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TAMIL NADU ARCHIVES

GOVERNMENT OF TAMIL NADU

P. W. D DEPARTMENT

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B.S. 28

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

13th August 1880, No. 1,943 W.

Buildings and Roads.
Civil Works.

Read the following paper:—

No. 33-A. From F. N. THOROWGOOD, Esq., M. Inst. C.E., Superintendent, Madras Harbour Works, to the Secretary to Government, Public Works Department, dated Madras, 4th August 1880, No. 35 W.

I HAVE the honor to submit the following report of the progress on these works during the past month of July 1880.

2. *North Pier Superstructure.*—Throughout nearly the whole of July a heavy ground swell has seriously interfered with diving operations, and during the last few days of the month (and up to the present date) the swell has been such as to stop work except for a few hours during the day. Moreover, from the 14th to the 29th July, all work of blocksetting had to be suspended at the north pier on account of the surf bank and railway lines being cut through to admit of the carrying out of the intercepting sewer. Notwithstanding these obstructions to progress, however, there were 160 blocks successfully set in position advancing the pier by a length of $92\frac{1}{2}$ lineal feet, and bringing up the total length to 3,117 $\frac{1}{2}$ feet from the point D, and to within exactly 600 feet of the commencement of the pier head.

3. I regret to state that there seems every probability of continued difficulty in setting the lower courses of blocks so long as the waves strike the pier as at present because at the south-west corner such a heavy swirl or eddy is caused that the divers are twisted round and carried off their legs at this spot when they could manage to work with comparative ease at other places.

4. *North Pier Rubble Base.*—The north pier base is so well in advance of the block work (as shown on the plan and sections accompanying this) that I have caused very little stone to be used in it during July, the greater portion going to the south pier. During the past month only 4,106 tons of stone were deposited, of which 2,654 tons were carried by the cargo boats and the remainder by steamers.

5. The base now reaches to about 580 feet beyond the end of the block work, and for nearly the whole of this length is sufficiently made up for setting blocks upon. It is not desirable to work much at the base of the pier head until I receive from Mr. Parkes his final orders as to the design of that work.

6. *Concrete Blockmaking.*—The work of making blocks in the yards has been carried on at a sufficiently quick rate, and the number of blocks on stock is such that none under the age of two months are set in the work. During July 407 blocks were made, of which number 85 were by hand-labor at the south pier, and the rest by machinery. In three weeks' time all the blocks for the curved work of the south pier will be finished, and this will simplify the arrangements for block frames to a great extent as all the remaining blocks in the piers will be rectangular in shape.

7. *Quarries.*—The quarries have been working fairly well during July, and although I have had to press the Contractor at Ambatur rather hard he has nevertheless succeeded in keeping up a fair supply. The quality of the laterite is, however, not so good as I should wish, but unfortunately there is now no choice. During the month 17,503 $\frac{1}{2}$ tons were sent down to Madras, which is almost exactly equal to what was quarried in the previous month of June, and is the limit of what can be turned out.

8. From the Pallavaram quarries a larger quantity has been quarried than usual, and since 17th July there have been five trains running daily. The amount of stone sent from these quarries in July has been 18,682 tons which has been used for rubble base and for blockmaking. Much of this stone is loaded up at the new siding laid in by the contractor at his own expense. Dynamite is still used with satisfactory results for quarrying.

9. *South Pier Superstructure.*—During the early part of July the progress at the south pier was very good, but latterly the same cause that interfered with progress at the north pier was attended by a similar result at the south. The ground swell raised such a powerful eddy that no divers could work. In the whole month 288 blocks were set, advancing the pier by a length of 163½ feet, and making the total length from the point E 2,564 feet. Of this work 177 feet is built on the curve. At the date of writing the swell is heavier than ever and prevents progress altogether.

10. *South Pier Rubble Base.*—The rubble base of the south pier has been rather closely followed by the superstructure, and consequently the steamers have had to work almost exclusively at this base during the past month. There were 22,870 tons of stone deposited in July which should be equivalent to 231 lineal feet of the completed bank. The base now extends about 460 feet in advance of the blockwork, and is made up to the full height for 300 feet of that length. Sections and soundings are constantly taken to ensure no waste of stone, and the results of these soundings are from time to time forwarded to Mr. Parkes in England.

11. *Protective Works to Beach.*—The sea continues to encroach to the northward to a certain extent, but the general contour line of the shore has not altered much during July, although near the northernmost groyne there has been a rather remarkable recovery of ground. In the neighbourhood of the Police Tannah and along Mr. Coleman's wall, boulders of granite are still being deposited, as the sea still continues to flatten the slopes to a certain extent. For these works only 1,035 tons of stone were used during the past month.

