

(1) Number of pages.....

(2) Date of repair.....

(3) Initials of the Referencer.....

MADRAS RECORD OFFICE

Government of Madras

Public Works DEPARTMENT

G.O. No. 2303 (W) Press
B.P. No. Mis.

Dated 30 - 8 - 1871.

Not to be folded or roughly handled

Read the following papers :—

No. 676. From Lieutenant D. McNEIL CAMPBELL, R.E., Executive Engineer, in charge of Godavery District, to Major-General G. W. WALKER, R.E., Secretary to Government, Public Works Department, dated Dowlaishweram, 11th July 1876, No. 1,029.

I HAVE the honor to forward herewith for the sanction of Government an estimate, amounting to Rupees 4,617, for repairing steamer *Wurdah*.

2. I enclose the correspondence noted in the margin regarding the Upper Godavery steamers for your information.

Extract from the Memorandum No. 63 of 21st January 1876, from the Chief Engineer for Irrigation.
Extract from this office letter No. 10 of 3rd April 1876 to the Chief Engineer for Irrigation.
Extract from the Memorandum No. 50, G. D. of 17th April 1876, from the Chief Engineer for Irrigation.

3. I beg to observe that in the Provincial Budget for 1876-77, Rupees 8,990 are provided for special repairs to "Tools and Plant" in the Eastern Delta. This sum was applied for in my budget estimate from Port Funds on account of

special repairs to the Harbour plant with remark, that in the event of those repairs being carried out by this department, that sum will be required.

4. As all the Harbour plant has been transferred to the Marine Department, and as I believe that Department will carry out the repairs to the same, I request that the sum of Rupees 4,617, required for the steamer *Wurdah*, may be allotted from the sum of Rupees 8,990 above alluded to, and the balance taken up by Government.

No. 63.

MEMORANDUM.

4. The *Godavery* does not belong to the Irrigation Department, but the defects in its machinery having unfortunately come prominently under notice during the recent trip made by His Grace the Governor up the river, when owing to the very inefficient condition of her paddle wheels, one received serious damage, which resulted in one object of the trip having to be abandoned, this steamer affords a forcible illustration of the necessity for a very radical change in the management of the machinery generally. The paddle wheel was rendered ineffective and the feathering apparatus destroyed owing to one arm of the wheel becoming displaced. The arms are held in the cast-iron nave or boss by screw bolts, and on examination of this and the other wheel it became apparent that several of the arms were more or less loose, and that among the many bolts used in putting the wheels and floats together but very few fitted properly, while many of the bolts were of a size altogether different from the originals which they had replaced. Again, many of the stays were bent and others were missing; in the larboard wheel five out of eight stays were absent. Parts of the engine, moreover, were much in need of adjustment and especially of tightening up at the bearings. Now whatever parts of the machinery are liable to loss, exceptional wear and tear, or damage, should be overhauled at short intervals and put to rights, and to enable this to be done readily, and indeed at once, there must be spare bolts, stays, &c., available. Had all the screw bolts of the *Godavery's* paddle-wheels been complete and of a proper description not only would accident have been avoided, but a considerable expense, over and above the cost of the bolts, in repairing damage would have been unnecessary. With spare bolts in readiness a few minutes would have sufficed to replace any damaged or lost bolt, and such

Proceedings of the Madras Government, Public Works Department,
30th August 1876. No. 2,303.

damage or loss should never be left undiscovered at the close of the day's work or before resumption of work the following day.

FORT ST. GEORGE,
21st January 1876.

(Signed) J. MULLINS, Lieut.-Colonel, R.E.,
Chief Engineer for Irrigation.

(True Extract.)
(Signed) D. McN. CAMPBELL, Lieutenant, R.E.,
Executive Engineer in charge, Godavery District.

From Major J. BEATTY, R.E., District Engineer, Godavery, to Lieutenant-Colonel J. MULLINS, R.E., Chief Engineer for Irrigation, dated Dowlaishweram, 3rd April 1876, No. 10.

