the age of eighteen, working in factories the limit set was 12 hours a day. In 1922 the Act was modified to lower the limit to 11 hours. Even as early as 1907, the conductors and drivers in the B.E.S.T. Company had a working day of 9 hours and 8 hours respectively. In 1919 even these were cut down by half an hour. It must be remembered that it was as late as in 1962 that the Motor Transport Workers' Act laid down eight hours per

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day as the maximum period of work for conductors and drivers.

OTHER CONCESSIONS

From the evidence tendered by the B.E.S.T. Company before the Royal Commission of Labour appointed in 1929, it is clear that its employees had been granted the following concessions; housing; medical help; loans for a special fund called the Employees' Welfare fund; a club room, with attached canteen; facilities for indoor and outdoor games; compensation for injuries sustained while on duty. The last of these was enforced by law for the first time in 1923; the Company had been granting it for years.

Another facility was the Savings Fund. Designed to encourage the employees to save their money, the scheme allowed a 5 per cent interest for the first five years and rising to 7.3/4 per cent upto 15 years and above.

Briefly, therefore, in those unenlightened times when the employers were under no restrictions and the workers were at their mercy, being unorganized, the B.E.S.T. stood out with its generous policies towards its employees.

AGE OF ADJUDICATION

After World War II started in 1939, to maintain industrial peace became a necessity for the Government and with the Defence of India Act the Government was armed with the authority to refer industrial disputes to a Tribunal or a Court. This was a very important step in this field. Till then it had been left to the employers to decide such disputes; now it was left to an impartial Tribunal. This placed an effective tool in the hands of the workers. All the disputes that arose between the B.E.S.T. workers and the B.E.S.T. management in the period

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between 1942-57 were settled through adjudication.

THE MADGONKAR AWARD

The first dispute to go before an adjudicator was about dearness allowance. This was in 1939. The workers' demand was that from 1st September 1939 they should be paid dearness allowance at 20 per cent of their wages. This dispute was referred to a Board of Conciliation presided over by Justice G. D. Madgaonkar of the Bombay High Court.

The Madgaonkar Award granted a flat dearness allowance of Rs.4 p.m. to the workers. The decision was based on three considerations; the wage policy during the war years, the desirability or otherwise of granting dearness allowance which would compensate fully for the rise in prices and the financial condition of the employers Company. In making the Award, Justice Madgaonkar expressed some very important ideas in relation to such employees as those of the B.E.S.T. According to him, the Government, the Municipality and the people have a right to efficient services at the hands of the Company without dislocation or interruption or accidents. With the internal management of the Company, including the wages of the employees, they are not directly concerned, nor is it clear that the employees of the Company, because it is a Public Utility Company, can claim any higher rights than the employees of any other Company. But the conditions of their employment including hours and wages must be such as to ensure the safety of the public and its conveniences.

BROOMFIELD AWARD (JUNE 1942)

When Japan entered the War there was considerable panic in the people of Mumbai. The Government declared the

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B.E.S.T. Co. as an essential service, under the Essential Services Ordinance. This gave the B.E.S.T. officers the right to prevent the employees of the organisation from leaving the city. The Company announced 1.1/2 months' pay as emergency bonus in addition to the usual bonus. Similarly it also announced that it would pay compensation for war injuries, under the War Injuries Ordinance. One demand of the workers was that the Company should give them a loan to enable them to take members of their family to other places. There were other demands too, like revision of the dearness allowance and a special allowance for leaving the city in an emergency. Rejection of these demands led to a strike of conductors and drivers. Finally, the Government left the matter to the adjudication of Justice Sir Robert Broomfield of the Bombay High Court. Justice Broomfield's Award too spoke pointedly of the rights of the people, the Municipality and the Governemnt in respect of transport services.

THE LATIFI AWARD (SEPTEMBER 1942)

In one such dispute, Shri A. Latifi, a retired I.C.S. Officer, acted as the Adjudicator. He had before him in all 75 demands of the workers, the most important of them being about the dearness allowance. There was one about the grant of recognition by the Company to the Workers' Union. In this connection Shri Latifi said, "The Company's policy in this matter is on the whole moderate and conciliatory. The Company has pointed out that so far not a single Union has been recognised by the employer in this province. Whether recognition is to be looked upon as a boon or a burden, it should be for the industry as a whole and not for any individual Company, especially one that has done so much for its workers. The question of recognition of unions has been accepted as an All-

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India problem and the Government of India has already set a stage for an All-India measure to deal with it." (The Bombay Industrial Relations Act of 1946 settled the question of granting recognition to Unions. Under the Act only one Union is given recognition in an industry.)

THE NANA VATY AWARD (NOVEMBER 1944)

The next dispute about pay increase, revision of pay scales and grant of dearness allowance according to the practice of the Millowners' Association, was referred to Shri E. M. Nanavaty, another retired I.C.S. officer, for adjudication. Of these demands, only the one about dearness allowance was allowed by the Adjudicator. The Nanavatty Award is important in several ways, particularly in the context of the B.E.S.T. Company's industrial relations. Under the Award, the dearness allowance keeps pace with the increase in the cost of living. The employees of the Undertaking have been able to improve their standard of living because of the rise in pay scales granted from time to time and the continuous increase in the dearness allowance. In the post-war years, the most important cause of industrial disputes was adequate wages; the Nanavaty Award mostly removed it. The Award also had important repercussions on the financial structure of the Undertaking. The constant increase in expenditure on dearness allowance could not be made good by raising the transport fares or the electricity charges. Both these being public utility services, there were social as well as political limits to the increase in the burden that the people could be made to bear. As a result, in order to accommodate this increase in expenditure, the Undertaking had to take recourse to such methods as raising the production and efficiency and practising every economy. Thus upto a point, to the Nanavaty Award goes the credit for the efficiency and the

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dynamic approach of the Undertaking's management. Shri Nanavaty also granted the other demands of the workers, some fully and some partially. His observation in the concluding paragraph of his Award indicates the essence of industrial relations. He observed : "It is my earnest wish and prayer that in the fullness of time both sides to this dispute may learn to appreciate the truth and wisdom of a notable saying of Lord Acton : "Compromise is the soul and whole of politics", and I may add "of economics too". Shri Nanavaty had also something to say about the revolution that was taking place in the industrial sector in the country. "It will require all the tact, savoir faire and sympathetic understanding of the workers' point of view on the part of the capitalists and organisers of industry in India to guide the industrial revolution into peaceful channels to avoid class warfare and bloodshed and in this connection the Directors of the Company may well bear in mind the wise words of a great student of modern history that there is another world for the expiation of guilt, but the wages of folly are payable here below."