12. *Intercepting Sewer along Beach.*—As I have stated in a previous paragraph on the night of 13th July the north surf bank was cut right through, and from that date to the evening of the 19th the work of building the sewer through the bank was carried on. The water was most troublesome, but by constantly keeping a steam-pump at work and by working night and day we managed to get the culvert securely and properly built. Since then the sewer has been extended by means of iron pipes into the sea and in a few days will be quite completed. The arrangement for disposing of the storm water is not yet commenced, as it seems to me desirable to see how the sewer by itself answers first.

13. *Stores received on Works.*—The following vessels have brought stores from England during July :—

<i>S. Gannet,</i>	558 casks cement, 12 diving dresses.
<i>Medusa,</i>	2,360 sacks of cement.
<i>White Adler,</i>	1,680 do. do.
<i>Rajah of Cochin</i> completed discharging her cargo.	

The *Gannet* ought to have brought some solution for divers' dresses, but although mentioned in the packing account this was not received.

14. *Plans, &c.*—The usual lithographed plan to a scale of 200 feet to an inch accompanies this report, together with longitudinal sections giving the most recent soundings on the bases. The high water line of 31st July is shown in burnt sienna and that of 30th June in red. It will be observed that there are no important changes going on either inside or outside the harbour.

15. *Expenditure.*—The expenditure, up to the end of July, has been approximately Rs. 42,08,492.

16. *General.*—The progress during July has not been so good as in July 1879, but the chief reason for this has been the heavy ground swell, and the interruption to traffic caused by cutting through the surf bank.

17. Another cause has also retarded the work and that I regret to state is sickness on my staff. At the present date I am deprived of the valuable services of Mr. G. Lowe, Head Foreman, who had charge of all the blocksetting arrangements. He has been most seriously ill from such long and constant exposure in the sun as is unavoidable on works of this description. I am glad to learn that he is better, but he will not be able to work for some time.

18. *Visit of His Grace the Governor.*—On the 20th July the south pier works were inspected by His Grace the Governor who proceeded to the end of the south pier to see the commencement of the curved work.

No. 33-B.

ORDER THEREON, 13th August 1880, 1,943 W.

RECORDED, with remark that the Government rely on Mr. Thorowgood to see that no laterite of a quality which might imperil the future solidity of the work is used.

(True Extract.)

Major, R.E.,
Under Secy. to Govt., P.W.D.

To the Superintendent, Madras Harbour Works.
" Secretary, Harbour Works Committee.
" Marine Department.
To General Morgan.

Edw. E. C. Shunker.
Spare Copies

BUILDINGS AND ROADS,
CIVIL WORKS.

G.O. of (1880) Madras

PUBLIC WORKS.

THE SUPERINTENDENT, MADRAS
HARBOUR WORKS.

cc, cc, cc

Dated August, 1880.

Encl.

Recd.

Ret.

G. O., 18th August 1880, No. 1,943 W.

AUGUST.

Nos. 33-A-33-B.

Madras Harbour Works.—Progr
Report of the — for the month of J
1880 recorded with remarks.

No. 35 W

From

THE SUPERINTENDENT,

MADRAS HARBOUR WORKS.

To

Colonel R. A. Sankar C. B. R. E.

Secretary to Government P. W. D.

Buildings and Roads

MADRAS, 14th August 1880.

Sir,

I have the honor to submit the following
report of the progress on these works during
the past month of July 1880

North Pier
Superstructure

2 Throughout nearly the whole of July a
heavy ground swell has seriously inter-
fered with diving operations, and during
the last few days of the month (and up
to the present date) the swell has been
such as to stop work except for a few
hours during the day. Moreover from the
14th to the 20th July, all work of block-
setting had to be suspended at the
North Pier on account of the surf bank
and railway lines being cut through to
admit of the carrying out of the intercept-
ing sewer. Notwithstanding these ob-
structions to progress however there were

160 blocks successfully set in position advancing the pier by a length of $92\frac{1}{2}$ lineal feet, and bringing up the total length to $3117\frac{1}{2}$ feet from the point B, and to within exactly 600 feet of the commencement of the Pier Head.

3 I regret to state that there seems every probability of continual difficulty in setting the lower courses of blocks so long as the waves strike the pier as at present because at the South West corner such a heavy swirl or eddy is caused that the divers are twisted round and carried off their legs at this spot when they could manage to work with comparative ease at other places.

4 The North Pier base is so well in advance of the block work (as shown on the plan and sections accompanying this) that I have caused very little stone to be used in it during July, the greater portion going to the South Pier. During the past month only 4106 tons ^{of stone} were deposited of which 2654 tons were carried by the

North Pier
Rubble Base

1943/4 cargo boats and the remainder by Steamers. 5 The base now reaches to about 580 feet beyond the end of the block work, and for nearly the whole of this length is sufficiently made up for setting blocks upon. It is not desirable to work much at the base of the Pier head until I receive from Mr. Parker his final orders as to the design of that work.

