

(1) Number of pages 12

(2) Date of repair

(3) Initials of the Referencer

MADRAS RECORD OFFICE.

Government of Madras.

Public Works DEPARTMENT.

G.O. No. 56

Press
Mis

Dated 6-1-1877

Not to be folded or roughly handled

No. 105. Read the following letter from F. N. THOROWGOOD, Esq., Superintendent, Madras Harbour Works, to Major-General G. W. WALKER, R.E., Secretary to Government, Public Works Department, dated Madras, 31st December 1876, No. 96-W.:—

I HAVE the honor to report the following amount of progress on these works since the 30th November, the date of my last report.

2. No laterite has been tipped in the surf bank during the past month, but small quantities have been removed from North Surf Bank. time to time from the southern spur or arm at the end of the bank and placed on the north side to fill up places where the sea appeared to be encroaching.

3. On the 5th December the Titan crane having loaded on trucks all the remaining blocks built "in situ" last April, proceeded to set these blocks at the end of the surf bank in something like regular order so as to form a protection to the end of the bank previous to commencing to set the regular concrete blocks. At the same time the north side of the bank was protected by six large blocks built "in situ" which would fall over and form a toe to the slope if the sea attacked the bank heavily at that point. On the 15th December the Titan was disabled by the breaking of another of its front wheels, but this was replaced by a new wheel on the 17th, and on the 18th the setting of the regular concrete blocks commenced.

4. During the 16th and 17th December, two of the large blocks built on the top of the slope were undermined and fell forward into the sea, and during the remainder of the month three others have followed; the result of this is to form a capital protection to the north-east corner of the laterite bank just where it joins the concrete blocks.

5. On the 18th the Titan advanced and set two of the first concrete blocks. These blocks are not of the full size, but were specially made for commencing the work.

Block Setting.

6. Up to the 31st there have been thirty-one concrete blocks properly set by the Titan, bringing the end of the top of the pier at this date to 920 feet from the point A on the plan. The total length of concrete block work is at this date 45 feet.

I would here state that this portion of work cannot be done in a perfectly regular and neat manner, owing to the impossibility of forming a proper bed for the lowest blocks, but in a short time sufficiently deep water will be reached to enable a diver to work.

The greatest number of blocks set in one day up to this date is eight, and these were set on a day when a considerably heavy sea was running.

Besides these regular blocks set in the work, I have had eight small blocks set on each side of the pier to form a protection to the junction of the laterite bank with the block work.

7. The making of concrete blocks has been proceeded with by hand labor at the rate of four large blocks and two small blocks per diem. The total number of

Concrete Blocks.

*Proceedings of the Madras Government, Public Works Department,
6th January 1877. No. 56.*

Blocks made for the construction of the pier is 288, of which ninety-one have been used during the month, besides a total number of sixty-six small blocks for protective work, forty of which were made during the month.

The quality of the blocks appears to be very good, and the black Palam stone serves as a capital material for present use, although perhaps not quite so hard and sharp as the broken Chinnampall stone will be.

Concrete Block Platform

8. I reported last month that the work of the north block platform is complete.

The south block ground is now being built as quickly as possible, and at the date 200 lineal feet of the 6th bath crane road is completed, and the platform built to this length is in a good state of advancement.

9. The third light traveller for block-making has been erected, and the fourth has been commenced on the east end of the south block ground.

Titan Cranes and Machinery.

The travelling jib crane, mentioned in my last report as having arrived, has been put together and used for depositing blocks at the end of the pier. It proves very useful.

On the 7th December the engines were placed under steam in order to try the stone-crushing machinery. One stone crusher was set to work and the result was most satisfactory. Since then all the stone crushers (five in number) have been completed, and two of them have been used for crushing stone for block-making.

The five elevators are nearly complete, and one of them is in working order. A few more details will have to be completed, and then the concrete will be made by the steam machinery.

10. The supply of stone has been quite sufficient to keep the block-makers at work. All the small stone and some of the large stones from Palam are being used.

Supply of Stone

I intend to keep up this source of supply until the Chinnampall lines are complete and the concrete-making machinery fairly at work.

11. On the 29th of this month the Harbour Works Committee met at the office of the Engineer-in-Chief.

Contracts

To open tenders for supplying stone for Chinnampall. Twenty-nine tenders were received, and the tender of a Native named Gopaswami was accepted, the rate being 1 Annas 3 Pies per ton, which was the lowest tender on the list. The Government Solicitor has had instructions from me to prepare an agreement for signature, but I have not yet received it from his office.

In the meantime the sidings at Chinnampall are laid out, and the earthwork commenced for laying in the tracks.

12. As it is agreed that the south and north block shall be made from the South India Railway, I have picked out a line for the extension of that railway and had plans taken preparatory to laying the road.

Supply of Stone for South Port Dock

I have also taken bearings at the point where the line will cross Cochrane's Canal, and I hope to commence the planning for a timber bridge over the canal immediately.