THE CHAGLA AWARD

Another important landmark in the sphere of industrial relations in the Undertaking is the Award made by Justice M. C. Chagla. He was appointed Adjudicator in a number of disputes between the Undertaking and its workers. These disputes included demands for revision of pay-scales, facilities to the Workers' Union for collecting subscriptions on the premises of the Company, promotions being made on the basis of seniority, stopping recruitment of outsiders so long as competent persons are available among the staff and appointment of a panel of judicial officers in place of the departmental officers to try cases against the workers in the

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matter of misconduct committed by them. Justice Chagla has made the following observations in regard to pay scales. "The principle to be borne in mind is — however revolutionary it might have sounded in days gone by and which has almost become an axiom now — that profits are the result of the co-ordination between the capital and the labour and while the capital is entitled to a fair return, the labour is equally entitled to some share in the profits produced by its contribution to the combined effort". After examining the financial position of the Company, Justice Chagla came to the conclusion that a demand for increase in wages was justified and he granted increase at the rate of 6 annas in the rupee to those drawing less than Rs. 13.1/2 p.m., 5 annas to those drawing upto Rs. 25, 3 annas to those drawing upto Rs. 40 and 2 annas to those drawing upto Rs. 75/-.

Referring to the demand for the grant of facilities to the Union for collection of subscriptions on the premises of the Undertaking, Justice Chagla left it to amicable settlement. He said that if the Union was really in earnest, it should depend upon its own strength rather than on favours not willingly granted (Later the Bombay Industrial Relations Act granted such facilities to the representative and approved unions). Shri Justice Chagla did not concede the demand that seniority alone should count for granting promotions and agreed with the Company that posts should be filled by outsiders when no suitable candidates are found in the Company's service. Towards the end of this Award Justice Chagla expressed some forward-looking thoughts, which have been borne out by later happenings in the field of industrial relations in the BEST. He said, "I sincerely hope that both the Company and the employees will realise that they are jointly working an enterprise

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which renders great service to the public and in which the public have a vital interest Some people have almost come to think that friction between capital and labour is a necessary concomitant of the modern trend and modern ideas about the dignity and rights of labour. I do not hold that view. If both capital and labour realise their mutual responsibilities, there is no reason whatever why in co-operation they cannot successfully run the enterprise without having disputes from time to time and reporting to arbitrations and adjudications This is the fifth adjudication which has dealt with the demands of the workers of the BEST. I sincerely hope that it will be the last."

In April 1946, Justice Chagla was the adjudicator in yet another dispute. The main demand this time was for an upward revision of certain salary-scales for clerks. The demand was mostly conceded. In these adjudication proceedings Shri S. R. Tendolkar argued the case for the Union. He later became a judge of the Bombay High Court. The question of granting recognition to the Union came up before the Adjudicator once again. The demand was rejected, but an observation made by Justice Chagla in the context pin-points the essence of good industrial relations. "I do not proposed to compel the Company to accept the suggestion of Mr. Tendolkar. The Company is not likely to lose anything by doing so. All that it will have to do is to inform the Union of any changes it proposed to make in the conditions of service and discuss the matter with the representatives of the Union before it ultimately comes to a decision. The Company's discretion to make any changes in the conditions of service would remain unfettered and I see no reason why the Company should fight shy of listening to the point of view of the Union put forward on behalf of the majority of its employees!" These words of Justice Chagla have a special

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significance for us today although the situation has changed considerably.

THE DIVATIA AWARDS

The Chairman of the Industrial Court, Shri H. V. Divatia, was appointed Adjudicator in a number of disputes. The Adjudicator began his work in November 1947, that is after the Company became a Municipal Undertaking. He approved of an extra bonus for the year 1946 and a number of improvement in the salary scales of clerks and other sections. The demands relating to working hours, holidays and other such questions were all rejected. In another Award Shri Divatia rejected the Union's demand regarding goodwill. Shri Divatia sanctioned a rise of 2 annas for every rupee in the case of the non-scheduled staff.

THE SHAH AWARD

A member of the Industrial Court, Shri M. C. Shah, was appointed Adjudicator and entrusted with the task of settling disputes arising out of the demands regarding the year of retirement, rise in salary-scales, bonus, dearness allowance on the weekly holiday and Union representation on the B.E.S.T. Committee. The demand for the Union representation on the B.E.S.T. was rejected by the Adjudicator on the plea that this was far too ahead of the times. The demand for dearness allowance on the weekly holiday was turned down on the ground that this demand was only another aspect of the general demand for salary rise. The Union had asked for bonus as part of the profits of the Company. And to support its claim the Union pointed to the precedent where bonus had been paid by the Company from out of its profits. The Adjudicator rejected this "bonus" plea, his argument being that in a public utility

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undertaking like the B.E.S.T. the balance (left after meeting all expenditure) cannot be described as 'profits'. This balance is credited to the "General Revenue" and utilized for public improvement purposes. (For the year 1970-71 the Municipal Corporation sanctioned 8-1/3 per cent of the pay as *ex gratia* payment instead of bonus).

After this there were a number of occasions when disputes were referred for arbitration to the Industrial Court.

A NEW ERA IN INDUSTRIAL RELATIONS

In 1957 the representative union presented a charter of demands. The two sides carried on negotiations for some time and a settlement regarding these demands was arrived at.

A new chapter opened in the sphere of industrial relations. Henceforth the two sides made it a practice to sit together and discuss the problems relating to demands. Both parties found the path of compromise more acceptable.

In 1959 the Union prepared a charter of 52 demands. And a strike was organized to press these demands. A compromise was arrived at and the strike was called off after four days. The Undertaking accepted certain demands and the work of organizing the classification and regradation of labour which was still before the Industrial Tribunal was entrusted to Shri H. R. Gokhale (Shri Gokhale was later appointed Justice of the Mumbai High Court and was also Minister for Law and Justice of the Union Government). Before arriving at a decision, Shri Gokhale took into account both efficiency, and job evaluation; he bore in mind the financial viability of the B.E.S.T. Undertaking and the salary scales and service conditions in force in other such organizations which had to do with transport, electricity and engineering.