Concrete
Blockmaking

6 The work of making blocks in the yards has been carried on at a sufficiently quick rate, and the number of blocks on stock is such that none under the age of two months are set in the work. During July 407 blocks were made of which number 85 were by hand labour at the South Pier and the rest by machinery. In three weeks time all the blocks for the curved work of the South Pier will be finished, and this will simplify the arrangements for block frames to a great extent as all the remaining blocks in the piers will be rectangular in shape.

7 The quarries have been working fairly well during July, and although I have had to press the Contractor at Ambatur rather hard he has nevertheless succeeded in keeping up a fair supply. The quality of the laterite is however not so good as I should wish but unfortunately there is now no choice. During the month 17503½ tons were sent down to Madras which is almost exactly equal to what was quarried in the previous month of June and is the limit of what can be turned out.

8 From the Pallavaram Quarries a larger quantity has been quarried than usual and since July 17th there have been 5 trains running daily. The amount of stone sent from these quarries in July has been 18682 tons which has been used for rubble base and for blockmaking. Much of this stone is loaded up at the new siding laid in by the Contractor at his own expense. Dynamite is still used with satisfactory results for quarrying.

South Pier
Superstructure

9. During the early part of July¹⁹⁴³ the progress at the South Pier was very good, but latterly the same cause that interfered with progress at the North Pier was attended by a similar result at the South. The ground swell raised such a powerful eddy that no divers could work. In the whole month 288 blocks were set, advancing the pier by a length of 163½ feet and making the total length from the point E 2564 feet. Of this work 177 feet is built on the curve. At the date of writing the swell is heavier than ever and prevents progress altogether.

South Pier
Rubble Base

10 The rubble base of the South Pier has been rather closely followed by the Superstructure and consequently the Thimmers have had to work almost exclusively at this base during the past month. There were 22870 tons of stone deposited in July which should be equivalent to 231 lineal feet of the completed bank. The base

now is made about 400 ft. in advance of the blackrock, and is made up to the full height for 300 feet of that length. Scares and soundings are constantly taken to insure no waste of stone, and the results of these soundings are from time to time forwarded to Mr. Parris in England.

11 The sea continues to encroach to the northward to a certain extent, but the general contour line of the shore has not altered much during July, although near the Northernmost quay there has been a rather remarkable recovery of ground. In the neighbourhood of the Police Wharfe and along Mr. Coleman's wall, boulders of granite are still being deposited, as the sea still continues to flatten the slopes to a certain extent. For these works only 1035 tons of stone were used during the past month.

12 As I have stated in a previous

Protective Works
to Beach

Stores received
on Works

Intercepting Scares
along Beach



1903
11. paragraph on the night of July 13th the North Surf bank was cut right through, and from that date to the evening of the 19th the work of building the sewer through the bank was carried on. The work was most troublesome, but by constantly keeping a steam-pump at work, and by working night and day we managed to get the culvert securely and properly built. Since then the sewer has been extended by means of iron pipes into the sea and in a few days will be quite completed. The arrangement for disposing of the storm water is not yet commenced, as it seems to me desirable to see how the sewer by itself answers or not first.

13. The following vessels have brought stores from England during July.

"Gannet"	550 casks Cement 12 Diving dresses
"Medusa"	3360 casks of Cement
"White Adder"	1000 casks of Cement
"Rajah of Echir"	completed discharging her cargo.

G.O. 11th July 1880

Buildings & Roads

From

The Superintendent

Madras Harbour Works

P.W.D.

SAVED

N^o 35 W.

N^o 35 W.

Dated 4th August 1880

with Submission
29-1-81

9/8/80

Madras Harbour Works - Progress
Report of the - for the month
of July 1880.

Cir. p. 8. 80. 11/7/80
C. 5-8-80

M 10/4/80 19/8/80

PUBLIC WORKS DEPARTMENT.

PROCEEDINGS OF THE MADRAS GOVERNMENT.

Under date the 15th August 1880

Read the following :-

From the Superintendent

Harbour Works } 10th 25 W 1/6 Aug 1880

Ordered to be recorded.

With reference to the
Report of the Superintendent
of the Harbour Works
of a quantity of work
done in July 1880
and in view of the fact
that the work is done
in accordance with the
instructions of the
Honble Member for
the Harbour Works
and that the work is
done in accordance with
the instructions of the
Honble Member for
the Harbour Works
and that the work is
done in accordance with
the instructions of the
Honble Member for
the Harbour Works

Report by the
Honble Member for
the Harbour Works
General Manager
ET

ET

11/8

G.C. 14 July 1860 by 161m

1. Plan sent by hanging

1. Plan sent by hanging
1/8

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4984

Govt. of Madras.

PUBLIC WORKS.

28-8-71

To

Dated

Issued

Recd.

Encl.

G. O. 13th Sep. 1880, No. 1943 W.

Vol. 33 A-232

Marino H Woods

Payees reports
of the — for the
month of July/80.

Recorded with
amails.

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