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TAMIL NADU ARCHIVES

GOVERNMENT OF TAMIL NADU

P. W. DEPARTMENT

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197	

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V-S-M.

1929 W
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GOVERNMENT OF MADRAS.
PUBLIC WORKS DEPARTMENT.

23rd April 1878, No. 1,929 W.

Buildings and Roads.

Civil Works

Read the following paper :—

No. 240. From N. ST. B. BEARDMORE, Esq., Assistant Superintendent, Madras Harbour Works, to the Secretary to Government, Public Works Department, dated Madras, 1st April 1878, No. 1 W.

I HAVE the honor to report that owing to continued fine weather the progress on the Madras Harbour Works during the month of March 1878 has been satisfactory.

2. *North Pier.*—A length of 94½ feet of breakwater has been constructed at the north pier, making a total length of 694½ feet from the point B, the commencement of the breakwater, or 1,300 feet from the old high water mark; the number of blocks set has been 152. During the early part of the month the section of the breakwater was the same as that constructed during the month of February, that is, a double tier of three blocks, 8 feet each in height; but at a distance of 618½ feet from the point B a double tier of four blocks, or eight blocks in the section, was commenced. For a time the sizes of these blocks were irregular, as it was necessary to step down, as it were, gradually into deeper water, so as to avoid making a sudden step from a tier of three full-sized blocks to a tier of four full-sized blocks. At a distance of 647½ feet from the point B a full-sized section of the pier, which will be continued throughout, was set. This section is a bottom block of 6 feet in height and three blocks above of 8 feet each in height, with another similar tier placed by its side. These bottom blocks are 14 feet in transverse length viewed as they are set in the breakwater, so that they project 2 feet beyond the blocks placed above them, which are 12 feet in transverse length. The rubble stone bed has been carefully levelled by divers before the blocks were set on it, and is at the end of the breakwater about 4 feet in thickness. The blockwork set in this breakwater is now regular and even, with the proper batter of 4 feet vertical to one foot horizontal.

3. *Rubble Base.*—The amount of stone deposited in the rubble base during the month has been 3,316 tons; of this 2,313 tons were deposited by boats and 1,003 tons by hand labor. A method was adopted this month of throwing stone from the platform of the titan, a sort of gallery having been erected by which the coolies could ascend to this platform with the stone. This method seems to answer well, as the stone can be thrown out to a wider extent than can easily be reached in throwing it from the breakwater; and the space below the titan, where workmen are at work during the setting of the blocks and at other times, is kept clear from the stone coolies. In fact there are times, for instance, during the process of block-setting when such a number of coolies could not be allowed to come underneath the titan.

4. An experiment has been made during the month of bringing stone from Covelong in the Steam Hopper Barge *Hobart*. It made one trip and deposited

120 tons for the basement of the north pier, but the enterprise was interrupted owing to some question having arisen concerning the proprietorship of the stone; and the negotiations for renewing the experiment are not yet completed.

5. *Block-making.*—The total number of blocks set in both piers has been 302. The total number of blocks made has been 367. Of these 230 have been made by machinery and 137 by hand labor. On the north block ground 170 were made and on the south block ground 197.

6. The jaws of the stone-breakers continue to wear out, and nothing has yet been heard of the expected arrival of new jaws from England or of other duplicate parts of the machinery indented for some time ago.

7. *Quarries.*—The supply of laterite stone from Ambatoor for the month has been 2,730 tons, but of this 320 tons were small gravel and used for block-making, the rest has been deposited in the rubble bases of the piers.

8. The supply of stone from Chinnamapett for block-making has been 1,571 tons. From the stone quarries on the South Indian Railway the supply of stone for block-making has been 2,530 tons and for the rubble base of the south pier 6,506 tons. This does not represent all the stone brought into Madras for the works during the month, for a quantity amounting to about 2,024 tons has been brought into Madras by the contractor Dhonadhee Vurdiah for making into blocks at a contract price for each block made.

9. *South Pier.*—The south pier has been advanced into the sea 120 feet, making a total length of 418½ feet from the point E, the commencement of the breakwater proper, or about 900 feet from the old high water mark. The number of blocks set has been 150; the section has been the same throughout the month, viz., a double tier of three blocks, 8 feet each in height.

10. *Rubble Base.*—The amount of stones deposited for the rubble base during the month has been by boats 3,096 tons and by hand labor 2,069 tons; the latter amount having been thrown from the sides of the breakwater or in front to make up the bed which is now at the end of the breakwater 5 to 6 feet in thickness. There is a large area now in front of the breakwater covered with stone.