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A Joint Committee of the management and labour carried out the task of job evaluation. Differences arose on certain basic questions and it was not possible to the joint committee to continue its work. The representatives of the management and of labour submitted separate reports on job evaluation to Shri Gokhale. The new classification and gradation made by him was based on these job evaluation reports. For the first time in the history of the Undertaking the wage structure of clerks and workers in the engineering, traffic and other departments (totalling a labour force of 20,000) were subjected to careful scrutiny and reconsideration. Till then the salary scales had been defined only on a piecemeal basis, but not as a whole. Secondly, as a result of the Gokhale Award there was an appreciable rise in the salaries of a majority of the B.E.S.T. workers. Thirdly, the wage structure which had been based on a traditional pattern was altered. Some of the anomalies within it were removed. The recommendations of the Gokhale Award were based on a factual study of work conditions and on job evaluation. The contradictions and anomalies in the wage structure were corrected. The existence of such contradictions had given rise to a great deal of discontent among the workers. The root cause of such discontent was now removed. Because of all these factors, the Gokhale Award is regarded as a significant step in the history of the Undertaking's industrial relations.

Besides, since job evaluation now became the basis for determining salaries, a certain order was now introduced into the field of service conditions. Henceforth no officer — and that included the Arbitrator, or a member of the Joint Committee — could fix the wages in any section without a practical and objective consideration of the work involved there.

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As mentioned earlier, in 1960-61 a Joint Committee of the Management and the Union was busy working out the details of job evaluation. This period witnessed an unusual happening. The Union lost its statutory representative status. There was a strike in December, 1959 and January, 1960. The Labour Court decreed that the strike was illegal. The Registrar discovered that, under a clause of the Bombay Industrial Relations Act, the Union was responsible for organizing and continuing the strike. As a result, the "representative" status of the Union came to an end. When such a situation arises, the Bombay Industrial Relations Act stipulates that in place of the Union the workers are expected to elect five representatives. The Commissioner of Labour called a meeting of the Undertaking's workers at the Vallabhbhai Stadium for this purpose. But it turned out that an election was unnecessary. There were only five candidates for the five seats. And they were all either members of the Managing Committee or active workers of the Union which had just lost its representative status. Six months later, according to the law, its representative status was restored to the Union.

In the matter of salaries, working hours and other facilities the B.E.S.T. Undertaking compares well with any other transport organization in the country. And in some respects it is even better. As for the vexed question of industrial relations, the BEST is not an industrial organization in the conventional sense of the term. That is, profit-making is not its objective. But this is a little misleading. Because, even if there is no 'profit' in it, there is the objective of providing 'service' to the community with the maximum efficiency and while achieving it 'profit' has to be kept in view. It is the same limitations, if under a different name. For 'profit', some other word is used. As a result, just as in a large industrial organization labour relations make for a

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risky responsibility calling for great skill, the BEST too with its labour force of about 46,000 has to face the same responsibility.

There was a time when in this Undertaking complaints, bickerings, discontent, strikes-which sometimes aggravated with a certain amount of violence-made a familiar pattern in the ways of the Undertaking's labour. The memory of it all is probably still there with the citizens of Mumbai. However, the last twenty-five or thirty years have been a period of comparative calm. In order that the present labour relations should be a matter of pride for the Management, regular efforts had to be made.

The Undertaking's management and administration have a long tradition of efficiency. The work of the organization has a firm base of healthy management and administrative principles and practices. The Undertaking is for the people. It is from this point of view that the Undertaking is always striving to promptly respond to the needs and aspirations of the passengers and the electricity consumers. This requires that the employee-employer relations are amicable.

The operations of the Undertaking are constantly expanding. Therefore, it lays stress on decentralization in the matters of control and authority. A course of action is accepted as a challenge; it is not given up because it generates a fault in the programme of the organization. The defects are pinpointed and proper remedial measures are undertaken. Evolution and development are unceasing processes in the administration.

FEELING OF A JOINT FAMILY

There is a constant effort to motivate and encourage the



A Meeting of the BEST Committee.



**First Chairman of
the BEST Committee
A. P. Sabawala**



**Present Chairman of
the BEST Committee
Arvind Nerkar**

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employees to achieve maximum productivity and efficiency. The entire organization is looked upon as a joint family, with all the employees as members of the family. Of course, there are sometimes differences of viewpoint in the administration and on the other hand, the workers and their Unions. The interests of the management and the workers are common and that the prosperity of the organization implies that of the workers is what everybody honestly trusts. This mutual trust between labour and management has been the main support to the co-operation between them and to the labour relations being smooth and amicable.

The 'Workers' Education Scheme recommended by the Labour and Employment Ministry of the Government of India has been put into operation by the BEST since 1962. During the last twenty-five years more than eleven thousand workers have profited from it. Under the scheme, the different depots run training classes, and study tours are arranged within and outside the city of Mumbai.

This scheme is conceived as one conducted by workers for workers. Under it, workers, after a period of time, become teachers, themselves. Such workers are deputed for the 'Worker-Teacher Training Course'.

For the observance of festivals, workers receive extra grants in advance, as also leave travel assistance. The latter scheme started in 1970. Formerly, under the scheme, third class fares for journeys by railways or by sea, were allowed. The scheme was dropped in 1977 and replaced by one in which the travel grant was consolidated. Under this scheme, now, every year employees in the various categories receive from Rs.500/- to Rs.2,700/- each.

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As per the rules framed in 1946, Industrial relations Committees were set up in 1974-75 to consider the complaints and problems brought up by the representatives of labour unions and the representatives of the management. These Committees meet regularly.

Since 1974-75, employees have been paid ex-gratia payment annually instead of a bonus. Since 1976, in both the transport and electric supply sections shop-level councils have been established. They comprise representatives of both the management and the workers. The meetings of these councils discuss a number of problems at the depot level.

In order to avoid judicial delays, an independent arbitrator is appointed. The BEST organization must be the first, in that sphere of activity in the country to refer to an independent arbitrator, individual labour dispute.

As stated above, in providing good conveniences to employees, as compared to any other transport organization the BEST has a special image of its own. At the same time, however, it does not tolerate indisciplined conduct or dishonesty on the part of the employees. If, after a full departmental inquiry, the charge of indiscipline or dishonesty is proved against an employee, appropriate action is taken against him. Penalties are meted out – like dismissal, demotion, reduction in the pay-scale, according to the gravity of the misconduct. With a view to securing improvement in conduct sometimes he is let off with a warning thus giving him an opportunity to improve. The warning is issued by the General Manager, or by one on the level of a Depot Officer.

