

Educational (1910) Department.

ORDINARY MS.

G.O., No. 565

DATED 27-9-1910.

19

[Despatch Abstract.]

Presidency College.

Sanctioning an expenditure not exceeding Rs 12,835 towards the cost of providing the Chemical Laboratories of the _____ with a Manufacture High Pressure Gas Holder.

BACK PAPERS.

G.O.	No.	Department.	Date.	G.O.	No.	Department.	Date.

FURTHER PAPERS.

G.O.	No.	Department.	Date.	G.O.	No.	Department.	Date.

[E & L.]
68
2,100-15-5-00.

EDUCATIONAL DEPARTMENT.

CURRENT FILE.

CONTENTS.

From	Number.	Date.	Pages.
[1070] D.P. 9	2923	21-5-10	1-5
[1668] memo. to D.P. 9	1070-2	27-7-10	6
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[P.T.O. FOR PUT UP PAPERS.]

PAPERS PUT UP WITH CURRENT No. _____

Papers of the department to which the current belongs.

Number.	Date.	Original (=O.) or spare copy (=S. C.)	Remarks. (In this column such of the papers as have been removed for copying, printing, etc., should be marked with a cross.)	Initials of Referencer with date in token of return to Reference department.

Papers of other departments.

Department.	Number.	Date.	Original (=O.) or spare copy (=S. C.)	Despatcher to note the return of the papers to the departments concerned.

Stock Form No. 135.
4,000-1-8-08.



EDUCATIONAL DEPARTMENT.

Received _____ 190 , Registered 30 5 1910 ³

Subject.

Requesting sanction to an expenditure not exceeding
Rs 12,650 towards the purchase of a Mansfield High
Pressure Gas Holder No. 1413, and a Centrifugal pump and
motor for the Presidency College Laboratory.

ENCLOSURES.

No. _____
Spare copies _____

R. C. No. 2923, / 10

Station M a d r a s , Dated the 21st May 1910. 190 .

From (Name) The Hon'ble Mr. A. G. Bourne, D.Sc., F.R.S., C.I.E.,
(Designation) Director of Public Instruction.

To The Secretary to the Government of Madras,
Educational Department.

Thro' The Accountant General,

M A D R A S.

Sir,

The Professor of Chemistry, Presidency College,
reports as follows regarding the supply of gas and
water to the chemical laboratories:--

"The oil-gas plant at the college erected by
Messrs Mansfield, Calcutta, supplies gas to the physical,
chemical and biological departments and also to the
Engineering College and to the Board of Revenue Labo-
ratory. The holder is one of 5,000 cubic feet and
when all the weights are taken off the pressure of gas
is equal to two inches of water. On gas making days
the pressure has to be reduced to nearly an $\frac{1}{2}$ " in order
that it may be possible to manufacture the gas. As
a result I rarely get a pressure of gas greater than

4000-209-02
5-12-1899 B

1725 letter 13
7 June 1915 W
14-9-16 D.

ok 158

2
A

1" and Bunsen burners will not work satisfactorily at this pressure; oil gas requires for complete combustion a good deal more air than coal gas does, and this extra air is not drawn in at such low pressures as 2"; non-luminous flames cannot be obtained. The difficulty is much greater with foot blow pipes, combustion furnaces and ~~multiple~~ ⁶⁶ furnaces.

Messrs Mansfield now meet this disadvantage by arranging to deliver the gas at 8", the top of the holder being made concave so as to hold an adjustable quantity of water. They have thus converted low pressure installations to high pressure ones at the Government Colleges, Lahore and Dacca; there is also one at the Agricultural College, Coimbatore; and the Professor of Chemistry at these institutions, whom I know personally, assure me of the immense improvement in all their burners.

The other departments who use the gas in the college use it comparatively rarely; they have been consulted and do not desire to come on the high pressure supply. But for the chemical laboratories I consider the provision of high pressure gas is indispensable; the work in future will consist less of "test-tubing" than of inorganic and organic preparations and quantitative exercises and the heating or distillation of large quantities of solids or liquids with the aid of the 'cold' flames at present available will cause a serious waste of time."

2. In these circumstances he proposes to purchase a Mansfield No. 1413 high pressure gas holder of 2,000 cubic feet capacity with a small gas engine and blower to transfer the gas from the present holder. There is room for the gas engine in the present gas house. The gas main of the chemical laboratory would then be connected

*In the same
room with the
gas holders ?*

M.

connected direct to the 8" pressure holder, all the other departments being connected to the 2" pressure holder. Messrs Mansfield have furnished an estimate amounting to Rs 12,000, this being the cost of delivery and erection of the holder, gas engine, and blower, including foundation for the holder and all connections.