11. *General.*—The tank deposited in 4½ fathoms water in the line of the north pier was visited on March 21st, and it was found to be nearly buried with rubble stone thrown around it. The diver, on removing some of the stone from the top and measuring with a rod through the man-hole, found a deposit of about 13 inches of soft muddy stuff inside which he described to feel considerably softer than the ordinary sandy bottom of the sea. This was the same depth of sediment that had been observed in the tank when last visited on the 25th January 1878. On March 23rd the tank was lifted, one of the steam barges having been brought over the spot so as to employ her windlass in lifting it up. It took some time and trouble to accomplish this, as the tank was tightly wedged in with stones. On bringing it to the surface it was observed that the tank could never have sunk into the sand more than 12 to 18 inches, as that space at the bottom of the tank was clean while the upper part was covered with barnacles and shell-fish. The deposit inside was found to consist of black sewage, mud, and road debris, which probably had been discharged at the Royapooram 10 feet sewer. The tank was subsequently carried to the south pier and deposited in the line of the breakwater in about 6 fathoms water.

12. On 25th March the works were visited by His Grace the Governor, accompanied by General R. Strachey, Member of the Council of the Indian Government in England and President of the Famine Commission.

13. *Expenditure.*—The total expenditure during March has been about Rupees 71,974. The total expenditure up to date has been about Rupees 16,78,467.

14. *Plans.*—This report is accompanied by a general plan of the Harbour and by longitudinal sections of the north and of the south piers.

No. 241. ORDER THEREON, 23rd April 1878, No. 1,929 W.

THE progress of the works during the month under review is, the Governor in Council considers, encouraging.

(True Extract.)

(Signed) E. A. FOORD, Colonel, R.E.,
Secretary to Government, P.W.D.

(True Copy.)

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

To the Superintendent, Madras Harbour Works,
Marine Department.

Edw. A. F. Goodall.
Spare Copies

1929
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BUILDINGS AND ROADS
CIVIL WORKS.

Gobt. of (1878) Madras.
PUBLIC WORKS.

To

The SUPERINTENDENT, MADRAS
HARBOUR WORKS.
&c., &c., &c.

Dated April 23rd.

Issued.

Recd.

Encl.

G. O., 23rd April 1878, No. 1,929 W.

APRIL

Nos. 240-241.

Madras Harbour Works.—The progress
report of the — for March 1878, recorded
with remark.

No. 1 W.

From

THE SUPERINTENDENT,
MADRAS HARBOUR WORKS.

To

Colonel E. A. Ford, R. E.
Secretary to Government, P. W. Dept.
for Roads & Buildings, April 1878.
MADRAS.

Sir,

I have the honor to report that
owing to continued fine weather the
progress on the Madras Harbour Works
during the month of March 1878, has
been satisfactory. —

North Pier.

2. A length of $94\frac{3}{4}$ feet of Breakwater
has been constructed at the North Pier,
making a total length of $641\frac{3}{4}$ feet from
the point B, the commencement of the
Breakwater, or 1300 feet from the old High
Water Mark: the number of blocks set
has been 152. During the early part of
the month the section of the Breakwater
was the same as that constructed during
the month of February, that is, a double
tier of 3 blocks, 8 feet each in height, but
at a distance of $618\frac{3}{4}$ feet from the point
B

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1929
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B, a double tier of 4 blocks, or 8 blocks in the section was commenced. For a time the sizes of these blocks were irregular as it was necessary to step down as it were, gradually into deeper water so as to avoid making a sudden step from a tier of 3 full sized blocks to a tier of 1 full sized block. At a distance of 67 1/2 feet from the point B, a full sized section of the pier, which will be continued throughout, was set. This section is a bottom block of 6 feet in height, and 3 blocks above of 8 feet each in height, with another similar tier placed by its side. - These bottom blocks are 14 feet in transverse length viewed as they are set in the Breakwater, so that they project two feet beyond the blocks placed above them, which are 12 feet in transverse length. The rubble stone bed has been carefully levelled by divers before the blocks were set on it and is at the end of the Breakwater about

Rubble Base

1929
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4

about 4 feet in thickness. The blockwork set in this Breakwater is now regular and even, with the proper batter of 4 feet vertical to one foot horizontal. -

3. The amount of stone deposited in the Rubble Base during this month, has been 3316 tons: of this 2313 tons was deposited by boats and 1003 tons by hand labour. A method was adopted this month of throwing stone from the platform of the Titan, a sort of gallery having been erected by which the coolies could ascend to this platform with the stone. This method seems to answer well as the stone can be thrown out to a wider extent than can easily be reached in throwing it from the Breakwater; and the space below the Titan, where workmen are at work during the setting of the blocks, and at other times, is kept clear from the stone coolies. In fact there are times for instance, during the process of block setting

getting when such a number of coolies could not be allowed to come underneath the Titan.

4. An experiment has been made during the month, of bringing stone from Cavelong in the Steam Tug "Barge Hobart". It made one trip and deposited 120 tons for the basement of the North Pier, but the enterprise was interrupted owing to some question having arisen concerning the proprietorship of the stone, and the negotiations for renewing the experiment are not yet completed.

