

(1) Number of pages _____

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MADRAS RECORD OFFICE.

Government of Madras.

Public Works DEPARTMENT.

G.O. No. 1001 (12) Press
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Dated 2-10-1872

Not to be folded or roughly handled

GOVERNMENT OF MADRAS.
PUBLIC WORKS DEPARTMENT.

12th October 1877, No. 1,001 W.

Buildings and Roads.
Civil Works.

Read the following papers:—

No. 125. From F. N. THOROWGOOD, Esq., Superintendent, Madras Harbour Works, to the Secretary to Government, Public Works Department, Buildings and Roads, dated Madras, 1st October 1877, No. 49 W.

I HAVE the honor to submit the following report of these works for the month of September; but the weekly reports submitted in obedience to G.O., No. 706 W, dated 8th September will have given the Government much information as to the north pier work.

2. *North Pier.*—The actual work done in advancing the north pier has been very small, only six blocks having been set, which advanced the work 5 feet seaward. The reasons for so small a return of work are, as have been reported already, the sand accumulation and the broken surf.

3. Since the 22nd September, the date of my last weekly report, I regret to state that no blocks have been set, the sea each day having been so heavy that nothing could be done. The heavy seas were only local as a rule, and broke on the sand at the end of the work, where the water was shallower than elsewhere. On Saturday the 29th September the sand was once more 7 feet deep and covered the caisson (previously deposited) completely to a depth of 4 feet. Bull's Patent Dredge has been used with good effect in getting the sand out of the caisson.

4. On the 4th September block-making by machinery was resumed on the south block ground only. The stone supply from Chinnamapet was not large and therefore not many blocks were made. There were 1,320 tons of stone brought down, and 95 of the ordinary 27 ton blocks were made in the usual manner. These were mostly made of the Portland cement from home, but occasionally General Morgan's cement is used and with satisfactory results.

5. *Staff on Works.*—The staff on the works remains much the same as at the commencement of the year, but the Accountant has been changed four times since that period. I have asked the Examiner if this cannot be stopped, as it takes some time to get into the way of the accounts of these works, on which many names of materials are quite new to the Accountants.

6. I have been deprived of two European Divers (Austrians) during the month. One of them went to the Madras Railway where his pay would be better but his work more difficult, and one has been laid up by a sting on the hand from a jelly-fish. This Diver, M. Claish, had been at Kurrachee, and was therefore a man of some experience. He is now out of hospital and at work.

7. *South Pier Works.*—The widening of the south surf bank is nearly completed, and I am having all preparations made for setting blocks and for tipping blocks over the north side. The total amount of stone used in this bank is 30,583 tons, of which 4,508 have been tipped in September. This stone has been brought from the 15th mile quarry and from the quarries at Palaveram. At the 15th mile quarry the work has

been done by one of the so-called "Contractors" at the ridiculously low rate of 5 Annas per ton. To this rate I have kept the contractor, for I gave him every warning that it was extremely low although not the lowest tender received. In a few instances I allowed him 9 Annas per ton for bringing stone in cattle carts from another quarry. I think that, as far as can be seen at this date, the south surf bank has been so cheap a work that it must not be taken as a precedent.

8. The length of the bank to the top of the slope on 31st August was 562 feet, and the length on 30th September 535 feet, the sea having flattened the slope back by 27 feet at the top. This is precisely what was wanted for a commencement with block setting. It has been done by the sea without dispersing one single stone too far into the harbour.

9. *Beach Railway*.—An engine was taken along the line of beach railway on the 24th September, but the very heavy rain made the road bad, and the engine got no further than the iron pier. On the 25th the engine ran through from one pier to the other. Blocks will be sent along now from the north pier yard.

