

No 902 J. 8. 10. 84
" " 997 J. 6-11. 84
" " 3107 W. 18-12. 84
Encls. of Stat. 25
3107 W. 18. 12. 84

No 1371 W of 13th June/85

Com? to the

Supg. Engr V Circle

with reference to G.O. No 3107 W of 18th Dec 84

Cd.

5.6.85

W

7.6.85

163

(7)
Govt. of 1881 Madras.

To

He PWD

4/6/85

Proceedings, dated
No. 3662

1885

Subject.

No. 1371 W of 13th June 1885

Sundry Certain
Instruments for other

87 v birds ✓

Chief Engr of PWD

13/6/85

Oct. 19/6.

5.6.85 - 2.10.6.85

13/6/85

Educational Department.

PROCEEDINGS OF THE MADRAS GOVERNMENT.

Read the following

*Despatch from India Office No 8 dated
30th April 1885.*

With reference to the letters noted in the margin

*Madras Public Works letter No ³¹⁰⁷ 25th w of 18th December 1884, (Pumps for Public Works Department)
Letter from Secretary to Government of Madras in the Educational Dept. No 61 dated 21st Jan'y 1885. (Microscopes for Agricultural College).
Letter from Secretary to Govt. of Madras in the Revenue Department No 9 dated 10th Feb'y 1885. (Stores for Survey Department)*

I have to inform your Excellency that I have sanctioned compliance with the Indents for stores therein forwarded.

*Order 27th May 1885 No 366 (Mis)
Communicated to the Revenue and Public Works Departments and to the Director of Public Instruction.
(True Extract)*

Memorandum

of Under Secretary

*To
The Public Works Department
- or - Revenue Dept.
X.L.D. - Director of Public Instruction*

GOVT. OF MADRAS.

PUBLIC WORKS DEPARTMENT.

LETTER to the Right Honorable
the Secretary of State for
India.

No. ²⁵/_{3107 W.} dated 18th Dec. 1884.

Forwarding special indent for two centrifugal pumps required to be kept in stock in the Presidency Public Works Stores to meet urgent demands.

18TH DECEMBER 1884, No. ²⁵/_{3107 W.}, PUBLIC WORKS.

PUBLIC WORKS DEPARTMENT.

LETTER—to

THE RIGHT HONORABLE THE SECRETARY OF STATE FOR INDIA.

MY LORD,

We have the honor to forward, for favor of compliance, a special indent for two centrifugal pumps, together with copies of our Proceedings marginally noted, explaining the necessity for keeping such articles in stock to meet emergent demands.

We have the honor to be,

My Lord,

Your Lordship's most obedient, humble servants,

FORT ST. GEORGE,
18th December 1884.

Exd. C. Howarth.

GENERAL.
ACCOUNT.

Govt. of {1884} Madras.

PUBLIC WORKS.

Dated December, 18th.

Recd.

Encl.

G.O., 18th Dec. 1884, No. 3107 W.

DECEMBER.

Centrifugal Pumps

Special indent for two — required to be kept in stock in the Presidency Public Works Stores ordered to be forwarded to the Home Government.

18TH DECEMBER 1884, No. 3107 W., PUBLIC WORKS.

Govt. of (1884) Madras.

PUBLIC WORKS.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

General.
Account.

READ—the following letter from Colonel H. L. PRENDERGAST, R.E., Superintending Engineer, V Circle, to the Chief Engineer, Public Works Department, dated Chepâk, 13th December 1884, No. 3540 :—

In G.O., No. 997 I., dated 6th ultimo, it is directed that the General Superintendent, Public Works Stores, should keep two centrifugal pumps in stock to meet urgent demands.

1 indent in triplicate.

2. There is only one 6-inch pump on the Public Works Stores books, and this is in use on the Buckingham Canal works. I have the honor to forward a special Home indent for two centrifugal pumps of 8 and 6 inch diameter to be kept in stock.

3. The annual indent for 1885-86 has been already disposed of in G.O., No. 2612 W., of 24th October 1884.

ORDER—dated 18th December 1884, No. 3107 W., Public Works.

