

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Irrigation.
Account.

READ—the following paper:—

No. 127 I.

Note by the Chief Engineer for Irrigation.

Lieutenant-Colonel Smart, R.E., who was specially deputed when on furlough in Europe last year to select current meters for use on the Gódávári delta works, remarks in his letter * No. 121, dated 12th March 1896 (paragraph 2), that, if the gauging of rivers and canals is to be taken up in earnest, it will be necessary to purchase electric current meters as it will not do to rely exclusively on the Pitot's tubes just received from Europe, and states that, with Pitot's tubes, the electric current meters and the ordinary tube-floats to check one another, the results should be reliable.

2. The undersigned approves of this proposal and recommends that an electric current meter of the newest make with all recent improvements be obtained from England through the India Office. If possible, the meter should be of English manufacture, and one made by Elliot Brothers and carefully calibrated would be preferred.

(Signed) R. R. E. DRAKE-BROCKMAN, Col., R.E.,
15th June 1896. Chief Engineer for Irrigation.

ORDER—No. 532 I., dated 24th June 1896.

Approved.

2. The General Superintendent, Public Works Stores, will submit, as soon as possible, a special indent for an electric current meter of the kind indicated by the Chief Engineer for Irrigation for transmission to the Director-General of Stores, India Office, for early compliance.

(True Extract.)

Under Secy. to Govt., P.W.D.,
Irrigation Branch.

To the Chief Engineer for Irrigation.
" Chief Engineer, Public Works Department,
Buildings, Roads and General Branch.
" Superintending Engineer, V Circle.
" Superintending Engineer on Special Duty,
Cauvery Completion Estimate, Tanjore.
" Examiner, Public Works Accounts.

Exd. C. M. Thumbuswamy.
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IRRIGATION.
ACCOUNT.

Govt. of {1896} Madras.
PUBLIC WORKS.

Dated June, 24th.

Recd.

Encl.

G.O. No. 532 I., 24th June 1896.

JUNE.

Electric Current Meter

The recommendation of the Chief Engineer for Irrigation that an — of the newest make with all recent improvements be obtained from England for use on the Godavari delta works, approved, and the General Superintendent, Public Works Stores, directed to submit a special indent for the same for transmission to the India Office.

No. 532 I., 24th June 1896

PUBLIC WORKS DEPARTMENT,
IRRIGATION BRANCH.

PROCEEDINGS OF THE MADRAS GOVERNMENT.

UNDER date the

READ the following

Note by the Chief Engineer for Irrigation. (H.R. N. 1. dated June 1896.)
No 127 I of 15-6-96.

printed in P.H. G. N. 420.3
dated 13 May 1896.

J.H.
17.6.96

Lieut Colonel Smart R.E., who was specially deputed when on furlough in Europe last year to select current meters for use on the Godavari delta Works, remarks, in his letter N. 121 dated 12 March 1896 (para 2), that, if the joining of rivers and Canals is to be taken up in earnest, it will be necessary to purchase ^{electric} current meters of another pattern as it will not do to rely exclusively on the Pitot's tubes just received from Europe, and states that, with Pitot's tubes, the electric current meters and the ordinary tube-floats to check one another, the results should be reliable.

2. The undersigned approves of this proposal and recommends that an electric current meter of the newest make with all recent improvements be obtained from England through the India Office. If possible, the meter

W. W. W. W. W.

157 1/2
96

24th June 1896.

Approved.

MSA

17.6.96

Puedo

1576

96

DEPT. OF COMMERCE

70

- The Chief Engineer for Irrigation.
- " Chief Engineer P. W. D. Buildings,
Roads & General Branch.
- " Supery. Engineer, Fifth Circle.
- " Supp. Engineer on Special duty, Cauvery
Completion Intrinside, Talayale.
- " Examiner, P.W. Accts.

P. W. CURRENT No. 5690

His Excellency the Governor

Recd. 23.6.96

Electric Current Meter.

13.5.96. 4203.

Issue

Recd. 19/6

48/6

9/185

CHIEF ENGINEER
5 FEB
GENERAL. 1886
ACCOUNT

113/6
Govt. of 1886 Madras.

PUBLIC WORKS.

Dated January, 25th.

Recd.

Encl.

G.O., 25th Jan. 1886, No. 202 W.

JANUARY.

Stores

Orders of the Government of India communicating revised rules laying down the procedure to be followed in obtaining from England —, other than railway stores, communicated to officers of the Department.

25TH JANUARY 1886, No. 202 W., PUBLIC WORKS.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

General.
Account.

READ—the following letter from Colonel W. S. TREVOR, R.E., Secretary to the Government of India, Public Works Department (Civil Works—Miscellaneous), to the Secretary to the Government of Madras, Public Works Department, dated Fort William, 12th January 1886, No. 12 M. :—

I am directed to communicate, for your information and guidance, the accompanying revised rules laying down the procedure to be followed in future in obtaining stores from England for the Public Works Department, other than railway stores, and to request that they may be brought into operation at once.

2. I am to invite your attention to paragraph 3 of Finance Department resolution No. 185, dated 10th January 1883, under which alone English stores may be purchased in this country; and to state that, whenever English stores are authorised to be purchased locally, the reasons for allowing the purchase must be placed on record, as well as the probable estimated loss or gain caused by adopting such a course.