10. *General matters connected with works*.—On the night of the 6th September, the only good surveying boat available to the Harbour Works (a boat built at Negapatam and sent here on purpose for survey work) was carried from her moorings by some means and has never since been heard of. Through the Marine Department instant application was made to all the Masters of Vessels in the Port, and men were sent along the coast to Ennore, but no news was obtained of the boat. I sent a telegram also to the Collector of Nellore, but with no result.

11. The boat was well moored the previous day by a new 5 inch hemp rope and was seen at midnight by the watchman riding safe. This is the second case of a Harbour Works boat having broken adrift at night though moored with a sound rope to a good mooring by a skilled seaman, and I can account for these accidents in no satisfactory manner.

12. In consequence of the loss of this boat, the occasional bad weather and the shortness of diving hands, I regret to state I have no report to submit on the subject of the cranes and the tank mentioned in the report for August. I have now got a boat from Coringa, which I trust will do good work.

13. On 3rd September the Harbour Committee were to meet. The meeting, however, consisted in a thorough inspection of the works, in company with Sir Alexander Arbuthnot, Sir William Robinson, and Mr. R. F. Chisholm.

14. *Stores*.—The only stores received during the month are diving gear brought by the Steam Ship *Duke of Buccleugh* and 910 casks of Portland cement by the Ship *Inverdine*.

No. 125-A. From the same Officer, dated Madras, 22nd September 1877, No. 48 W.

I HAVE the honor to submit my report for the past week on the state of the sand at the north break-water.

2. On the 17th instant the Divers worked again in the caisson lowered on the 15th and finished levelling the rubble base for the foundation, and by the afternoon of the same day three blocks were successfully set in the south row. The caisson was then transferred to prepare the base for a block in the north row, and the Divers were kept at work till dark at excavating the sand from the caisson.

3. On the 18th, as there was a considerable swell, the Divers could not empty the caisson of sand (3 feet deep now); so I tried one of Bull's Dredges worked from the Titan crane with some success. The size of this dredge, however, (supplied by the Engineer's Department of the Madras Railway) was not great enough to excavate more quickly than one Diver could manage to do.

4. On the 19th the work was resumed in the early morning and a block was sent down from the yard to the Titan; but when the foundation was nearly ready, the sea which had been steadily increasing all day, became so heavy that the Divers were ordered up, for the signal-man and pump-men could no longer stand against the waves.

5. On the 20th the sea was so heavy that no one could stand at the end of the break-water, and it was considered advisable to remove the rails and sleepers lest they should be washed away. No diving was done, therefore, on this day.

6. On the 21st the sea continued too heavy for sub-marine work, and unfortunately the sand returned into the caisson, filling it up level with the top, the sides being 3 feet in height.

7. On the 22nd (the date of writing) the work of removing the sand was resumed both by Divers and by Bull's Dredge, although the sea is too boisterous for working with ease.

8. The foundation was properly levelled and before half past six on the 22nd three blocks had been successfully set.

9. In his letters to me Mr. Parkes suggests that rubble might be tipped on the sand to such a height that the third or lowest course of blocks should be done away with; but, as I expect the sand to go gradually away now, I think it would be a pity to raise the foundation 8 feet higher by this method for the sake of getting perhaps 50 feet further out in smooth weather. Mr. Parkes, says, however, "I shall be much better pleased to find you have succeeded in advancing the deep courses."

No. 126. ORDER THEREON, 12th October 1877, No. 1,001 W.

RECORDED.

2. The Master Attendant will be required in the Marine Department to report upon the subject of the loss of the Harbour Boats* from their moorings.
* Paragraphs 10 and 11.

3. The Progress Report will be communicated to the Consulting Engineer for Railways, with reference to the engagement of the Austrian Diver by the Madras Railway Company. His loss to the Harbour Works is to be regretted.

(True Extract.)

Colonel R.E.,
Secretary to Government, P.W.D.

To the Superintendent, Madras Harbour Works.

" Marine Department.
" Examiner of Public Works Accounts.
" Consulting Engineer for Railways.

Exd. E. C. Shunker.
Spare Copies

No. 49W.