To meet a social responsibility, the BEST has built tenements for workers all over Greater Mumbai : at Parel,

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Santacruz, Ghatkopar, Goregaon, Dindoshi. Of these more than 1,600 tenements have been given on an ownership basis and 3,578 on rental basis. These tenements provide all the essential amenities for the workers and their families.

HOUSE RENT ALLOWANCE

A house-rent allowance came into effect in 1977. It was on a slab system. The rates were liberalised in 1985. This 'stage' method was displaced from 1-4-1986, by another under which the allowance was calculated at 10 per cent of the basic pay and the dearness allowance taken together. The BEST Committee accepted in 1991 a proposal to grant 5 per cent of the house-rent allowance to workers occupying its tenements.

Under another scheme, reimbursement is made to a worker of the expenses he had to bear for a surgical operation, as well as for expenditure on medical treatment. Also, arrangement is made for the patient's stay in the Talegaon Hospital, the Lokmanya Tilak Hospital at Sion, the Radhabai Natu Watumal Hospital at Ghatkopar and there is reimbursement of the entire expenditure – on the stay and the surgical or medical expenses. Under a newly launched scheme, if an employee meets with accidental death while on duty, his dependents are paid rupees one lakh.

This grant is over and above the compensation paid under the various rules, like the 'Workers' Compensation rule and the Employees' State Insurance Scheme. The Undertaking has its own arrangement to supply blood, when needed, to employees and their family members. For this, the BEST organizes blood donation camps at its offices, workshops and depots. To impress on the minds of the workers the importance of family planning, free counselling is available at its family

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planning centres and means of birth control too are provided. Similarly, as an encouragement, employees undergoing the birth-control operation are granted special leave upto six days, with full pay allowances.

RECRUITMENT AND TRAINING

Recruitment on a temporary or permanent basis, is made to the various categories, according to requirement. Rules and regulations have been laid down in the matter of recruitment.

Officers are deputed for training to institutions of repute in the various branches. Such training is found to be useful from the viewpoint of the Undertaking's efficiency. Technical workers in the subordinate categories like foremen and fitters are sent for training to various workshops and factories for experience of handling different kinds of machinery, material, tools etc. There is a scheme under which children of workers are granted scholarship for education, which includes professional education. Post-graduate education is also included in it. The Undertaking runs grainshops which sell rationed, as well as unrationed items, to the workers at concessional rates.

It has already been stated that misconduct on the part of a worker is treated in a stringent manner. At the same time, workers rendering excellent service are honoured for it. Those who put in more than their usual quota of work, or show extraordinary efficiency, are awarded "Best Service" medals or certificates and cash prizes of upto Rs.1,000/- each.

The Arts and Sports Club of the Undertaking provides opportunities and encouragement to its members wanting to participate in competitions in those fields, held on the State, as well as national level, as also in ones outside these levels. These

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employees are granted their full pay and allowances during the period and on an average, sixty days leave in all. This club arranges for entertainment for employees and their family members.

PERSONNEL DEPARTMENT

The Personnel Department was set up in 1951 in order to cope with the new responsibilities brought by the fast changing situation. There was a constant increase in the staff of the Undertaking. There was much new labour legislation after the achievement of freedom. Standing orders regarding service had to be framed according to the Bombay Industrial Relations Act. It was necessary to co-ordinate the labour policies prevalent in the different departments of the Undertaking. All this business called for a special department. Therefore the Personnel Department was created and it was charged with the following duties :

- 1) Selection of Personnel for clerical and similar posts;
- 2) Compiling statistics of labour turnover, absenteeism, etc.
- 3) Acting as a Liaison between the Management and the Representative and Approved Union.
- 4) Advising and assisting the allied departments for maintaining a uniform policy throughout the Undertaking.
- 5) Ensuring co-ordination and uniform application of personnel policies throughout the Undertaking.
- 6) Removal of anomalies in the wage structure and its application.
- 7) Attendance at meetings between the Heads of Departments and the Management or the Workers' Representatives.

INDUSTRIAL RELATIONS

- 8) Correspondence with Unions and other organisations on labour questions.
- 9) Attending the proceedings before the Commissioner of Police and Councilors under the Bombay Industrial Relations Act.
- 10) Holding conferences with the Undertaking's Solicitors regarding labour demands and implementing the orders of the Labour Industrial Courts, or of the various statutory authorities constituted under different enactments, like the Chief Inspector of Factories.

The Personnel Department is headed by the Chief Personnel Officer.

CHAPTER 16

OTHER DEPARTMENTS

MATERIALS MANAGEMENT DEPARTMENT

The procurement of the various kinds of material required for the smooth operation of the work connected with the transport, electricity supply and civil engineering departments is managed by the Materials Management department, formerly known as the Stores department.

This department has its offices at Colaba, Dadar and Kussara, so as to deal expeditiously with the proposals for the purchase of various types of material. The Dadar office handles the purchase of chassis, tyres and tubes and other spare parts, grease, high-speed diesel, etc. The Kussara office looks after the procurement of the transformers, switch-gears and cables required by the supply branch and also building material such as cement, bricks, sand etc. required by the Civil Engineering Dept. The administrative work of the department is conducted at Head Office, Colaba.

The Undertaking registers companies concerned with these areas, charging them a fixed amount as registration fee. Whenever the tenders are floated the intimations are always sent to these registered firms to enable them to submit their quotations against the various tenders. Efforts are always taken to develop new sources so that material required can be

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procured expeditiously. In order to acquire the required material urgently, the Undertaking strives continuously to use new methods. Various procedures are thought up for acquiring material promptly. In 1990, for example, a system was devised known as COLD (Consumers Operated LUBE Depot). In different depots, oil tanks were made available by the oil Corporations to store lubricant oil. These tanks are looked after by the oil companies. To maintain the minimum stock of oil, the oil Corporation refill the tanks, following a time table. Payment for the lubricant used during the stipulated period is made at the end of particular time lag. As a result, the inventory of lubricant was maintained at zero point. Similarly, the Undertaking needs to have adequate stocks of various kinds of spare parts so as to enable to keep buses in good state of repairs. The Undertaking has entered into an agreement with a company in order to have an adequate stock of the necessary items in the Dadar workshop. This scheme is known as 'COSUD' (Consumers Operated Spares Unit Depot). Under this scheme the company is given space in the Dadar workshop. This space can be utilised only to stock items which are necessary for looking after the condition of the buses, but which are in short supply, so that the services run without a hitch. In this godown in the Dadar workshop stocks can be maintained of items that would be needed for at least two months. If the material required for a department gets exhausted, its stock is replenished, immediately. The main purpose of the scheme is to keep the inventory of the spare parts needed by the Transport department at the lowest level. The Material Management Department also looks after the procurement of the food grains to be supplied to the employees of the Undertaking. It began in 1970, with the buying of food grains worth about rupees 3.5 lakh and selling it to the employees on a 'no profit, no loss' basis. At present

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about 5 crore rupees worth of food grains are bought every year. And in all about 10,000 employees, including ration card holders, take advantage of the scheme.