10. With regard to the Upper Godavery steamers *Godavery* and *Wurdah*, my inquiries have brought to my notice the fact, of which you were probably unaware, that in both these steamers the cast-iron framing, which is attached to the bed plates of the engine, and which bears

* This occurred some years since.

at its other extremity the two portions of the main shaft, is broken,* and has been repaired with pieces of sheet iron. That iron framing in both those steamers is broken on either side immediately under the main shaft. The result is that the two portions of the main shafting are out of adjustment† and it is believed that this is one principal cause of the frequent breaking of the pins which hold the bolts in position.

† To the extent of an inch, to an inch and a half.

11. You remark that "parts of the engine are much in need of adjustment, and especially of tightening up at the bearings." The fact is believed to be that the looseness you refer to is due to the cast-iron framing being broken, and the main shaft out of adjustment. There is no doubt that that cast-iron framing is a weak point in the construction of these steamers, and that it requires strengthening. So long as that portion of the vessel continues broken, the engines must be worked with injury to themselves, and the main shaft being out of adjustment affects the working of the paddle arms and floats.

12. The floats again are a weak point in these steamers. When the steamers were first put up, they were fitted with floats of elm timber, 1½ inches thick. No spare floats were sent, and the elm floats were soon broken, and had to be replaced by teak ones of 1½ inches; which was afterwards increased to 2 inches for greater strength. The floats are 8½ feet long, by 1½ feet broad, and 2 inches thick.

13. It is much to be desired that some means could be devised of strengthening the floats without unduly increasing their weight. Possibly this may be effected by using iron straps (instead of the bolts which have hitherto been used to bind the two pieces of timber together) or strips of sheet iron at intervals.

14. The immediate cause of the accident on the journey to the gorge was the breaking of the cast-iron eccentric‡ which works upon the main shaft, and to which the eccentric rods of the feathering apparatus are attached; and it is believed that the breaking of the eccentric was mainly due to the main shaft being out of adjustment, caused by the broken condition of the cast-iron framing.

‡ The eccentric never broke before.

15. No doubt there should have been on board a sufficiency of spare bolts and stays, but it is believed that this did not materially contribute to the breaking of the eccentric and the loss of floats.

16. These steamers always have lost floats and still do, even when in the most perfect order with every stay and bolt complete, and just out of the workshops. For instance, the S.S. *Godavery* at the beginning of last season had just been put in thorough working order, and yet she lost a float on her first trip from Dowlaishweram to Rajahmundry.

§ With the important exception noted in paragraph 10.

Proceedings of the Madras Government, Public Works Department,
30th August 1876. No. 2,303.

17. It is the unanimous opinion of officers on the spot that both these steamers (*Godavery* and *Wurdah*) should not be worked any longer until they have been docked, and the iron framing above mentioned properly repaired (or recast) and adjusted. I send an estimate* for repairing the steamer *Wurdah*.
* Rupees 4,617.

18. As the *Godavery* and *Wurdah* should not be worked any longer until they have been thoroughly repaired, I propose this season to work the *Wynegunga*, which is the steamer of the three that has seen least service, and is therefore in the best order. Her framing is said to be still perfect.

19. The *Wynegunga* is now lying at Dumagudiem, and wants several pieces of machinery which were taken off her from time to time for the use of the other steamers. These I purpose sending up on the *Godavery* in the first fresh, and meantime having the *Wynegunga* caulked and painted where necessary and got into order for the work of the season. The *Godavery* would then be laid up at Dumagudiem until her repairs can be taken in hand after the *Wurdah* has been attended to.

No. 30 G.D.

MEMORANDUM.

No. 675-A.

6. The undersigned does not concur with the District Engineer as to the cause of the accident to the *Godavery's* starboard paddle wheel in January last. It was due to one of the paddle arms becoming detached, and the way in which other arms had been secured or left insecure clearly denoted the process by which the detached arm had got out of its socket in the boss. The loss of floats by striking against the river bed is probably unavoidable, but the paddle arms should not become displaced by the bolts which secure them becoming unscrewed. Properly fitting bolts with check nuts and split pins would render such an accident impossible. Accidents will happen from unforeseen contingencies when machinery is in perfect order, but what was to be regretted in the case of the *Godavery* was an accident which certainly would not have happened had the paddle wheels possessed their full complement of properly fitted bolts and stays. The suggestion of His Grace the Governor that it would be well to add a circumferential band to strengthen the wheels should not be lost sight of.