From

THE SUPERINTENDENT,

MADRAS HARBOUR WORKS.

To

Colonel C. A. Ford, R. E.

Secretary to Government,

P. W. D. Buildings & Roads,
MADRAS.

1st October 1877

SIR,

I have the honor to submit the following report of these works for the month of September, but the weekly reports submitted in obedience to G. O. A. 906W dated September 8th will have given the Government much information as to the North Pier work.

2. The actual work done in advancing the North Pier has been very small, only six blocks having been set, which advanced the work 5 feet seaward. - The reasons for so small a return of work are, as have been reported already, the sand accumulation and the broken surf.

3. Since the 22nd September, the date of my last weekly report, I regret to state

that

North Pier

that no blocks have been set, the sea each day having been so heavy that nothing could be done. The heavy seas were only local as a rule, and broke on the sand at the end of the work where the water was shallower than elsewhere. On Saturday the 29th September, the sand was once more seven feet deep and covered the caisson (previously deposited) completely to a depth of 14 feet.

Bull's Patent Dredge has been used with good effect in getting the sand out of the caisson.

4. On the 4th September block-making by machinery was resumed on the South Block ground only. The stone supply from Chinnamapet was not large and therefore not many blocks were made. There were 1320 tons of stone brought down and 95 of the ordinary 27 ton blocks were made in the usual manner. These were mostly made of the Portland Cement from home, but occasionally General Morgan's cement is used and with satisfactory results.

Staff on Works

5. The staff on the works remains much the same as at the commencement of the year, but the Accountant has been changed four times since that period. I have asked the Examiner if this cannot be stopped, as it takes some time to get into the way of the accounts of these works, on which many names of materials are quite new to the Accountants.

6. I have been deprived of two European divers (Austrians) during the month. One of them went to the Madras Railway where his pay would be better, but his work more difficult, and one has been laid up by a sting on the hand from a jelly-fish. This diver, M. Lelaish, had been at Kurrachee and was therefore a man of some experience. He is now out of Hospital and at work.

South Pier Works

7. The widening of the South Surf Bank is nearly completed, and I am having all preparations made for setting blocks, and for tipping blocks over the North side.

The

The total amount of stone used in this bank is 30583 tons, of which 4508 have been tipped in September. This stone has been brought from the 15th mile quarry and from the quarries at Palaveram. At the 15th mile quarry the work has been done by one of the so called "Contractors" at the ridiculously low rate of Annas 5 per ton. To this rate I have kept the contractor, for I gave him every warning that it was extremely low although not the lowest tender received. In a few instances I allowed him Annas 9 per ton for bringing stone in cattle carts from another quarry. I think that as far as can be seen at this date the South Surf bank has been so cheap a work that it must not be taken as a precedent.

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Beach Railway

General matters
connected with
works.

the Harbour.

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13. On September 3rd the Harbour Committee were to meet. The meeting however consisted in a thorough inspection of the works in company with Sir Alexander Arbuthnot, Sir W^m Robinson and Mr. R. F. Whistholm.

14. The only stores received during the month, are diving gear brought by the S.S. "Duke of Buccleugh," and 910 casks of Portland Cement by the ship "Inverdiie"

I have the honor to be,

Sir,

Your most Obedient Servant

J. N. Thoroughgood.

Superintendent

Madras Harbour Works

Buildings & Roads

From The Superintendent
Madras Harbour Works

S.O. 8th Sept 1877 No. 706.10.
Mis 20 " " 167.10.

a/c 10/9 W

Dated 1st October 1877

No of Enclosures 1

Progress Report

Submits report of progress during
the month of September 1877

GC 12. Oct 5) S.D. 125

No. 10514.

From

THE SUPERINTENDENT,

MADRAS HARBOUR WORKS,

To

Colonel E. A. Ford, R.E.

Secretary to Government,
Buildings & Roads Branch, P.W.D.