The Department also looks after the selling of scrap. Material deteriorated by use, or of no use at all, or reduced to scrap, is assembled in the scrap yard. The scrap yard, formerly in the Deonar yard, has been moved to the scrap yard near the Oshiwara bus depot. Some of the scrap is housed in the Anik depot. All this scrap is either auctioned or sold by calling tenders. In 1970, the sale for the year brought in some 70 lakh rupees; the income has now gone up to between five and six crores every year.

SECURITY AND VIGILANCE DEPARTMENT

Till 1952, each department had its own watchmen. A centralised Watch & Ward Department was established that year, with a Security Officer as its head and havaldars, gatekeepers and 47 watchmen under him. The next year brought the addition of two security inspectors and a clerk. By 1954, when the centralisation was completed, the number of watchmen had grown from 40 to 164.

The Security Department had the following important duties assigned to it : to investigate cases of theft and corruption; to guard the depots, installations and other property of the Undertaking; to arrange for armed guard for the vehicles, etc., carrying cash of the Undertaking. Till September 1958, the Watch and Ward Department was attached to the Personnel Department. That year it was transferred to the Management and Secretarial Section, with the additional responsibilities such as confidential inquiries, inquiry into actions against the management; inquiries into cases of corruption; prevention and

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investigation of thefts; investigation of cases of assault; civil defence; providing training in drill for the watchmen and in marksmanship for the armed sentries. This department was headed by the Vigilance Officer and he was assisted by the Chief Security Officer.

On 1st April 1969, the Watch and Ward Department was made an independent establishment and placed under the General Manager and later on in October 1981, nomenclature of the department was changed to security dept. and the designation of the watchman changed to Security guard. That year a well equipped security training centre was established at Bandra depot in order to impart training to security staff and civil defence training courses were regularly conducted there. Officers and staff of Security and other departments were trained in detection of suspected objects found in the buses/premises. Training was imparted at 'Bomb Detection and Disposals squad'. The Security Officers were also imparted training in drill with / without arms at Gorkha Regiment, Rapid Action Shooting practice at Marksman's Academy and Karate Training at All India Gojukai Karate.

Since 1978, on 26th January, a Republic Day Ceremonial Parade is being held by the department at Backbay Depot.

In view of the rapid expansion of the Undertaking, a separate Vigilance Cell was created in the department in August 1992, mainly to investigate cases of leakage of revenue in Transport and Electric Supply Branch. Presently, the Security & Vigilance Department is headed by Chief Security & Vigilance Officer.

MEDICAL DEPARTMENT

The Medical Department is primarily responsible for

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assessment of medical fitness of the recruit candidates of various categories for appointment in the Undertaking and also to render medical treatment to the employees of the Undertaking. The Medical Department is headed by Chief Medical Officer who is assisted by two Deputy Chief Medical Officers.

Prior to municipalization in 1947, the B.E.S. & T. Undertaking had only two dispensaries at Dadar and Colaba for treatment of its employees. With the expansion of transport services and electric supply in Greater Mumbai from time to time, the Undertaking opened twenty-three full-fledged dispensaries.

The Undertaking provides all types of treatment to its employee patients for their illness free of cost. This includes treatment of chronic diseases anti-hyper tension, anti-diabetic, anti-tubercular.

The Medical Department has hospitalisation scheme where reserved beds are available for benefit of the employees of the Undertaking in various hospitals. During the last few years many employees suffering from heart diseases or heart block were given facility of implantation of pace-maker, replacement of mitral valve, bypass surgery and heart surgery in various hospitals in Mumbai.

All employees of the Undertaking are availing of reimbursement facility and dental reimbursement facility. The employees are given advice in the necessity to plan their families.

Importance is given to the medical fitness of drivers, shunters. Bus Drivers, Bus Shunters over the age of 40 to 45 years are examined once in a year.

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Health cards are being issued to employees of the Undertaking, who are suffering from major diseases and these cards can be maintained by them after their retirement also. This scheme is introduced during the Golden Jubilee Year.

Medical Department has started blood group data bank on computer which gives voluntary eligible donors with different blood group and locations of employees of the Undertaking. Continuous Medical Education Programmes are conducted.

II - DIAGNOSTIC CENTRE

A Diagnostic Centre (Examination Centre) was started in 1952 at Mumbai Central where the specialists visit. At this Centre, all types of routine investigations are carried out just as at various public/municipal/government hospitals free of cost. These include blood routine examination, serological examination, blood chemistry, sputum, urine, stools, X-rays, electrocardiogram and eye examination.

ELECTRONIC DATA PROCESSING DEPARTMENT

Computerisation in the B.E.S. & T. Undertaking began with the first application of Stores Material Inventory in the year 1968-69. Undertaking started this activity by hiring 11 hours of Computer-time daily on IBM-1401 Computer. Computerisation of Electricity Billing and Pay-roll followed and a stage was reached when IN-HOUSE COMPUTER was justified by the usage. Billing was computerised in the year 1971 and Pay-roll in 1973. In the year 1981, the Fourth Generation Computer MV/8000 was installed. The change-over to DG-MV/8000 entailed rewriting about 100 programmes, which had been written in IBM-1401 Autocoder in a new language, namely DG-COBOL. In doing this the Undertaking did not simply translate the programmes, but

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redesigned the Systems themselves, so as to exploit the power of the DG System. The huge conversion work was completed well in time and we were in a position to discontinue hire of Computer time from any outside agency on the day the In-House Computer became operational. This was a good achievement of which E.D.P. Department ought to be justly proud of.

The following were the major applications implemented by B.E.S. & T. on Data General Computer System, namely,

- i) Electricity Consumer billing;
- ii) Installation of load data and meter records;
- iii) Pay-roll – pay-slips, ex-gratia, arrears, provident fund, Income Tax, L.T.A. and Leave Encashment, E.S.I. etc.;
- iv) Store Material Inventory;
- v) Traffic Ticket Accounting;
- vi) Daily Vehicular Returns;
- vii) Tyre Statistics

The Computer technology has been changing very fast. Every year new models with better and advanced features are coming out. The software technology is also changing in leaps and bounds. While carrying out the future developments these things have to be kept in mind.