Ordered that the indent be forwarded to the Home Government for compliance.

(Here enter No. ²⁵/_{3107 W.}, dated 18th December 1884.)

(True Extract.)

(Signed) J. SHAW-STEWART, Colonel, R.E.,
Secretary to Govt., P.W.D.

To the Superintending Engineer, V Circle.
„ Chief Engineer for Irrigation.

Exd. C. Howarth.
Spare Copies

Dated November, 6th.

Reed.

Encl.

G.O., 6th Nov. 1884, No. 997 I.

NOVEMBER.

Centrifugal Pumps

Orders on letter from Messrs. Richardson and Cruddas submitting explanation on the failure of the — supplied by them.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Irrigation.

READ—the following letter from Messrs. RICHARDSON AND CRUDDAS, Bombay, to the Under Secretary to Government, Public Works Department, Irrigation Branch, Madras, dated Bombay, 25th October 1884, G. No. 9074 :—

We have the honor to acknowledge receipt of copy of G.O., dated 8th October 1884, No. 902 I., Public Works, with correspondence thereto attached, with reference to the bursting of two of Messrs. J. and H. Gwynne's centrifugal pump at Sangam. In reply we can only express our regret and refer you to the copy of Messrs. Gwynne's letter, which forms part of the correspondence.

2. All pumps made by this firm are of the same pattern, and as the two supplied by us were new and in the same order as received from Messrs. Gwynne, we cannot account for their bursting, unless unfairly strained by concussion or otherwise. As you are probably aware, Messrs. Gwynne stand high among makers of centrifugal pumping machinery, and for years we have annually sold a large number of these pumps; but we have never before heard of any bursting in the manner described.

ORDER—dated 6th November 1884, No. 997 I., Public Works.

Communicated to all Superintending Engineers, with a copy of proceedings of Madras Government, No. 902 I., dated 8th October 1884, for information.

2. Superintending Engineers will estimate their future requirements for machinery so as to obviate the necessity of purchasing in India and of submitting urgent indents to England.

3. The General Superintendent, Public Works Stores, will keep two centrifugal pumps, one large and one small, in stock to meet urgent demands.

(True Extract.)

(Signed) J. O. HASTED, Colonel, R.E.,
Joint Secy. to Govt., P.W.D.,
Irrigation Branch.

To Superintending Engineers.
To the Chief Engineer for Irrigation.

Exd. E. Fernandez.
Spare Copies

IRRIGATION.

Govt. of 1884 Madras.

PUBLIC WORKS.

Dated October, 8th.

Recd.

Encl.

G.O., 8th Oct. 1884, No. 902 I.

OCTOBER.

Centrifugal Pumps

Correspondence on the subject of the failure of certain —, referred to Messrs. Richardson and Cruddas for remarks.

8TH OCTOBER 1884, No. 902 I., PUBLIC WORKS.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Irrigation.

READ—the following letter from J. W. RUNDALL, Esq., Superintending Engineer, II Circle, to the Chief Engineer for Irrigation, dated Duggirála, 22nd September 1884, No. 549 S.G. :—

I have the honor, with reference to paragraph 6 of your note of the 31st July, printed with G.O., No. 746 I., of the 16th August, to forward copy of a letter from the Executive Engineer, Sangam Project Division, regarding the failure of the centrifugal pumps purchased from Messrs. Richardson and Cruddas, Bombay.

2. On the receipt of this letter, I asked Captain Campbell if he could account for the two stones having got inside the 6-inch pump, and, in reply, he informs me that he thinks they must have been sucked up through the grating which was large enough to pass small stones. Captain Campbell moreover points out that these stones were found the *second time* the pump was taken up for repairs, so the stones can have had nothing to do with the splitting of the case, though their presence would account for the breaking of the fan when the pump was set to work again.

3. I do not suppose that Messrs. Richardson and Cruddas sent an old pump and charged for the 8-inch pump as a new one. It is probable that the pump had been in stock for a long time.