3. The consumption of water for the laboratory in future is estimated to be about 500 gallons of high pressure water from a height of 64 feet and 1,000 gallons of low pressure water from a height of 40 feet. At present the water is raised to the tanks on the roofs by a hand pump, which entails an ~~expense~~ ^{expenditure} of Rs 16 a month on coolies. As electric current will be available in the college next term it will be considerably cheaper to do the pumping electrically. The Professor of Chemistry therefore suggests the purchase of a centrifugal pump and motor: a pump of the Rees 'Roturbo' type with a delivery of 1750 gallons per hour to a head of 80 feet, (e-g), size G.A.M.D.D.H sold by Messrs Osler, Madras, at Rs 635 for motor- and pump.

4. The Principal recommends that these proposals may be approved; and I have the honour to request you will be so good as to obtain the sanction of Government to an expenditure not exceeding Rs 12,650, towards the objects specified above.

5. There is no provision for the charge in the current year's budget but I think the bulk of it can be met from savings under "Salaries," for Arts Colleges, as the whole of the provision for 4 new Professors in the Indian Educational Service is not likely to be spent. The necessary reappropriation statement will be submitted

£ one 1174 15
19-10-09

This will meet
the condition of
my variable
head but
the head is ~~not~~
variable. No.

Page 124 of the CBE
for 1910-11

submitted after the issue of the Civil Budget Estimate.

I have the honour to be,

Sir,

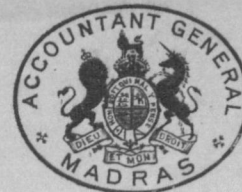
Your most obedient servant,

W. H. Murray

for Director of Public Instruction.

W. H.

M.R.B.



Fort St. George, the 27 of May 1910.

No. P.A. 5-3118

Enc: 2.

There is no audit objection to the sanction of Government being accorded to the purchases in question, as the Mansfield High Pressure Gas Holder is believed to be an article manufactured from imported materials and the centrifugal pump and motor, ^{are} ~~one~~ already in India and, as such, come under rules 2 & 3 (a) respectively of Rules for the supply of articles for the Public Service, appended to Government of India Resolution No: 4941-4988-102 (C & I), dated 14th July '09.

Pages of
G.O. 361 Fml
8257909

A.

K. A. S. Rao
for Accountant-General.
mrs.

TO

The Secretary to the Government of Madras,
Educational Department.



CN^o 1070

4

Memo. No 1070-272. 7. 10

With reference to his letter R.C.

No. 2923/10 of 21st May 1910 requesting

Sanction to the purchase at a cost not

exceeding Rs 12,650 of a Mansfield

High Pressure Gas Holder and a

Centrifugal pump and motor for

the Presidency College Laboratory. The

D.P. is requested to ~~obtain and~~

~~forward to Govt the firm quotations~~

with specifications, plans and

estimates, ~~thereof~~ and also to

~~PP~~ Obtain and forward

~~2.7.10~~ to Govt quotations from

same firms ~~showing~~ the price

of the machinery required.

RD

2.7.10

2/7

desp
27

Submit the proposals in details

To, the D.P. ✓

desp
27/10

EDUCATIONAL DEPARTMENT.

Received



190

Registered

25. 8. 1910

Subject.

Submitting particulars called for in connection with the proposal to purchase a Mansfield High Pressure Gas Holder and a Centrifugal pump and Motor for the Presidency College, Madras.

ENCLOSURES.

No. 6 (A 67)
in a tin box
Spare copies

Ref on Current

No. 2927/10

Station Madras, Dated the 22nd August 1910

From (Name) The Hon'ble Mr. A.G. Bourne, D.Sc. F.R.S.C.I.E.,

(Designation) Director of Public Instruction,

Madras

To The Secretary to the Government of Madras,

Educational Department.

Sir,

Page 6 anti

With reference to Memorandum No. 1070-2 Educational, dated 2nd July 1910, I have the honour to submit herewith the specifications, plans and estimates submitted by the Principal in connection with the proposal to purchase a Mansfield High Pressure Gas Holder and a centrifugal pump and motor for the Presidency College laboratory.

2. Enclosure A. is a diagram of the Intensive type gas holder which it is now proposed to instal in order to raise the gas pressure between the existing holder and the chemical laboratories.