OOTACAMUND,
17th April 1876.

(Signed) J. MULLINS, Lt.-Col., R.E.,
Chief Engineer for Irrigation.

(True Extract.)

(Signed) D. McN. CAMPBELL, Lieutenant, R.E.,
Executive Engineer in charge, Godavery District.

No. 676-B. From the District Engineer, Godavery, dated 18th August 1876, No. 1,385.

From Lieutenant D. McNEIL CAMPBELL, R.E., Executive Engineer in charge of Government Workshop, to Major J. BEATTY, District Engineer, Godavery, dated Dowlaishweram, 11th August 1876, No. 140.

In reply to your Memorandum, No. 1,269, dated 7th instant, I have the honor to furnish the following particulars of the items lumped together and making up a total of Rupees 2,500 in the estimate for repairing the steamer *Wurdah*.

For digging dock 150' x 35' x 9' and baling, also for placing bed beam for vessel	Rs. 1,000
For opening part of the vessel to take out the bed plates of the engine to repair the same and rivet up the vessel again	1,000
For sundry works, such as replacing the worn-out cast-iron bearings, bed plates, and adjusting the main shaft of paddles	500
	2,500

Proceedings of the Madras Government, Public Works Department,
30th August 1876. No. 2,303.

2. There will probably be considerable saving on the first item if the repairs are postponed till after all chances of freshes in the river are over, and I would therefore recommend that the vessel be not docked till the beginning of November 1876.

No. 677. ORDER THEREON, 30th August 1876, No. 2,303.

ACCOUNT, No. 41.

(a) Heads of Service.—Provincial.
Fund.—Ordinary.
Class.—IV Tools and Plant.
Name of Work.—Repairing the Steamer Wurdah.
Amount.—Rupees 4,000.
To be carried out by the Public Works Department.

THE estimate for repairing the Steamer Wurdah is sanctioned for a sum of Rupees 4,000, a saving of Rupees 500 being effected by not docking till November, and the centage being reduced by Rupees 117. Funds are provided by transfer from the grant in the current

year's Provincial Budget, Part III, for "Special Repairs," Godavery District.

2. Below is given the total sum transferred from the Budget Grant* in question:—

- * Rupees 8,990.
- Rs. 756 for Tools and Plant. Godavery District, (G.O., No. 1,543, dated 20th June 1876).
- „ 1,117 for Dissecting Room, Medical College, Madras, (G.O. 2,101, dated 14th August 1876).
- „ 500 for widening bridle-path between new Kotagerry road and the road leading from Walthamstow towards Dozabettah (G.O., No. 2,260. of 25th August 1876).
- „ 4,000 for repairs to Steamer Wurdah.
- „ 6,373

leaving a balance of Rupees 2,617 which is held at the disposal of Government.
The above sanction has been registered as Provincial No. 129-W. of 1876-77.

(True Extract.)

Colonel,
Offg. Under Secy. to Govt., P.W.D.

To the District Engineer, Godavery.
„ Examiner of Public Works Accounts.

Exd. W. H. French.
Spare Copies

No 1029

District Engineer's Office
Dowlaiswaram 11th July 1876.

From,

Lieutenant D. McNeil Campbell
Executive Engineer in charge Godv. Dt.

To

Major General E. W. Walker R.E.
Secretary to Government D.P.W.
Madras.

Sir,

I have the honor to forward herewith for the sanction of Government, an estimate amounting to Rs 4,617 for repairing steamer "Wurdah".