MADRAS, 22nd September 1877.

SIR,

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report for the past week on the state of the
sand at the North breakwater.

2. On the 17th instant, the divers worked
again in the caisson lowered on the 15th and
finished levelling the rubble base for the
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the south row. - The caisson was then
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in the North row, and the divers were
kept at work till dark at excavating the
sand from the caisson.

3. On the 18th as there was a consider-
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the caisson of sand (3 feet deep now),

so I tried one of Bull's dredges worked from the Titan crane with some success. The size of this dredge, however, (supplied by the Engineer's department of the Madras Railway) was not great enough to excavate more quickly than one diver could manage to do. -

4. On the 19th the work was resumed in the early morning and a block was sent down from the yard to the Titan, but when the foundation was nearly ready, the sea which had been steadily increasing all day, became so heavy that the divers were ordered up, for the signal-man and pump-men could no longer stand against the waves. -

5. On the 20th the sea was so heavy that no one could stand at the end of the breakwater and it was considered advisable to remove the rails and sleepers lest they should be washed away. No diving was done therefore on this day. -

6. On the 21st the sea continued too heavy

heavy for submarine work, and unfortunately the sand returned into the caisson, filling it up level with the top, the sides being 3 feet in height.

7. On the 22nd (the date of writing) the work of removing the sand was resumed both by divers and by Bull's dredge, although the sea is too boisterous for working with ease. -

8. The foundation was properly levelled and before half past six on the 22nd, three blocks had been successfully set. -

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"in advancing the deep courses."

I have the honor to be

Sir,

Your most Obedient Servant,

J. W. Thoroughgood.

Superintendent.

Wallas Harbour, N. B.

20-9-77 No 167 Wm

Circulated for
information, not M/g
To The Hon. W. H. Stoddart.
His Grace the Governor.

Buildings & Roads

From The Superintendent,
Madras Harbour Works

No 168 W
Dated 22nd September 1877.

Sand Accumulation.
Submits report on accumu-
lation of sand at North pier
during week ending 22nd Sept 1877.

Circulated

PUBLIC WORKS DEPARTMENT.

Letter from the Supt. Madras Harbour
Works No 149 W dated 1st October 1877

FOR ORDERS.

Ed Mrd Colonel R.E.
Secy. to Govt. P.W.D.

Fort St. George
Octr 1877 }

and it will hold for
the department and the
comparing for men

communicate the
report to Col S. S. S. who
drawing attention to the
situation. 13/10/77

I think the Mr. Almond
should be informed by
reporting the subject
of the loss of the
Harbour boats from
these drawings. It
is suspicious of the

G.O. 12th Oct. 77. No 125 A

FOR ORDERS.

*For the collection
of the fine by the
Commissioner*

*Ch. 989
22/10/77*

*For the
Commissioner*

*Let under
orders*

1001 W

Public Works Department.

PROCEEDINGS OF THE MADRAS GOVERNMENT.

Under date the 12 Oct/77

Read the following :—

(1) Letter from the Superintendent } (H.E. No 49 W dt 1st Oct 1877)
Madras Harbour Works. } 48 W - 22 Sep 77
(a) Do —————

Recorded—

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3. The report will ^{be} ~~also~~ be communicated to the Consulting Engineer for Railways with reference to the engagement of the Austrian Diver by the Madras Railway Company. His loss to the Harbour Works is to be regretted.

927 12/8

To The Supt. Madras Harbour Works 4
" Marine Department 7
" Examiner P. W. Accounts 15
" Consulting Eng. for Railways 61
" *47*
" *India 7*

Despd 18-10-77

6.10.77

Crobyl

Sub of 1877 *Madras*
PUBLIC WORKS.

Supt. Harbour Works

12 Oct. 1877 1001W

Nos 125-126

Madras Harbour Works
Progress report for the
month of September 1877.
Recorded with remarks.

Ind. in Reg.
19. 10. 77.