

(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. | 2367        | Press |
| B.P. No. |             | Mis.  |
| Dated    | 6 - 9 - 195 | 876   |

Not to be folded or roughly handled

No. 51. Read the following endorsement of the Chief Engineer for Irrigation, dated Ootacamund, 29th August 1876, No. 167-W:—

From Lieutenant D. McNEIL CAMPBELL, R.E., Executive Engineer in charge, Godavery District, to Lieutenant-Colonel J. MULLINS, R.E., Chief Engineer for Irrigation and Joint Secretary to Government, Public Works Department, dated Dowlaishweram, 18th August 1876, No. 1,381.

With reference to your memorandum No. 21, dated 8th January 1876, I have the honor to forward the following report regarding the results of the experiments I have made with Moore's patent current meter.

2. I first took the surface velocity of water in Bank canal several times with floats, and obtained an average of 2.38 feet per second. I then found the velocity eight different times with the meter in the same place as surface velocity had been taken, and got an average of 2 feet a second, the lowest velocity obtained being 1.73 feet a second, and the highest 2.23.

3. I then tried the instrument in still water, by dragging it through a distance of 300 feet in 2 minutes 28 seconds, that is, at a velocity of 2.02 feet a second, and the result obtained by the number of revolutions was 4.26 feet a second; this being most unsatisfactory, I repeated the trial, and by dragging it at a velocity of 1.85 feet a second, the recorded result was 4.62 feet a second. I repeated this test several times, but with nearly the same results.

4. I then tested the meter still further by comparing it with Elliot's current meter, and the results obtained were as follow:—

| Moore's Meter. | Elliot's Meter. |
|----------------|-----------------|
| 1.32           | 1.9             |
| 1.9            | 1.9             |
| 1.7            | 1.8             |

5. It will be seen from the above that all the experiments were most unsatisfactory, more especially the second, the results of which I am quite unable to understand; but I believe that all the experiments were vitiated by a crack in the glass which rendered it impossible to exclude the water, so that it can hardly be considered that the instrument has had a fair trial. It was owing to this crack that I considered it useless to submit the instrument to further tests. After the third experiment, the cylinder was found to be half full of water which had entered at the ends of the glass as well as through the crack. As regards the instrument I do not see that it has any advantage over Elliot's current meter. It will require most careful usage, and will be more liable, I should say, to get out of order, and I believe it will be very difficult to exclude water; it may be better in deep sea current, but in ordinary rivers and canals in this country I should prefer the Elliot's current meter. The only improvement I can suggest is that the steel spring should be made considerably stronger. In many observations that I took, it failed to stop the rotation of the cylinder when let loose; for, having been dragged forward by the current, it fell in front of the button, which of course did not therefore catch in the slot made for the purpose in the spring. I return the meter herewith, and request that, should it be thought necessary to test the patent further, a fresh instrument may be sent. The glass was cracked when the instrument arrived here.

Proceedings of the Madras Government, Public Works Department,  
6th September 1876. No. 2,367.

SUBMITTED for the information of Government with reference to G.O., 3rd  
December 1875, No. 3,441.

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

No. 52.

ORDER THEREON, 6th September 1876, No. 2,367.

IRRIGATION, No. 6.

Account.

THE Moore's patent current meter, which has been tested in the Godavery District with unfavorable results, owing probably to the glass being cracked, will be repaired in the Public Works Stores; and, if possible, the defect noticed in the latter part of the District Engineer's letter will be obviated. The meter will then be retransmitted to the District Engineer for further trial.

(True Extract.)

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

11:167-W.

Submitted for the in-  
formation of Government with  
reference to G.O. 3<sup>d</sup> December  
1875, No. 3,441.

Colonel Mullins, R.E.  
Chief Engineer for  
Irrigation

Submitted for the in-  
formation of Government with  
reference to G.O. 3<sup>d</sup> December  
1875, No. 3,441.

1876.

P.W.D.

CEP 76

No. 1509

From

The Chief Engineer for Irrigation

To

The Secretary to Govt.  
P.W.D.

Dated 29 } August 1876  
Desp. 31 }

Enclol

No. 167-W.

Moore's Patent Current Meter  
Submitted for information  
report on the results of the  
Experiments made with—

No. 57

No. 2367

Public Works Department.

PROCEEDINGS of the MADRAS GOVERNMENT.

Under date the 6<sup>th</sup> Sept/76-

Read the following:—

Endorsement of the Chief Engineer for  
Irrigation D. D. of 29<sup>th</sup> August 1876.

The Moore's patent  
current meter, which  
has been tested in  
the Godavery District  
with unfavourable re-  
sults, owing probably  
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will be repaired in the  
P. W. Stores; and if possible  
the defect noticed in the  
latter part of the District  
Engineer's letter will be  
obviated. The meter  
will then be retrans-  
mitted to the District

ML

3/1

Engineer for further  
trial.

My. 30/8

6529

Govt. of 1876 Madras.

PUBLIC WORKS.

To The H. B. Godavery

Dated

Issued

Recd.

Encl.

G. O., 1<sup>st</sup> September 1876, No. 2867

Nos. 51-52

Moore's Patent Current  
Meter Learning instru-  
tions for the repair of the  
and its despatch to the  
B. B. Godavery for  
further trial.

B. Godavery ✓  
Frederick ✓  
For J. with 1 Encl ✓  
Desd 21/9/76

No 57/2