2. I enclose the correspondence noted in the margin re-
garding the Upper Godavery steamers

Extract from the Memo No 68 of 21st January 1876
from the Chief Engineer for Irrigation—
Extract from this office letter No 10 of 3rd April 76 to—
Extract from the Memo No 30 G.O. of 17th April 1876
from the Chief Engineer for Irrigation—

for your information—

3. I beg to observe that in the Provincial Budget for 1876-77 Rs 8990 are provided for special repairs to "Tools and Plant" in the Eastern Delta— This sum was applied for in my Budget

1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31. 32. 33. 34. 35. 36. 37. 38. 39. 40. 41. 42. 43. 44. 45. 46. 47. 48. 49. 50. 51. 52. 53. 54. 55. 56. 57. 58. 59. 60. 61. 62. 63. 64. 65. 66. 67. 68. 69. 70. 71. 72. 73. 74. 75. 76. 77. 78. 79. 80. 81. 82. 83. 84. 85. 86. 87. 88. 89. 90. 91. 92. 93. 94. 95. 96. 97. 98. 99. 100.

80.14 Aug 76 - No 2107

1876 Department

80-5138

"Murdah" Steamer.
Towards for the sanction
of Government on estimate
for repairing - with certain
explanation.

Dated 11th July 1876.
Revised 19th July 1876.
No 1029
Encl: 1st

From
The Executive Engineer
In charge Godavari R.
The Secretary to Govt.
Public Works Department
Madras.

No 1112

With reference to the letter
from the offrs S.E. Godavari No. 1029
dated 11th July 1876, submitting an
estimate of Rs 4617 for repairing the
Steamer "Murdah" the C.E. has the
honor to request that
particulars of the items
lumped together and
making up Rs 2500 may
be furnished - mean
while the work may
be commenced.

- 1 Docking
- 2 Taking to pieces
- 3 New best plate (copper)
- 4 Main shaft adjustment &c &c

of G.H.M.
D.S. Godavari
21 July 1876
No 676
Circ-28-8-76
Desp-219-7-76
60/21d 30-8-76

Irrigation-

SP 3
No 68

Memorandum

The "Godavery" does not belong to the Irrigation Department, but the defects in its machinery having unfortunately come prominently under notice during the recent trip made by His Grace the Governor up the river, when owing to the very inefficient condition of her paddle wheels one received serious damage, which resulted in one object of the trip having to be abandoned, this steamer affords a forcible illustration of the necessity for a very radical change in the management of the machinery generally. The paddle wheel was rendered ineffective and the feathering apparatus destroyed owing to one arm of the wheel becoming displaced. The arms are held in the cast iron nave or boss by screw bolts and on examination of this and the other wheel it became apparent that several of the arms were more or less loose, and that among the many bolts used in putting the wheels and floats together but very few fitted properly, while many of the bolts were of a size altogether different from the originals which they had replaced.

Again

4
Again many of the stays were bent, and others were missing in the larboard wheel 5 out of 8 stays were absent. Parts of the engine moreover were much in need of adjustment and especially of tightening up at the bearings. Now whatever parts of the machinery are liable to loss, exceptional wear and tear, or damage, should be overhauled at short intervals and put to rights, and to enable this to be done readily, and indeed at once, there must be spare bolts, stays &c available. Had all the screw bolts of the Godavery's paddle wheels been complete and of a proper description not only would accident have been avoided, but a considerable expense, over and above the cost of the bolts, in repairing damage would have been unnecessary. With spare bolts in readiness a few minutes would have sufficed to replace any damaged or lost bolt, and such damage or loss should never be left undiscovered at the close of the day's work or before resumption of work the following day.

Fort St. George (Signed) John Mullins Lt Col R.E.
21st Jan 1876
Chief Engineer for Irrigation
(True Extract)

J.W. Campbell Lieut R.E.
Executive Engineer in charge
compd

Enclosure to letter from
the Executive Engineer
in charge Godavery St.
to the Secretary to Govt.
D.P. No. 92, 1029 dated
11 July 1876.

P. H. 5138/76
3

No 10. — District Engineer's Office, God.
Dowlaisherani 3 April 1876.

From, — Major J. Beatty R.E.
District Engineer Godavery.