*Proceedings of the Madras Government, Public Works Department,
6th January 1877. No. 56.*

13. The vessels whose arrivals I reported last month have been this month discharging their cargo, namely, the *Hougoumont* unloading cement, and the *Chyebassa* rails and permanent-way fastenings, which were urgently needed on the works.

No fresh arrival of stores has taken place during the month.

The *Chyebassa* was anxious to leave the port without delivering the rails, but, as these were urgently required, I asked the Master Attendant not to let her go. The Agents thereupon sent in a claim of Rupees 1,500 per diem for every day that she was kept to discharge the rails; the total amount of the claim being for 3½ days Rupees 5,250. I was informed that the Master Attendant had communicated with the Government on the subject, and that the detention of the vessel under the circumstances was quite justifiable.

14. During the month the sea has continued to cut away the sand accumulation on the south of the north pier, as shown on the enclosed plan. On the north of the pier there are perceptible signs of accumulation where there had formerly been encroachment of the sea. The sections which will be shortly taken on the same lines as before will show more definitely the amount.

General matters connected with Works.

No. 105-A. From F. N. THOROWGOOD, Esq., Superintendent, Madras Harbour Works, to Major-General G. W. WALKER, R.E., Secretary to Government, Public Works Department, dated Madras, 5th January 1877, No. 98-W.

I HAVE the honor to enclose a copy of the plan and section which shows the state of the Harbour Works on 31st December 1876.

2. These drawings are prepared for the Government of India as mentioned in the letter No. 2,542, dated 22nd September 1876, from the Secretary to Government of Madras, Public Works Department, to the Secretary to the Government of India.

No. 106. ORDER THEREON, 6th January 1877, No. 56.

CIVIL WORKS, No. 5.

ORDERED to be recorded.

(True Extract.)

Major-General, R.E.,
Secretary to Government.

To the Superintendent, Madras Harbour Works.
" Marine Department.

Exd. E. C. Shunker.
Spare Copies

361
PUBLIC WORKS DEPARTMENT,
FORT ST. GEORGE, 6th January 1877.

No. 107.

No. 67.

FROM

MAJOR-GENERAL G. W. WALKER, R.E.,
Secretary to the Government of Madras,
Public Works Department,

TO

THE SECRETARY TO THE GOVERNMENT OF INDIA,
Public Works Department.

CIVIL WORKS, No. 6.

SIR,—In continuation of my letter of the 12th October last, No. 2,741, I am directed to forward a copy of report of the Madras Harbour Superintendent, together with plan and sections, showing the progress of the works up to the close of the quarter ending 31st December.

I have the honor to be,

Sir,

Your most obedient servant,

Major-General, R.E.,
Secretary to Government.

Ed. B. C. Shaker.
Spare Office

No. 96 w.

From

THE SUPERINTENDENT,
MADRAS HARBOUR WORKS,

To

Major-General G. W. Walker R.E.,
Secretary to Government,
Public Works Department,
MADRAS, 31st December 1876.

SIR,

I have the honour to report the following amount of progress in these works since the 30th November the date of my last report—

North Surf Bank No. Kateer has been tipped in the surf bank during the past month, but small quantities have been removed from time to time from the Southern spur or arm at the end of the bank and placed on the North side to fill up places where the sea appeared to be encroaching—

On the 5th December the Titan Crane, having loaded on trucks all the remaining blocks built in situ last April, proceeded to set these blocks at the end of the Surf bank in something like regular order so as to form a protection to the end of the bank previous to commencing to set the regular concrete blocks. At the same time the North side of the bank was protected by six large blocks built in situ which would fall over and form a toe to the slope.

if

if the sea attacked the bank heavily at that point. -
On the 16th December the Titan was disabled by the
breaking of another of its front wheels, but this
was replaced by a new wheel on the 17th and on
the 18th the setting of the regular concrete blocks
commenced.

During the 16th and 17th December two of
the large blocks built on the top of the slope were under-
mined and fell forward into the sea, and
during the remainder of the month three others
have followed. the result of this is to form a
capital protection to the North-East corner of
the laterite bank just where it joins the concrete
blocks.

On the 18th the Titan advanced and set two
of the first concrete blocks. These blocks are
not of the full size, but were specially made
for commencing the work. -

Up to the 31st there have been 31 concrete blocks
properly set by the Titan, bringing the end of the
top of the pier at this date to 920 feet from the
point A on the plan. The total length of concrete
block work is at this date 145 feet. -

I would here state that this portion of
work cannot be done in a perfectly regular and
neat manner owing to the impossibility of
forming

6M 2
forming a proper bed for the lowest blocks - but
in a short time sufficiently deep water will
be reached to enable a diver to work. -

The greatest number of blocks set in one day
up to this date is eight and these were set on
a day when a considerably heavy sea was
running. -

Besides these regular blocks set in the work
I have had eight small blocks set on each side
of the pier to form a protection to the junction
of the laterite bank with the block work. -

The making of concrete blocks has been pro-
ceeded with by hand labour at the rate of 1
large blocks and 2 small blocks per diem. -
The total number of blocks made for the con-
struction of the Pier is 288, of which 91 have
been made during the month besides a total
number of 66 small blocks for protective
work 40 of which were made during the month.