4. It is certainly singular that both these pumps should have failed in the same way, and that, though made by the original patentees, Messrs. Gwynne and Co., they should not have worked as satisfactorily as those constructed by other firms, but I think it a mere coincidence that the pumps failed, for, as remarked by Messrs. Gwynne and Co., they are all made from the same patterns, and similar pumps are known to have worked well elsewhere.

ENCLOSURES.

From Captain D. McN. CAMPBELL, R.E., Executive Engineer, Sangam Project Division, to the Superintending Engineer, II Circle, dated Sangam, 4th September 1884, No. 197.

With reference to endorsement No. 467 S.G., dated 27th August 1884, on G.O., No. 746 I., dated 16th August 1884, I have the honor to report as follows.

2. Sanction to purchase a 6-inch centrifugal pump in Bombay was obtained in G.O., No. 881 I., dated 6th November 1883, and the pump was received from Messrs. Richardson and Cruddas on the 27th December 1883. This pump worked well for about two months when the casing suddenly split. This split was about 2 inches long and $\frac{1}{4}$ inch wide. There was apparently no cause for this, except weakness of the casing, as the pump was not driven at an excessive speed

In order to continue working the pump, the split was plastered up with composition, but this was continually giving way, and therefore, as soon as work could be stopped for a few days, the pump was removed and an iron plate was revetted inside. This acted for a time, but gave way after a few weeks, and, on removing the pump, it was found that the fan was almost entirely destroyed, two stones having got inside. A new fan was cast, the split repaired again, and pump set to work, but it never acted properly, only giving about one-third discharge.

3. The purchase of a 10-inch centrifugal pump was sanctioned in G.O., No. 244 I., dated 1st March 1884; but Messrs. Richardson and Cruddas stated they had none in stock, but that they could supply an 8-inch pump at once. This was accordingly ordered, but it never worked properly from the beginning, and its appearance was not certainly that of a new pump. The fan had so much play on the axle, that it knocked against the sides of the casing. This was partly remedied by putting on washers, but this pump had only been working about one month when it split exactly in the same place as the other. This split was however larger. After this, the pump gave constant trouble, and all attempts at getting it to give more than one-third discharge failed, and after a very short time it was found that the fan had worn out, a new one was cast but the result was not satisfactory.

4. I wrote to Messrs. Richardson and Cruddas regarding the failure of these, pumps, and a copy of my letter and his answer thereto and a letter from Messrs. Gwynne and Co. are herewith forwarded.

5. To say that the pumps were not properly worked is a mistake, as we had been working two pumps received from England nearly constantly day and night for over a year, and they had shown no signs of breaking up and had worked throughout most satisfactorily.

6. I am of opinion that both the pumps received from Bombay were of inferior workmanship.

From Captain D. McN. CAMPBELL, R.E., Executive Engineer, Sangam Project Division, to Messrs. RICHARDSON AND CRUDDAS, dated 16th May 1884, No. 337.

Referring to your No. 3506, dated 18th May 1884, I have the honor to inform you that the casing of both the 6-inch pump and the 8-inch pump split while at work. The split in both is close to where Gwynne and Co. is printed on them. In the case of the 6-inch pump the split is about 2 inches long and $\frac{1}{2}$ inch wide and in the 8-inch about 4 feet long and 1 inch wide and in addition a crack nearly all round.

The 8-inch pump worked badly from the first, and the instructions have been carefully attended to. We have been working two other 8-inch pumps (Gwynne's) nearly constantly day and night for the last two years, and have therefore had considerable experience in the working of the centrifugal pumps.

The breaking down of the 8-inch pump is a most serious matter. We had completed 6,000 feet of anicut wall and had only 400 feet to join across the deep bed of the river before the freshes came down the river. The pump breaking down has rendered the joining of the wall almost impossible before the floods, and the result will be that most of the work done will be washed away.

From Messrs. RICHARDSON AND CRUDDAS, to the Executive Engineer, Sangam Project Division, dated Bombay, 2nd July 1884, No. 5046 G.

With reference to your letters, Nos. 247, 318, and 337 of 5th, 14th, and 16th May respectively, copies of which were sent on to Messrs. I. and H. Gwynne through our London correspondents, we have now the honor to hand you copy of that firm's reply, and if you can send us any portions of the broken casings showing deficiency of either material or workmanship, we shall have much pleasure in sending them on to London for you and obtaining the new castings free of charge, as promised by Messrs. Gwynne.