To, — Lieutenant Colonel J. Mullins R.E.
Chief Engineer for Irrigation.

Sir,

With regard to the Upper Godavery steam-
ers, "Godavery" and "Murda", my enquiries have
brought to my notice the fact, of which you were
probably unaware, that in both these steamers
the cast iron framing, which is attached to the
bed plates of the engine, and which bears at
its other extremity the two portions of the main
shaft, is broken, and has been repaired with
pieces of sheet iron. That iron framing in
both these steamers is broken on either side
immediately under the main shaft. The
result is that the two portions of the main
shafting are out of adjustment, and it is
believed that this is one principal cause
of

* This occurred
some years
since.

⊙ To the extent
of an inch, to
an inch and
a half.

of the frequent breaking of the pins which hold the bolts in position.

11. You remark that "parts of the engine are much in need of adjustment, and especially of tightening up at the bearings." The fact is believed to be that the looseness you refer to is due to the cast iron framing being broken and the main shaft out of adjustment. There is no doubt that that cast iron framing is a weak point in the construction of these steamers, and that it requires strengthening. So long as that portion of the vessel continues broken the engines must be worked with injury to themselves, and the main shaft being out of adjustment affects the working of the paddle arms and floats.

12. The floats again are a weak point in these steamers. When the steamers were first put up they were fitted with floats of elm timber, $1\frac{1}{2}$ inches thick. No spare floats were sent, and the elm floats were soon broken, and had to be replaced by teak ones of $1\frac{1}{2}$ inches, which

was

was afterwards increased to 2 inches for greater strength. The floats are $8\frac{1}{2}$ feet long, by $1\frac{1}{8}$ feet broad, and 2 inches thick. It is much to be desired that some means could be devised of strengthening the floats without unduly increasing their weight. Possibly this may be effected by using iron straps (instead of the bolts which have hitherto been used to find the two pieces of timber together) or strips of sheet iron at intervals.

*The eccentric never broke before.

14. The immediate cause of the accident on the journey to the Gorge was the breaking of the cast iron eccentric which works upon the main shaft, and to which the eccentric rods of the feathering apparatus are attached, and it is believed that the breaking of the eccentric was mainly due to the main shaft being out of adjustment, caused by the broken condition of the cast iron framing.

15. No doubt there should have been on board a sufficiency of spare bolts, and stays, but it is believed that this did not materially contribute to the breaking of the eccentric

eccentric and the loss of floats.

16. These steamers always have lost floats, and still do, even when in the most perfect order, with every stay and bolt complete, and just out of the workshops. For instance the S.S. "Godavery", at the beginning of last season, had just been put in thorough working order and yet she lost a float on her first trip from Bowlaishweram to Rajahmundry. ** With the important exception noted in para 10.*

17. It is the unanimous opinion of officers on the spot that neither these steamers ("Godavery" and "Wurda") should not be worked any longer until they have been docked and the iron framing above mentioned properly repaired (or recast) and adjusted. I send an estimate for repairing the steamer "Wurda". *Rs. 4,617.*

18. As the "Godavery" and "Wurda" should not be worked any longer until they have been thoroughly repaired I propose this season to work the "Wynegunga", which is the steamer of the three that has seen least service, and is therefore

in the best order. Her framing is said to be still perfect.

19. The "Wynegunga" is now lying at Dumagudem, and wants several pieces of machinery which were taken off her from time to time for the use of the other steamers. These I purpose sending up on the "Godavery" in the first fresh, and meantime having the "Wynegunga" caulked and painted where necessary and got into order for the work of the season. The "Godavery" would then be laid up at Dumagudem until her repairs can be taken in hand after the "Wurda" has been attended to.

Have the honor to be
Signed/ J. Beatty Major R.E.
District Engineer Godavery.
(True Extract)
J.M.W. Campbell Esq. R.E.
Executive Engineer in charge Godavery.