Enclosure B. is a description and account of the method of working this holder.

Enclosure C. is a diagram showing how the new holder will be connected with the old ones and with the Engine in the

PD
24/8

8
10
gas house.

Enclosure D. is an estimate from Messrs. Mansfield, Calcutta, amounting to Rs 12,120/- for the complete erection of the above plant and for the testing and repair, if necessary, of the existing gas pipes of the chemical laboratories.

Enclosure E. is an estimate from Messrs. Osler, Madras, for the complete erection with all service pipes of a centrifugal pump and motor, amounting to Rs 715.

Enclosure F is a plan of the chemical laboratories showing the position of the gas holders and pumps existing and proposed referred to above with the exception of the new gas holder which would be south of the old one and like it screened by trees from the Marina.

I have the honour to be,

S i r ,

Your most obedient servant,

A. J. Bowring

Director of Public Instruction

R N.V.S.

[E. & L.]
97
1/30-15-3-02

EDUCATIONAL DEPARTMENT.

Purchase of a manfield High Pressure Gas Holder
No 1413 etc for the Presidency College Madras at a
cost of Rs 12,650 Secretariat

NOTES.

12

W 216 00 H 216 00

C. No. 1670 From the S.P. 9 No. 2923, dated 21-5-1906.

SUBJECT. Purchase of a manifold High Pressure Gas Holder No. 1413 &c. for the Presidency College, Madras, at a cost of Rs 12,650.

Para. 4 of letter on p. 3 of C.F.

Para. 3 of letter on p. 3 of C.F.

28,237
2,108
31,345

Vide extract from the letter of the Professor of Chemistry on pp 1 & 2 of C.F.

Vide para. 2 of Director's letter on p. 2 of C.F.

Para. 5 of his letter on p. 3 of C.F.

Page 5 of C.F.

The Director of Public Instruction requests sanction to the purchase at a cost not exceeding Rs 12,650 of (1) a Manifold high pressure gas holder of 2000 cubic feet capacity (Cost. Rs 12,000) with a small gas engine and blower to transfer the gas from the present holder and (2) a centrifugal pump and motor (Cost Rs. 655).

2. The existing gas plant was erected by Messrs. Mansfield & Sons - Vide G.O. No. 809 Etdy 5-12-99. The total estimated cost of the plant was Rs 31,345 - Vide G.O. No. 2795 Ndy 29th September 1896 and 2697 Wdy 11th October 1899. ^{Circumstances} ~~The reasons for~~ ~~under which~~ ~~the~~ existing plant is considered unsuitable for the purpose for which it is intended is explained in para. 1 of the Director's letter. The necessity for the purchase of a centrifugal pump and motor is shown in para. 3 on page 3 of Current file. When the new plant is erected the gas main of the Chemical Laboratory would be connected direct to the 8" pressure holder, all the other departments being connected to the existing 2" pressure holder.
3. The S.P.D states that the Charge can be met from the Savings under "Salaries" for Arts Colleges. The A.G. to whom the proposal is submitted states that there is no audit objection to ^{the} sanction being accorded to the purchase in question. It is for consideration whether the expenditure may

may be sanctioned.

PP
12.6.10

D C
905 2795W + 2697W
29.9.96 11.10.99

4 £. 809 Ed. B.
5.12.99

The estimates for the existing gas works at the Presidency College were sanctioned by the P.W.D., ~~and~~ but the execution of the work was entrusted ^{by that Department} to Messrs Mansfield & Sons. It is submitted that before sanctioning the purchase of the Mansfield High Pressure Gas Holder with accessories, and the centrifugal pump and motor, the remarks of the P.W.D. may be obtained uo.

2. The Cost of the original Gas works was met by the P.W.D.; while the present proposal is to meet the Cost of the plant now required from the Savings under the allotment for Govt. Arts Colleges in the Educational Budget.

Para 5 of the D.P.D.'s letter. p. 3 of c.

SL- No. 1070 - 1
15.6.10
DP 1576

PP
14.6.10

P.W.D. uo. remarks
Su
14/6



P.W.U.O. R No. 412
Dated 16.6.10

Dates not to be completed
on 21.6.10

SW

Submitted.

P.K.S
21.6.10

In this case before granting administrative sanction on an uncertain cost basis it would doubtless be

P.W.D.

A

Letter to ask the D. I. I. 67
 item & forward from quotations
 with specifications, which can be
 examined with the plans, when final
 order can be passed. The Res. Authority
 is an expansion pump & with the
 fixed head a cheaper pump might
 do but the saving in this would
 be small. There is a doubt about
 the position of the engine for the
 gas plant.