The development carried out till then was in the batch mode of operations. This did give the benefits of Computerisation, but now the new techniques were available to carry out the development in "ON-LINE" mode. The batch system gives the "history" while the On-line Systems gives the "news". BEST

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had decided to start using the On-line technology since the year 1991.

Till the year 1991, processing of all the jobs for the systems, viz. Ticket Accounting System, Daily Vehicular Return, Electricity Billing, Payroll etc. were being done centrally at the Computer Centre at Backbay Bus Depot. In the year 1991, the idea of decentralisation of Traffic applications was initiated.

As a first step of decentralisation, one MINI Computer System PCS-AViiON-3200 was installed in July 1991. This system was based on the UNIX Operating system, which was the latest technology. The On-line Ticket Accounting System was developed in end of December 1991.

The new applications & other activities undertaken in various departments by the Electronic Data Processing department include processing of tickets & cash applications, analysis of trip cards, applications of engineering and departmental sub store applications etc. The new activities also include palm top computers, computer installations at some depots to avoid time, energy and labour in transporting input & output document

Besides, activity relating to processing of cheques is also taken on computer. The project of digitisation of Mumbai City maps for underground cables is under process. Six mini computers are installed at six zonal computer centres for processing of ticket accounting system and daily vehicular return system.

PUBLIC RELATIONS DEPARTMENT

It hardly needs to be said that good public relations are very important for any organization which has to deal with the

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public. The organization, if it is to give its best, has to be fully aware of the difficulties and inconveniences suffered by the public and of its complaints. The concept of 'Public Relations', like several other concepts in the theory of management, first took shape in the U.S.A. in 1930. Our country accepted it during the years of World War II. Now we regard public relations as an unavoidable aspect of the work in any organization.

The B.E.S.T. Undertaking, with its constant and many sided contact with the public, has great use for a Public Relations Department. At one time, when there was no department bearing such a name, its various functions were entrusted to the Secretary. The need for a separate department came to be felt keenly. The Undertaking decided in 1950 to set up a Public Relations Department. The functions of the Department are : to take note of the complaints of passengers and consumers and to attend to them, to remove their *misconceptions, to supply them the information they ask for —* ~~to act as a link~~ *to act as a link* between the Undertaking and the people and institutions served by it; to edit '*BEST Varta*' the Undertaking's bulletin; to issue press notes; to publish administration reports and booklets and other material of the kind and to run the Advertisement Section which is concerned with the advertisements carried by buses, bus-shelters, kiosks on street lighting poles and hoardings.

The features which usually appear in the periodical are : Farewell to retiring employees, News Items to honour employees *who have distinguished themselves in other fields such as sports, literature, arts etc.,* News from the Transport as well as Electric Supply Departments, Reports of various functions, Contributions, like articles, cartoons, etc., from the employees.

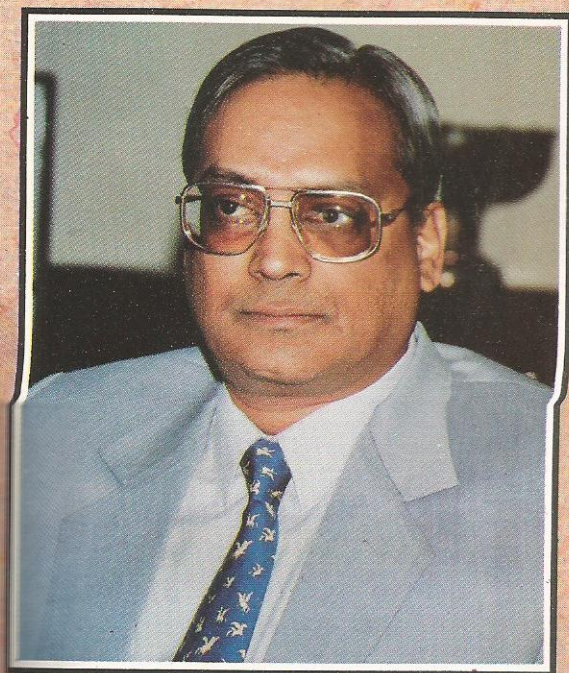
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ADVERTISEMENT SECTION

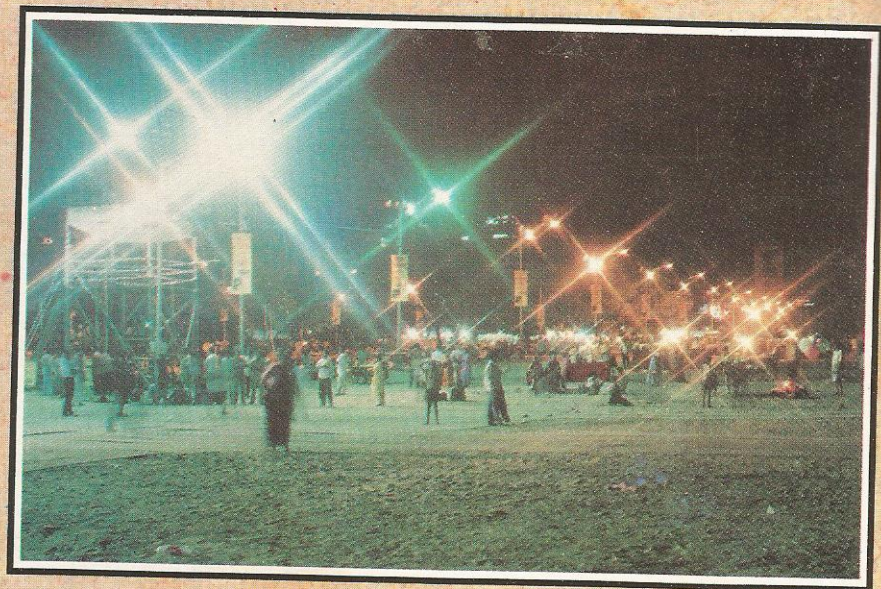
The practice of letting out some space inside or outside the vehicles for carrying advertisements started about the same time as the horse-drawn tramcars. No record is available of the rates charged or the income earned till 1927, in which year the total income from such advertisements amounted to about Rs.39,000. Then, as now, agents used to be appointed to secure advertisements. The Advertisements Section has expanded a great deal since the Undertaking took over. There are four 'places' which now carry advertisements : (1) Buses, (2) Bus shelters, (3) Kiosks on street-lighting poles, (4) Hoardings at vantage spots (since 1962). The revenue per annum has now shot up to Rs.8.25 crores.