Awaiting your reply.

From Messrs. I. and H. GWYNNE, to the Executive Engineer, Sangam Project Division, dated 89, Common Street, 11th June 1884.

We have your favor of this date, and have read the enclosure sent therewith. There must have been something most extraordinary for two pumps to go exactly the same way, and we fear there must have been some severe concussion, such as the belts slipping off suddenly to produce such results; all our pumps are tested to carry 60 lb. on the square inch, which is equal to 120 feet head. If upon examination we find that there is any deficiency in either material or workmanship, we will supply new castings free of cost. With regard to the 8-inch pump not working satisfactorily, there must be something wrong with the driving arrangements, as all the pumps are

made of the same pattern, and there cannot therefore be anything amiss in the interior construction. We presume it is improperly speeded, otherwise it should work well, as a great number of others are doing.

ORDER—dated 8th October 1884, No. 902 I., Public Works.

The foregoing correspondence will be printed and referred to Messrs. Richardson and Cruddas for remarks on the failure of the pumps purchased from them.

(True Extract.)

(Signed) J O. HASTED, Colonel, R.E.,
Joint Secy. to Govt., P.W.D.,
Irrigation Branch.

To the Superintending Engineer, II Circle.

„ Chief Engineer for Irrigation.

To Messrs. Richardson and Cruddas.

Exd. A. Grubert,

Spare Copies

IRRIGATION.

Govt. of (1884) Madras.

PUBLIC WORKS.

Dated October, 8th.

Recd.

Encl.

G.O., 8th Oct. 1884, No. 902 I.

OCTOBER.

Centrifugal Pumps

Correspondence on the subject of the failure of certain —, referred to Messrs. Richardson and Cruddas for remarks.

P. W. D.
Govt. of (1885) Madras.
MILITARY.

To
THE PUBLIC WORKS DEPARTMENT,
&c., &c., &c.

Dated May, .

Issued

Recd.

Encl.

G.O., 30th May 1885, No. 2730.

no. 1372 w of 13th June/85

Communicated to

S. E. III Circle with
adventure to G. O. No.
456 w of 29th January/78
of J. S. E.

no. 1372 w of 13th June/85
MAY.
Nos. — .

Ordinance Department—Stores.

Ainley, Supervisor Sergeant, Public Works
Department.—Requisition for a carbine for the
use of —, negatived.

S. E. III Circle with 1 encl.

Other Sub-
C.A. to Govt
Sub of W. 2. in. Scheme } for
information



GOVERNMENT OF MADRAS.

MILITARY DEPARTMENT.

May 1885, No. .

Ordnance Department—Stores.

Read the following papers :—

No. . From Lieutenant-Colonel H. M. VIBART, R.E., Superintending Engineer, III Circle, to the Chief Engineer, Public Works Department; dated Rámandrug, 4th May 1885, No. 248.

I have the honor to submit, for sanction of Government, an indent on the Ordnance department for a carbine required on payment by Supervisor

Sergeant Ainley to keep up his rifle practice.

2. The Ordnance Officer at Bellary says that the sanction of Government is necessary to the issue of arms to military subordinates employed in the Civil department.

No. 96-E.

Transferred to the Military Department for favor of compliance if there be no objection.

(By Order.)

OOTACAMUND,
9th May 1885.

(Signed) C. BOWEN, Major, R.E.,
Under Secy. to Govt., P.W.D.

No. . From the Inspector-General of Ordnance; dated 20th May 1885, No. 21-G.

No. . ORDER THEREON, ~~30~~ May 1885, No. 2930.

The requisition being inadmissible under regulation, must be negatived.

2. Attention is invited to Proceedings of Government (Military), No. 167, dated 11th January 1878.

(True Extract.)

(Signed) A. KENNEY-HERBERT, Lt.-Col.,
Offg. Secretary to Government.

To the Public Works Department, with the indent.
,, Inspector-General of Ordnance.

Exd. E. C. Shunker.