W. 18/6

I think the course suggested
 at A is the proper one. Let
 us have the proposals in detail
 with specifications & estimates & plans
 if an opinion is desired -

Mr. S. W.

18/6/10

Educational Department

Draft to Mr. S. P. 1 / Please
 Look
 30/6/10



The draft ^{memo.} placed below is for approval

PP 2-7-10

Issue on 2/7

[memo no. 670-24 2-7-1910]

30/6

From the D.P.D. No. 2923/10, dt 22nd August 1910.

pp. 208 & 209 of P. & also the roll of plans &c.

The D.P.D. submits the specifications, plans and estimates in connection with the proposal to purchase a Mansfield High Pressure Gas Holder and a Centrifugal pump and motor for the Presidency College, Madras. They were required by the P.W.D. in their note dt 27-6-10 on page 3 supra.

2. Submitted that the plans, estimates and specifications may be forwarded to the P.W.D. u.o.

P.W.U.O. R No. 595
Dated 26-8-10

PR
25-8-10
7.H.
25-8-10

Sur
25/8

21-9-10 1668-1
25-8-10
Desp 7/10
25/8

To the P.W.D. u.o.

P.W.D.

The plan & estimate have been examined & may be approved

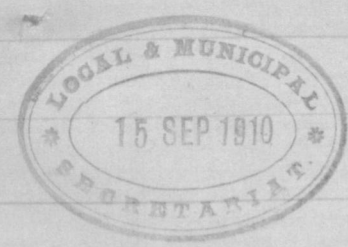
M/3/9

Edw

Educational Department

It is for Consideration whether the proposed expenditure amounting to Rs 12,835 may be approved. If approved the draft order placed below may issue with the Concurrence of the Financial Deptt.

PR 17-9-10 The D.P.D. says he will submit the usual reappropriation statement for this amount, which he proposes to meet from savings under



para. 9 of D.P.D. letter
15/9/10 3 of 4

Box 27
C. 22.9
K 23.9

under "Salaries" for *Wb* Colleges

$\frac{10}{17.9.10}$

Sec 4

Sm
17/9

US $\frac{10}{19.9.10}$ 1668-2
199 ✓ 19.9.10
2/19/9 *on*

Financial *no.*

Wb.
19.9.10

19-9-10
CURRENT NO.
4045
FINANCIAL

The draft order may be
accepted in *Finl.*

Sm
21/9/10

C. I.
11-9-10

Wb.

Wb.

accept
 $\frac{10}{19.9.10}$

Finl. 100 4045-1
LOCAL & MUNICIPAL
27 SEP 1910
SECRETARIAT

Wb.

✓ *ssul.*
Educational Depart.

[*Ex. no* 565 d 27-9-10]

READ AGAIN G.O., No., dated..... 19.....

” ” ” ” ” 19

READ ALSO :—

C. No. 670, From the D.O. 9, No. 2923/10, dated 21-5- 1960.

Ends of the A G. PA. 3118 27-5-1960

" " 1668, " " 2-0.9, " 2423/6, " 22-8-1960.

ORDER.

Mi

No. 503, dated 27.9.1970.

The Govt. are pleased to sanction an expenditure not exceeding Rs 12,835 towards the cost of providing the Chemical Laboratories of the Presidency College, Madras, with a Mansfield High Pressure Gas Holder and a Centrifugal pump and motor, including the cost of erecting the plants and of testing and repairing, if necessary, the existing gas pipes of those laboratories.

$\frac{PP}{17-9 \cdot 10}$

Sun
17/9

Link.
19.9.10

To,
The D. O. J. with enclosures ^{returned}
" A. G. ~~then~~ ^{to} ~~the~~ ^{the} ~~Dept.~~ ^{Public Works}
~~Copied to the~~ ["] ~~the~~ ^{Public Works}

✓
the deep
no depth 17.9.10.
8.5.11

1919

When given for copying
When copied
When examined
When signed

191

READ AGAIN G.O., No.

DATED
19

CURRENT No.

ENCLOSURES TO C. No.

ORDER OF GOVERNMENT.

LETTER OF GOVERNMENT.

STATEMENT WITH DITTO.

PAPERS NOT FILED UP, BEING MEANT FOR DESPATCH
IN ORIGINAL.

A A A A A A A

N.B.—
A = Copy in full.
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