For letting out each of these four kinds of space for advertisements, tenders are invited, and the person submitting the highest tender is appointed as the sole agent.

**First General Manager
of the BEST Undertaking
A. L. Guilford
(1947-1949)**

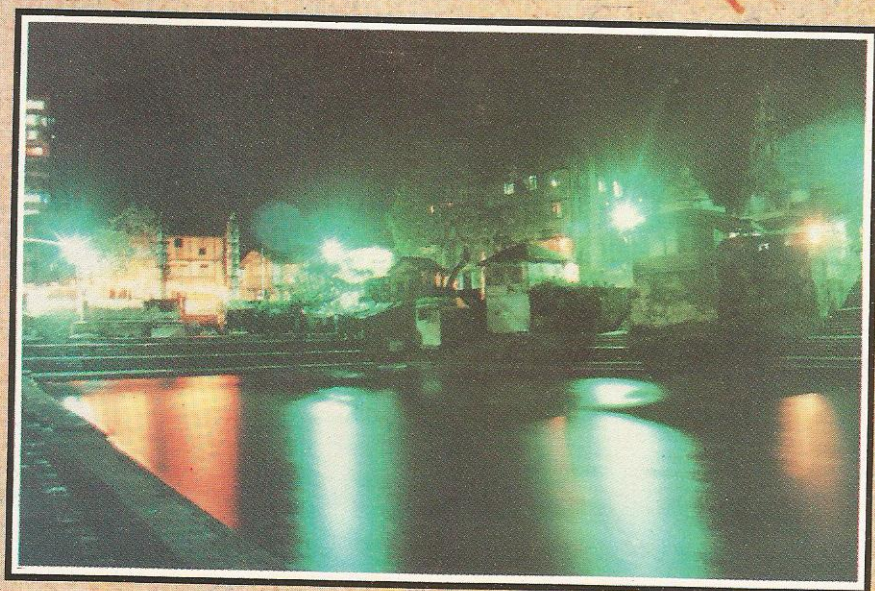


**Present General
Manager
Vinay Mohan Lal
I.A.S.**



Lighting Arrangements at Chowpatty for Ganpati Immersion.

Lighting Arrangemens at Banganga, Walkeshwar.



CHAPTER 17

SOME STRAY REFLECTIONS

So far we have traced the growth of progress of the BEST Undertaking till 1997. However, once again, it has to be underlined that this is not a history, nor an authoritative reference book. It is just a story, an account.

Who runs the bus transport without which Mumbai is rendered virtually lame? Its efficiency is a matter of pride for every Mumbaite. To whom does the credit for it go? That the Mumbaite should know it all; that he should have a broad picture of the work of the Undertaking, was the objective behind this writing.

As I was coming to the end of the first edition of the BEST story – covering the period from 1947 to 1972 – several thoughts crowded in my mind. They found articulation through an imaginary 'Nanabhai'. Once again, today my frame of mind is very much like that same Nanabhai's. More and more thoughts are clamouring for expression. And I am giving myself a free rein in writing this chapter. Maybe, there will be the doubt as one is reading it : *How is all of it related to the achievement of the Undertaking?* The doubt should be dispelled by the time one has finished reading the chapter.

Milk, gas, water, electricity, the railway local service and

SOME STRAY REFLECTIONS

the other modes of transport : Well, these are the daily needs – and pressing needs of Mumbaites. If there is the slightest slip in their smooth availability, the citizens feel it immediately. Nay, they are despondent. "When will it be back to normal? Everyone starts asking plaintively, rather than angrily. Unless he has achieved the philosopher's calm or the pessimist's resignation. Very recently the truck-drivers went on strike for four or five days. And the prices of life's necessities shot up like mad.

Who are you going to blame for this state of affairs? The government has other responsibilities to face, the most challenging of them being that about the cost of living. Any strike pushes that up. The rulers have to go to the people every five years. To appeal for their votes. The parties in opposition demand to know the why and how of every rise in the cost of living. They too do it with an eye on votes. And the common man is just fed up.

It all came to mind because of the recent four-day's complete strike in the Undertaking. It was then that Mumbaites realized what an important part of their life the bus system is.

A strike immediately gives the people something like a burning sensation. But what, when the growing temperature rises to boiling point? Will it scorch? At present, the people of Mumbai are adjusting themselves to the circumstances. The low temperature does not quite scorch. But quite soon it will be a case of the last straw on the camel's back. It will just break the camel's back. Some people might think I was stretching it to the extreme. But the way the city of Mumbai is swelling-or deteriorating, one might say such a situation is within the realm of possibility.

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In sketching the story of the Undertaking upto 1997, I have given an idea about the increase in the population and the number of buses during these years. Everybody is feeling the effect of it all on the bus transport and the environment. The bus would now seem to be crawling slower than the tramcar. It was precisely because of its low speed that the tram was dismissed as being outdated.

What are the multifarious effects of the constantly growing population is a subject that lies in the sphere of the experts. But some of them are apparent even to a layman like me. Go where you like and you have crowds, congested roads, schools and colleges and railway trains and buses and other vehicles, et cetera. I say et cetera to comprise so much else that is past my comprehension. I have not made a study of the frightening situation detail-wise. I have lived in the Dadar area for the last seventy years. I have seen a vastly different Mumbai. After Sundown the Dr. Babasaheb Ambedkar Road [the Vincent road of the those days] was as good as deserted. To walk from Dadar T.T. to the King's Circle [at Matunga] was a scary experience. The same was true of walking along the Tilak Bridge. There is no hour of the day or night now when you are not aware of people moving about. Stir out at an odd hour-say, at 3.00 a.m. and you have the inevitable bunches of men; men on their way home after the night shift in some textile mill or industry. In the Dadar area, there used to be much fewer people in the streets then on a Sunday than there are on any weekday now. One is fed up with the very idea of stirring out on a holiday. In those days, Sundays and holidays were sort of set aside for visiting relatives and friends. Going out 'casually' is just not done today. If one goes out it is for some unavoidable work.

It was the same tale of woes with the buses and the local

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railway service, Today, a man who takes a train at Thane for Mumbai calculatedly, as he thinks, gets into a Thane local. It is all so nice and comfortable. He even gets a window seat. He is mightily pleased. But at the Dadar Station where he wants to get off, it is anything but nice. His clever calculation has gone all wrong. The exit has such a crowd milling near it that he just can not get off. And the expense? Formerly, it was a mere four annas carried you from Dadar to Fort. Now it's all of five rupees! Coins are fast going out of circulation. A rupee means nothing. Who bothers about it when you have to throw it on something that you got the other day for just ten paise?