Government Workshop
Probable Estimate for repairing
Steamer Turda

| Quantity | Description of work | Rate | Amount Total |
|----------|---------------------------|------|--------------|
| 508 lbs | Wrought Iron | 26 | 796 |
| 1072 | Cast Iron | 200 | 95115 |
| 24 | Sheet Brass | 84 | 128 |
| 202 | Copper rod | 430 | 2456 |
| 176 | Gun Metal | 1 | 176 |
| 30 | Sheet Lead | 4 | 78 |
| 20 | Europe Steel | 58 | 714 |
| 10 | Iron wire | 6 | 32 |
| 40 | yds Dungree cloth | 32 | 7148 |
| 20 | Baras Wood Charcoal | 6 | 78 |
| 196 | Tie men | 7 | 8512 |
| 404 | Lascars | 4 | 101 |
| 32 | Smith | 1 | 32 |
| 32 | Cast Iron bearings of | | |
| | Paddle floats for turning | 5 | 10 |
| 50 | lb White lead | 49 | 14136 |
| 25 | Red Lead | 310 | 51510 |
| 20 | B. Linseed oil | 36 | 46 |
| 15 | Grease | 4 | 3120 |
| 40 | Hemp | 10 | 214 |
| 25 | Cocount oil | 2 | 32 |
| 8 | Thread | 7 | 38 |
| 2 | Twine Europe | 1 | 2 |
| | Carried over | | 69017 |

The District Engineer
Godavery
for Chief Engineer
for Navigation

Dated 3rd April 1916
Recd 3rd April 1916

P. W. 5138/16
2

Steamers of the
Navigation Department
and Upper Godavery
Navigation. Report
on the. With reference
to Memo No 68 of 21st
January 1916.

Enclosure to letter from
The Executive Engineer
in charge Godavery
to the Secretary to Govt
D. W. No. 1019 dated
11th July 1916

Brought forward

690 17

2 lbs Emery ——— 11 310

199 3/4 Cft Oak wood ——— 28 49854

30 Carpenter repairing

Sundry work with

old wood ——— 7 132

2 Pairs H. S. ——— 104 148

50 Screws ——— 2 84

800 Pz ft Caulking ——— 3 24

30 Pz Paint ——— 4 120

Docking frame and stop hammer

of steaming and replacing

Cast Iron bed plates

on the Sponson beams

and adjusting the

main shaft with

its bearings ——— 2500

Centage 20 — Per cent 384799

Total Expenses 4617

Government Workshop

Office Dowlaismaun

24th March 1876

W. J. Conon

Sub Engineer

W. J. Conon

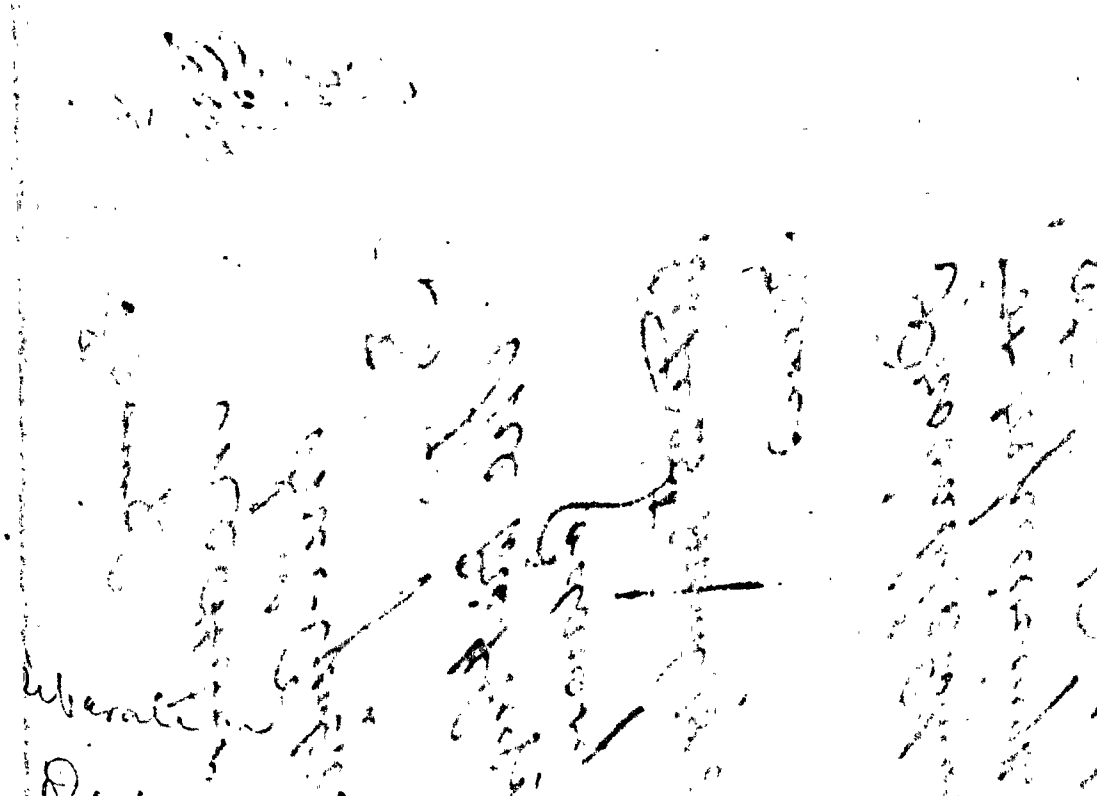
Capt. R. B.