The quality of the blocks appears to be very
good, and the black Palaveram stone serves as
a capital material for present use, although
perhaps not quite so hard and sharp as the
broken Ichinninapett stone will be. -

I reported last month that the whole of
the

Concrete Blocks.

Block setting

Concrete Block
Platform

if the north block platform is complete...
The South block ground is now being built
as quickly as possible, and at the same time
ful of the Goliath Crane road is completed, and
the platform itself for this length is in a good
state of advancement.

The third light traveller for block making
has been erected, and the fourth has been com-
menced on the East end of the South block
ground.

The travelling Jib Crane, mentioned in my
last report as having arrived, has been put together
and used for depositing blocks at the end of
the pier. It proves very useful.

On the 7th December the Engines were placed
under steam in order to try the stone crushing
machinery. One stone crusher was set to
work and the result was most satisfactory.
Since then all the stone crushers (5 in number)
have been completed, and two of them have
been used for crushing stone for block making.

The five Elevators are nearly complete and
one of them is in working order.

A few more details will have to be completed
and then the concrete will be made by the

Steam

Supply of Stone

Steam machinery.

The supply of stone has been quite suffi-
cient to keep the block makers hard at work.
All the small stone and some of the large comes
from Palaveram as has been the case formerly.
I intend to keep up this source of supply until
the Chinnamapett lines are complete and the
concrete making machinery fairly at work.

Contracts

On the 9th of this month, the Harbour Works
Committee met at this Office to open tenders for
supplying stone from Chinnamapett. Twenty-
nine tenders were received, and the tender of a
native named Govroomoorthy Chetty was accepted,
the rate being 4 annas 3 pias per ton which was
the lowest tender on the list. The Government
Solicitor has had instructions from me to pre-
pare an Agreement for signature, but I have
not yet received it from his Office.

In the meantime the Sidings at
Chinnamapett are set out, and the earthwork
is commenced for laying in the roads.

As it is agreed that the South Surf band
shall be made from the South Indian Railway,
I have picked out a line for the extension of
that railway and had levels taken preparatory
to laying the road.

Supply of Stone for South Surf Bank.

I have also taken borings at the point where the line will cross Lochmoo's Canal, and I hope to commence the pile driving for a timber bridge over the Canal immediately.

The vessels whose arrivals I reported last month have been this month discharging their cargo, viz. the Mangrove, intending cement, and the Chyghessa rails and permanent way fastenings, which were urgently needed on the works.

As to fresh arrivals of stores, none taken place during the month.

The Chyghessa was ordered to leave the port without delivering the rails, but as these were urgently required, I asked the Master, Almond, not to let her go. The Agents thereupon sent in a claim of Rs 250 per diem for every day that she was kept to discharge the rails, the total amount of the claim being for 3 1/2 days Rs 875. I was informed that the Master Almond had communicated with the Government on the subject, and that the detention of the vessel under the circumstances was quite justifiable.

During the month the sea has continued to eat away the sand accumulation on the

General matters
connected with
works.

South of the North Pier, as shown on the enclosed plan. On the north of the Pier there are perceptible signs of accumulation where there had formerly been encroachment of the sea. The sections which will be shortly taken on the same lines as before will show more definitely the amount.

I have the honour to be,

Sir,

Your most obedient servant,

F. N. Thoroughgood.

Superintendent

Madras Harbour Works

o Madras Kuller-Nak.

P.W.D.
 61177
 128
 From The Superintendent
 Madras Harbour Works
 To The Secretary to Government
 Public Works Department
 Fort St George

Dated 5th
 Dec (January 1877)

Sent to the Govt of
 India -
 Forward 2 drawings
 showing the state of the Harbour
 and for the great widening
 31st December 1876.

No 57 26 Jan 77
 The Secretary to the
 Govt of India
 P. W. Dept.

Sir,
 In confirmation of my
 letter of the 12th October last,
 No 2741, I am directed to
 forward a copy of Report
 of the Madras Harbour
 Superintendent together with
 plan and sections showing
 the progress of the works
 up to the close of the quarter
 ending December 31st.

Yours
 C. M. M.

Recd 12th Jan 77
 with 2
 sketches

No 105 11

Recd

Govt. of 1877 Madras
PUBLIC WORKS.

the left hand side of the road
1113. 57-000 1-3-3

on the left hand side of the road 57-000

No. 1050107. -

The following is a list of the names of the persons who have been employed in the Public Works Department of the Government of Madras since the 1st of January 1877. The names are given in the order in which they were employed, and the dates of their appointment are given in parentheses. The names are given in the order in which they were employed, and the dates of their appointment are given in parentheses.

Left in 1877