5. The total number of blocks set in Block-making both piers has been 302. The total number of blocks made has been 367. Of these 230 have been made by machinery and 137 by hand labour. On the North block ground 170 were made and on the South block ground 197.

6. The jaws of the stone breakers continue to wear out and nothing has yet been heard of the expected arrival of new jaws from England or of other duplicate parts of

Quarries

1929 3
of the machinery included for some time ago.

7. The supply of laterite stone from Ambaloor for the month has been 2730 tons, but of this 320 tons were small gravel and used for block-making; the rest has been deposited in the rubble bases of the Piers.

8. The supply of stone from Chinnama-pett for Blockmaking has been 1571 tons. From the stone quarries on the South Indian Railway, the supply of stone for block-making has been 2530 tons and for the rubble base of the South pier 6506 tons. This does not represent all the stone brought into Madras for the works during the month, for a quantity amounting to about 2024 tons has been brought into Madras by the contractor Phannathe Vindialah for making into blocks at a contract price for each block made.

South Pier

9. The South Pier has been advanced

advanced into the sea 120 feet making a total length of 1184 feet from the point B, the commencement of the Breakwater proper, or about 900 feet from the old High Water Mark. The number of blocks set has been 150. the section has been the same throughout the month viz a double tier of 3 blocks, 8 feet each in height.

10. The amount of stones deposited for the Rubble base during the month has been by boats 3096 tons; and by hand labour 2064 tons; the latter amount having been thrown from the sides of the Breakwater, or in front to make up the bed which is now at the end of the Breakwater five to six feet in thickness.

There is a large area now in front of the Breakwater covered with stone.

11. The tank deposited in 14 1/2 fathoms water in the line of the North Pier was visited on March 21st and it was found to be nearly buried with rubble stone thrown around it. The diver on removing some of the stone from the top and

Rubble

General

1929/4
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and measuring with a rod through the man-hole found a deposit of about 13 inches of soft muddy stuff inside which he described to feel considerably softer than the ordinary sandy bottom of the sea. This was the same depth of sediment that had been observed in the tank when last visited on the 25th January 1878. On March 23rd the tank was lifted: one of the steam Barges having been brought over the spot so as to employ her windlass in lifting it up. It took some time and trouble to accomplish this as the tank was tightly wedged in with stones. On bringing it to the surface it was observed that the tank could never have sunk into the sand more than 12 to 15 inches as that space at the bottom of the tank was clean while the upper part was covered with barnacles and shell fish. The deposit inside was found to consist of black sewage mud and road debris which probably had been discharged at the Royapuram 10 feet sewer. The tank was subsequently carried to the South pier and deposited in

in the Line of the Breakwater in about
6 fathoms water.--

12. On 25th March, the works were visited
by His Grace the Governor accompanied
by General R. Strachey, Member of the
Council of the Indian Government in
England and President of the Famine
Commission.--

13. The total expenditure during
March has been about Rs 4,974. The
total expenditure up to date has been
about Rs 16,846. Expenditure

14. This report is accompanied by
a general Plan of the Harbour and
by longitudinal sections of the North
and of the South Piers. Plans

I have the honour to be,

Sir,

Your most obedient servant

Nathaniel Beardmore

Assistant Superintendent

Multras Harbour Works

1929
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Roads & Buildings

From

The Superintendent,
Madras Harbour Works,

Letter from the Supt. Madras Harbour
Works No. 1 W dated 1st April 1878.

FOR ORDERS.

2018-3-98 to 1386 W. incl

As W
Dated 1st April 1878
Despatched 6th

Edmond Col. R.E.

Secy. to Govt. P.W.D.

1st of Enclosures 3

6- April 1878.

Encouraging Struck
LTS

W.D.
11/4

Progress Report
Forwards Progress Report
of the works during the
month of March 1878.

Civ. 17-04-78.
O.L. Spul & Spul
Civ. 6-4-78.

FOR ORDERS.

Mr. H. H. C. C.
Mr. H. H. C. C.
Sir John the Lord

5

^{Book}
^{at work}
No 1929 W 723 April 78.

The progress of the
works during the month
under review is the former
in Council considered,
encouraging.

24th 22/4

John C. C.

Re. 23/4/78
Cir. 194-78.
On 24th 8 April
1978

Supl. Mr. H. H. C. C.
maine Sept. 7
Sept 20-78 180

4281.

Gobt. of India
PUBLIC WORKS.

To
Dated
Issued
Recd.
Encl.

G. O., 23 Apr 1878, No. 1929 W.

Nos.

Madras Harbour Works

The proper report of the
for March 1878. recorded, with remark.
~~Drawn up by the~~

Subd. Rep.