Executive Engineer

In Charge Govt Works

L. Beatty Major R. E.

District Engineer Godavari

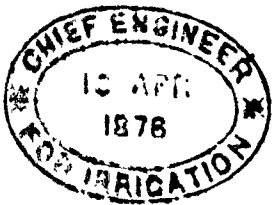


Liberalization
Docks
Taking account of
pieces
- new bed plates (engine)
- Repair to main shaft

3847-99

652-00

1000-00



Ch. S. D. 29/5/76

Forwarded 11/04/76

Chief Officer

Rich. Gould 11/04/76

To

Mr. Smith

Secretary

Recd 25th March 1876

Recd

Probable Cause

for Repairs

Steamer Purdah

P. S. 188/76

Enclosure to letter from the Executive Engineer in charge Godavery to the Secretary to Govt. D.O. No. 1029 dated 11th July 1876.

No 30 G. S.

S. D. 8

13

Memorandum

Irrigation-

6. The undersigned does not concur with the District Engineer as to the cause of the accident to the Godavery's starboard paddle wheel in January last. It was due to one of the paddle arms becoming detached, and the way in which other arms had been secured or left insecure clearly denoted the process by which the detached arm had got out of its socket in the boss. The loss of floats by striking against the river bed is probably unavoidable but the paddle arms should not become displaced by the bolts which secure them becoming unscrewed. Properly fitting bolts with check nuts and split pins would render such an accident impossible. Accidents will happen from unforeseen contingencies when machinery is in perfect order, but what was to be regretted in the case of the Godavery was an accident which certainly would not have happened had the paddle wheels possessed their full complement of properly fitted bolts and stays. The suggestion of this Grace

Grace the Governor that it would be well to
add a circumferential band to strengthen the
wheels should not be lost sight of.

(Signed) John Mullins Lt. Col. R.R.
Chief Engineer for Irrigation

Ootacamund.

17 April 1876.

(True Extract)

J. M. Campbell Lieut. R.R.
Executive Engineer in charge Govt. D.

Compd
ms

DISTRICT ENGINEER'S OFFICE, GODAVERY.
DOWLAISHWARUM, 18th August 1876.

No. 1385

From. Lieutenant D. W. Neil Campbell R.E.

Executive District Engineer in charge
Godavery District

Enclosure

To. Major General G. W. Walker R.E.
Chief Engineer
Secretary to Government D. P. W.
MADRAS

SIR,

With reference to your Memorandum No. 1112 dated 21st ultimo, I have the honor to forward herewith copy of a letter, received from the Officer in charge Government Workshop Dowlaishwarum, shewing the particulars of the items lumped together and making up Rs 2,500 provided in the estimate for the repairs of steamer "Wurdah".

