

(1) Number of pages _____

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(3) Initials of the Referencer _____

MADRAS RECORD OFFICE.

Government of Madras.

Public Works DEPARTMENT.

G.O. No.	396 (w)	~~Press~~ ~~Mis.~~
Dated	9-7-	1877.

Not to be folded or roughly handled

GOVERNMENT OF MADRAS

PUBLIC WORKS DEPARTMENT.

9th July 1877, No 396 W.

Buildings and Roads
Civil Works

Read the following paper —

No 131 From F N. THOROWGOOD, Esq, C E, Superintendent, Madras Harbour Works, to the Secretary to Government, Public Works Department, Buildings and Roads, dated Madras, 30th June 1877, No 30 W.

I HAVE the honor to report as follows on the progress of the Madras Harbour Works during the month of June 1877.

2 *North Pier*—The swell and surf have been somewhat heavy during the past month, but at short periods of a more quiet sea a small amount of work has been done. Some of the end blocks which were displaced and damaged during the cyclone in May have been lifted and set on a level bed. Nineteen blocks have been set and a progress of $14\frac{1}{2}$ feet made, giving a total length on 30th June from point B of $321\frac{1}{2}$ feet. One of these blocks was made with General Morgan's cement, and was the first block made with steam machinery.

3. On the 12th June laterite stone was obtained from Ambatoor quarries, and up to the 30th 1,887 tons have been received and deposited along the north side of the breakwater, where it had settled and where the foundations had been undermined during the recent storm. Among this laterite stone and previous to the deposit of it 44 small 7-ton concrete blocks have been thrown as *purres perdues* which will give more substance to the foreshore.

4. *Concrete Blocks*—The total number of large concrete blocks now made is 874, of which 11 have been made during the past month, and besides this number 92 small 7-ton blocks were made in June.

5 The total quantity of shingle concrete stone received from Chinnamapett has been 336 tons, and this small quantity is owing to the supply having been stopped since the 8th June, in order to allow the Railway Company to have the trucks to bring laterite stone from Ambatoor, which stone has been used as above described.

6. *Concrete Block Platforms*—The south block ground has been extended 60 feet as shown on the accompanying plan; one of the Peninsular and Oriental godowns having been removed in order to make way for the block platforms.

7. *Buildings*.—The new Carpenters' shop and stables have been completed and a large leaf pandal has been erected in order to store fresh arrivals of cement.

8 The mechanics have been employed in examining the valves and bearings of the engines, in repairing the stone breakers, in slightly altering some of the travelling cranes, and in erecting No. 2 locomotive engine, which is now completely fitted up and has been under steam on several occasions.

9 *Harbour Committee*.—The Harbour Committee met twice during the month. The only alteration in existing contracts made at these meetings was in the case of Mr Woolley, who asked permission to withdraw from his contract of unloading stone.

at the south pier. The reason of his withdrawal as he stated was that an insufficient supply of stone was brought down, while I contend that he did not unload sufficiently quickly the stone which was brought. The whole facts of the case were laid before the Harbour Committee, and they consented in permitting him to withdraw.

10 *Stores*—The following ships have been unloading stores for these works during the month,—*Her Majesty, Mofussilite, Vimera, Deccan* and *Sea Gull*. They have brought 8,298 casks of cement, a locomotive engine with all fittings complete, six tons of iron chains of different sizes; a Titan crane and a Goliath Travelling crane. These two latter machines have arrived in the *Sea Gull* and have not yet been completely unloaded.

11. *South Pier, Surf Bank*—A quantity of 3,606 tons of stone from the quarry at the 15th mile on the South Indian Railway has been deposited in this bank, increasing the length of it by 150 feet, making a total length of 350 feet from point D.

12 *Beach Road Railway*—The Beach Road Railway has been extended a further length of 1,800 feet, leaving a space of only 800 feet across the neighbourhood of the iron pier to be connected, in order to complete the whole line, but since the 25th instant, the works have been stopped for the reason stated in my communication to your No 28 W of 26th June.

13 *Engineers of the Hopper Barges*—The four Engineers of the steam Hopper Barges have left Madras, passages having been secured for them by the Master Attendant in the Steam Ship *Navario*. The fact of their departure and the fact that free passages had to be secured to them according to their agreements, have been reported to the Examiner of Public Works Accounts.

14 *General observations*—The accompanying plan shows the accumulation of sand which has taken place at the south of the north and south piers. It also shows a cutting away of sand to the north of the south pier. This sand has no doubt moved to the north within the harbour limits, and has caused much of the accumulation of sand on the south side of the north pier.

15 Cross sections of the beach north and south of the harbour as well as within its limits are being repeated this month.

16 The state of the sea and the position of the shipping has been such that no further examination has been made of the crates deposited on the sea bottom, since those reported by me on June 16th, 1877.

17. An accurately cut cube of laterite stone has been suspended in the sea as an experiment, its weight having been previously ascertained. This cube will be reweighed after being suspended in the sea for a period of a month and the result reported to Government.

No. 132. ORDER THEREON, 9th July 1877, No 396 W

ORDERED to be recorded

(True Extract)

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

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

Exd E. C. Shumler
Spare Copies

From

THE SUPERINTENDENT,

MADRAS HARBOUR WORKS.