Yes, there are more industries, there are more jobs. Pay-packets are fatter. So the middle class can at least manage. But all these apparent increases have brought not just blessings, but alas, with them curses. That the prices of commodities have gone up has its other reasons, but that the supply falls short of the demand is also one of them.

And who is responsible for it? There could be several. You won't be able to put your finger on one. None will implicate himself openly. But the biggest criminals, rather obviously, are : the swelling population and the swelling number of vehicles on the roads. They cannot plead "not guilty" to the charge. Once again, it is no expert writing this chapter. The experts too have been exposed by the circumstances. But this is being written by a simple Mumbaite - 'illiterate' in the changed ways of today. But he is a Mumbaite in his grain. He has been a witness of the continuous change, bearing the burns of it all. What he is saying is mainly based on the articles and statistics in newspapers - and, of course, on his personal experiences.

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The leading car manufacturers in the world are here for "collaboration". Advertisements of new models catch one's eye every day. One can not help thinking: most of these vehicles will be running on Mumbai's roads. Where else will they go? The roads of "Beautiful Mumbai", the biggest market for cars in the country, are already groaning under the weight of vehicles. To make the roads wide enough for them, every day footpaths are being sliced away. How much more will they do it? And how wide can the roads be? As it is, one finds it difficult to walk along the footpaths. Or is it that like Pune, Thane and Nashik, for instance, Mumbai's roads will have no footpaths? And will all the widening prove equal to the ever-growing traffic?

Not that the government is unaware of it all. As many as forty fly-overs are scheduled to come up in the city in the near future. Of course, that will ease the traffic congestion. But how long? This is a terrifying question. It is true though Mumbai is not the only city suffering from this malady. The phenomenon of the growth of vehicles, using roads, is more or less common to the whole world. But the example of the rest of the world will not be of use here. For one thing, most of those countries are affluent. They have underground railway systems. And their fly-overs have floors. A friend of mine had just been to South Korea. He saw a river bridge there which has four floors: one for the railway, one for trucks, one for motor cars and one for the tramway! We can only hear these stories. If the tram service is to be restored, how many crores of rupees will it mean per kilometre? For forty years now the Mumbaite has been beguiled by the alluring story of the underground 'metro' to come. Even if all the technological impediments are solved – there is the steel wall staring you in the face: Where is the money for it all

SOME STRAY REFLECTIONS

to come from? It's millions and billions – maybe, trillions. It is getting impossible even in cities like London and Tokyo and New York to move about in a private vehicle. There too is the steel wall. Not of lack of funds, but of parking places! Wealthy persons, after a limit do not go out in their own car, but prefer the public transport. If that is the lot of opulent cities, cities overflowing with riches, what can impoverished Mumbai do?

The Mumbaite tried to evade the changing conditions as far as he could and patching up a truce with the situation, he is still carrying on! But he will realize after some time that his complacency is hollow. A short while ago, I had been to a village. Spent four days there. There was no entertainment, no daily paper; as far as the food and drink it was rustic fare. Yet I kept thinking that I had not had such enjoyment for a long while. I couldn't see why, though. Then I realized that I had not experienced such utter tranquility for years together. The only sound there was of the wind blowing. And I realized what horrid effect sound pollution has on our brain. When? When I took in the quessence. Till then the brain had been adjusting itself to the gradually growing sound pollution. Will the Mumbaite similarly adjust himself twenty-five years hence? Let man, if he likes, snuggle up to such satisfaction. But the leaders and the rulers can not afford to be so heedless. That is why people are worried about what can be done in the present circumstances and in the ones to come. They clutch at the solutions that occur to them.

Mumbai's roads are, by and large, the creation of the British. So wide, that till 1940, their width struck you. The same holds good specially for water supply and electricity supply. We did not quite need that much water and electricity in those days. The Tansa Lake is so far away from Mumbai; but after a

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hundred years it still continues to serve us. They had the foresight in those days to know that the city would continue to grow.

Where do people come from in Mumbai? From the whole country. Anyone with merit in him, whichever the field, is confident that it will be rewarded only if he goes to Mumbai. And it is, fully rewarded. A joke about the literary field comes to mind. Writers from outside, even ones from Pune, look with suspicion at the creature called "Mumbai Sahityika". They have persuaded themselves that these creatures gang up to corner all the reputation and the status and the money that is in the business. They fret and fume to that effect – but mostly in private. They forget that there is no such thing as a 'Mumbai Sahityika'. Some gifted writers, convinced that to come to the notice of the readers, to make a reputation and to strike fortune, they have to migrate to Mumbai, do so. They settle down in Mumbai. Their hope is not belied. And, in a manner of speaking, they become neophytes : that is, forsake their old place and become Mumbaites. Like myself. What does one make of it? What else can we call it but the "Mumbai magic"! And, of course, there is no question of jobs. Here you get some job, somewhere. That is the greatness of Mumbai. That brings to the city, rushing from all over the country, gifted people, artistes, industrialists, dreamers of dreams and those who have the toughness to accept what risks may come. The poor-and-hungry lead them. Then there are the graduates hoping to get employment. And those with new ideas, in the hope of getting a break for them. Briefly, Mumbai is the one sustainer of all the needy of the country and of all the hungry.

Another problem is of pollution. Where lies the root of this disease? I see just one villain : Mumbai's population –

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grown beyond measure. A city of forty lakhs has now a crore! What can the government do? And the police? This age of machines has had its impact on the criminal gangs. They don't wield the 'Rampuri' knife any longer. It's a revolver now and sometime even AK47. The common citizen is not yet afflicted by the threat.

The city has had several calamities over these years. But the Undertaking braved them with such ease and confidence that we take it for granted that the bus system will run smoothly, electric supply will be uninterrupted. And the Undertaking too has shown that our confidence was not misplaced. Here is a simple example. Mumbai is the only city in the country where bus queues are observed. This of course, did not come naturally. The Undertaking had to put in efforts to achieve it. It detailed inspectors at the more crowded bus-stops. After a while, Mumbaites realized that it was the most comfortable way.

I have every confidence that howsoever difficult and demanding the day to come, the Undertaking will prove more than equal to them. Its performance till now holds that assurance. My very best wishes to it on behalf of Mumbaites.

Jai Maharashtra! Jai Hind!!