I have the honor to be,

Sir,

Your Most obedient Servant

D. W. Neil Campbell R.E.
Executive Engineer in charge G.D.

Enclosure to letter from
the Executive Engineer
in charge Godavery
District to the Secretary
to Government No. 1049
dated 11th July 1876.

G. W. 138/76

No 645-CC

Campbell

Wharf of paddles 2500

P.W.D.
244076
No 102

1876

From

Executive

The District Engineer, in

charge Godavery District.

To

Chief Engineer

The Secretary to Government

Department Public Works

MADRAS

Date.

18th August 1876

Received.

NO. 1385

Encl. acc

Subject.

"Wurdah" Steamer

Forwards copy of a letter from
the Officer in charge Godavery
District Workshop, showing
particulars of certain items
provided in the estimate for
the repairs of.

E. 1. V

SP Govt Workshop office 11
Dowlaiswaram
11th August 1876.

No 140.

From.

The Officer

In charge of Govt Workshops.

To.

The District Engineer

Godavery District.

Sir,

In reply to your Memorandum No 1269
dated 7th Instant, I have the honor to furnish
the following particulars of the items lumped
together and making up a total of Rs 2500,
in the estimate for repairing the steamer
"Wurdah"

For digging dock 150' x 35' x 9' } Rs.
and baling also for placing } 1000
bed beam for vessel

For opening part of the vessel
to take out the bed plates of } 1000
the engine to repair the same
& rivet up the vessel again.

For sundry works, such as re-
placing the worn out cast iron } 500
bearings, bed plates & adjusting the } 2500
main shafts of paddles

cc - 28.8.76 (Mk 30.8.76)
Depd Govt 24-8-76. 121-9-76

There will probably be considerable saving on the first item if the repairs are postponed till after all chances of freshes in the river are over, and I would therefore recommend that the vessel be not docked till the beginning of November 1876.

P.W.D.
24/8/76

I have seen
Signed / D. McNeil Campbell Esq.
Executive Engineer in charge Govt Workshop -
(True Copy)

J. McNeil Campbell Esq.
Executive Engineer in charge Govt.

No 2303 : Public Works Department.
PROCEEDINGS OF THE MADRAS GOVERNMENT.
Under date the 30th Aug^r 1876.
Read the following:—

From the District Engineer
for Madras No 1029 of 11 July 76
No. 1385 of 10 Aug 76

The estimate for repairing the Steamer "Wurdah" is sanctioned for a sum of Rs. 4000, a saving of Rs 500 being effected by not docking till November, and the centage being reduced by Rs. 117. Funds are provided by transfer from the grant in the current year's Provincial Budget, Part III, for "Special Repairs", for Madras District.

Below

Below is given the
total sum transferred
from the Budget Grant in
question. + Rs 8770

Rs 756 for Tools & Plant. Madras District.
(G.O. No. 1543 dated 20 June 1876)
Rs 1117 for Dressing Room, District Office, Madras.
(G.O. No. 2101 dated 14 August 1876)
4000 for repairs to Steamer "Wurdah".

Rs 5873

leaving a balance of Rs
3117 which is held at the
disposal of Government.

The above sanction has
been registered as Provincial
No 129 N. of 1876-77.

No 676-677

Shree Padareng
Examiner, Mr. A. V.
Dated 23/9/76

(a) Heads of Service— *Provincial*

Fund. *Ordinary*

Class. *IV Tools & Plant*

~~Main head.~~

~~Sub head.~~

Name of Work. *Repairing the Steamer "Wurdah"*

Amount. *Rs 4000-*

To be carried out by the *P. W.* Department.

Print in the margin of G.O. No 2303 of 30th August 1876.

6102
5138

Govt. of Madras.
PUBLIC WORKS.

To
The N. B. Godavery

Dated

Issued

Recd

Encl.

G. O. 30th August 1883 No. 2803

1- Estimate for repairs
734/1 Nos. 676-677

Steamer - "Nurdaki"

Godavery Dr

Estimate for re-
pairing the —
sanctions of

An
25/7/83