To Colonel E. A. Foord, R.E.
Secretary to Government, P.W.D.
for Roads & Buildings.
Fort St. George
MADRAS, 30th June 1877

SIR,

I have the honor to report as follows on the progress of the Madras Harbour works during the month of June 1877.—

2. The swell and surf have been somewhat heavy during the past month, but at short periods of a more quiet sea a small amount of work has been done. Some of the sand blocks which were displaced and damaged during the cyclone in May have been lifted and set on a level bed. Nineteen blocks have been set and a progress of 11 1/2 feet made giving a total length on 30th June from point B of 321 1/2 feet. One of these blocks was made with General Morgan's cement and was the first block made with steam machinery.—

3. On the 12th June laterite stone was obtained from Amalthoor quarries and up

North Pier

to the 30th, 1887 tons have been received and deposited along the North side of the Breakwater, where it had settled and where the foundations had been undermined during the recent storm. - Among this laterite stone and previous to the deposit of it 44 small 7 ton concrete blocks have been thrown as pierres perdues which will give more substance to the Foreshore. -

Concrete Blocks. 4. The total number of large concrete blocks now made is 874 of which 11 have been made during the past month and besides this number 92 small 7 ton blocks were made in June. 5. The total quantity of shingle concrete stone received from Elimmampett has been 336 tons and this small quantity is owing to the supply having been stopped since the 5th June in order to allow the Railway Company to have the trucks to bring laterite stone from Ambathoor, which stone has been used as above described. -

Concrete Block Platforms 6. The South block ground has been extended 60 feet as shown on the accompanying plan. One of the P. & O. godowns having been removed in order to make way for the block platforms. -

Buildings

7 The new carpenter's shop and stables have been completed and a large leaf pandal has been erected in order to store fresh arrivals of cement.

8 The mechanics have been employed in examining the valves and bearings of the engines, in repairing the stone breakers, in slightly altering some of the travelling cranes and in erecting No 2 Locomotive Engine which is now completely fitted up and has been under steam on several occasions. —

Harbour Committee

9 The Harbour Committee met twice during the month. The only alteration in existing contracts made at these meetings was in the case of Mr Woolley who asked permission to withdraw from his contract of unloading stone at the South Pier. The reason of his withdrawal as he stated was that an insufficient supply of stone was brought down, while I contend that he did not unload sufficiently quickly the stone which was brought. The whole facts of the case were laid before the Harbour Committee and they consented in permitting him to withdraw. —

Forces

10 The following ships have been unloading stores for these works during the month, "Her Majesty," "Mofussilite," "Veneira," "Deccan" and "Sea Gull". They have brought 8298 casks of cement, a Locomotive Engine with all fittings complete, Six tons of iron chains of different sizes. A Titan Crane and a Goliath Traveling crane. These two latter machines have arrived in the "Sea Gull" and have not yet been completely unloaded. —

th Pier
of Bank

11 A quantity of 3606 tons of stone from the quarry at the 15th mile on the South Indian Railway has been deposited in this bank increasing the length of it by 150 feet making a total length of 350 feet from point D.

to Road
Lway

12. The Beach Road Railway has been extended a further length of 1800 feet leaving a space of only 800 feet across the neighbourhood of the iron Pier to be connected in order to complete the whole line, but since the 25th instant, the works have been stopped for the reason stated in my communication to you N^o 28 W of 26th June. —

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Barges

13 The four Engineers of the Steam Hopper Barges

Barges have left Madras - passages having been secured for them by the Master-Attendant in the Steam ship "Navarino." The fact of their departure, and the fact that free passages had to be secured to them according to their agreements, have been reported to the Examiner of Public Works Accounts.

General Observations

14. The accompanying plan shows the accumulation of sand which has taken place at the South of the North and South Piers. - It also shows a cutting away of sand to the North of the South Pier. This sand has no doubt moved to the North within the Harbour limits and has caused much of the accumulation of sand on the South side of the North Pier.

15. Cross sections of the Beach North and South of the Harbour as well as within its limits are being repeated this month.

16. The state of the sea and the position of the shipping has been such that no further examination has been made of the crates deposited on the sea bottom, since those reported by me on June 16th 1877.

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has been suspended in the sea as an experiment
its weight having been previously ascertained -
This cube will be reweighed after being sus-
pended in the sea for a period of a month
and the result reported to Government.

I have the honor to be,
Sir,
Your most Obedient Servant

F. N. Thoroughgood.
Superintendent
Madras Harbour Works
per R. S. B. B.

P.W.D.

60677

6534

Roads & Buildings.

From
The Superintendent
Madras Harbour Works

27 June 1877 No 314-10.
9 " " 211 "

No 30 W
Dated 30th June 1877

No of Enclosures 3

Madras Harbour

Reports progress of the works
during the month of June 1877

469 1/2 July 1877 No 131

171
PUBLIC WORKS DEPARTMENT.

Letter from the Superintendent Madras
Harbour Works, No 30 W, of 30th June 1877.

FOR ORDERS

E A Ford Esq. R.E.
Secretary to Government
P.W.D.

Copy 534

Govt. of {1877} Madras
PUBLIC WORKS.

To

Dated

Issued

Recd.

Encl.

G O. 9- July 1877, No 396 W

Nos. 131-132

Madras Harbour Works
Report on the progress
of the — during the month
of June 1877. Recorded.

*Entered in Register
16-7-77*

FOR ORDERS

*List under orders Building Works
No 396 W 30 July 77
Recorded 11/7
9/7*

*Supt. M. S. Nair
Marine Dept.
Secy Harbour Committee*

Recd 14-7-77