3. The Examiner of Public Works Accounts should be furnished with a copy of each order issued under the preceding paragraph, and should be requested to enter and attach its substance to the annual return under paragraph 23 of the Finance Department resolution quoted above.

4. I am further to point out that, under the rules in force, the purchase of English stores by means of orders given to agents or firms in India, who have to send such orders to England for execution, is absolutely prohibited. If any case of such a nature should occur, it should be seriously noticed and should be forwarded, together with the orders passed thereon, to the Government of India for information.

ENCLOSURE.

Revised rules for procedure in obtaining stores from England for the Public Works Department, other than railway stores.

Indents for Public Works stores, other than railway stores, so long as they are within the grant assigned for the purpose for expenditure during the year, should be sent direct by the Secretaries in the Public Works Department of the several local Governments and Administrations to the Director-General of Stores, India Office.

2. All indents transmitted to the India Office must be in duplicate, and must give full particulars, and be accompanied by all information likely to be of use in guiding their supply. One copy of each indent and of the documents accompanying should be simultaneously sent to the Government of India in the Public Works Department. If the indents are not printed at the time of first despatch, one manuscript copy only need be sent to the India Office, and one manuscript copy to the Government of India. On being printed subsequently, two printed copies should be sent to the India Office, and one to the Government of India.

3. Indents must be made out only on the authorised form as at present in use. Calculations and specifications must be clear and complete, and must be accompanied by all necessary drawings, models, or samples; the indenting officer being responsible that all information necessary for an accurate and complete comprehension of his wants is given.

4. English money, weights and measures are alone to be used in all indents sent to England and in all correspondence thereon, the money values being entered in conventional sterling at two shillings per rupee.

5. Indents are to be numbered progressively; and should, in addition, have each item numbered consecutively, commencing from unit (1) upwards in each indent. Particular attention must be devoted to this, so that the quotation of the number of an indent and the number of an item may fully identify the article in question.

- (I)—The grant for outlay in England during the year.
- (II)—The number and amount of each indent certified during the month just closed.
- (III)—The amount of the grant for the year actually apportioned up to the end of the month, corrected by latest advices from England.
- (IV)—The balance available to meet further indents.

Exd. E. Fernandez.
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R 549W
3

R 549W
GENERAL.
ACCOUNT.

Gobt. of {1886} Madras.
PUBLIC WORKS.

Dated July, 2nd.

Recd.

Encl.

G.O., 2nd July 1886, No. 1679 W.

JULY.

English Stores

Issuing certain instructions as regards the
local purchase of — .

2ND JULY 1886, No. 1679 W., PUBLIC WORKS.

GOVERNMENT OF MADRAS.
PUBLIC WORKS DEPARTMENT.

General.
Account.

READ—the following paper :—

Office note from the Examiner of Public Works Accounts, dated 18th June 1886, No. 220.

ORDER—dated 2nd July 1886, No. 1679 W., Public Works.

With reference to the proceedings marginally noted, sanctioning the purchase in the local market of European stores required in the Public Works Workshops and Nilgiri divisions, the Examiner, Public Works Accounts, points out that the information necessary to enable his office to compile the statement prescribed at page 23, appendix I to the Public Works Code, is not fully given in any case. The attention of Superintending Engineers is therefore drawn to proceedings, No. 2770 W., dated 20th November 1885, and No. 202 W., dated 25th January 1886. In the letter from the Government of India recorded in proceedings of Government, No. 202 W., dated 25th January 1886, attention is invited to paragraph 3 of Financial Resolution, No. 185,* dated 10th January 1883, under which alone English stores may be purchased in this country. The paragraph in question is as follows :—

* *Vide* appendix I, Public Works Code.

“The special cases in which, with the previous sanction of the * * * Local Government, * * * stores of European manufacture may be obtained in India are—

“1st, when for any special reason it may be more economical to do so ;

“2nd, when stores indented for from England have not arrived, and inconvenience is anticipated from delay in the supply ;

“3rd, when the articles are perishable ;

“4th, the sanction of Government is not necessary in the case of petty purchases in the local market not exceeding Rs. 10 in value. The previous sanction of Government should only be obtained in cases in which the cost of the article required exceeds Rs. 10.”

2. In submitting applications for sanction to the local purchase of English stores, Superintending Engineers will, in future, invariably adopt the form hereto annexed, in the remark column of which should be given the reasons which render the purchase necessary, and the clause under which sanction is sought. Particular attention is drawn to the fourth clause, under which the sanction of Government is not needed to the purchase of articles not exceeding Rs. 10 in value. The lists submitted for the sanction of Government would be greatly reduced if such petty articles were excluded. It is also noticed that the lists received from the Public Works workshops include sundry articles required for supply to Collectors or other departments of Government. There appears no reason why the workshops should undertake such purchases, and the practice should be discontinued.

7TH JANUARY 1887, No. 20 W., PUBLIC WORKS.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

General.
Account.

READ—the following paper :—

Docket from the Government of India, Public Works Department (Civil Works—Miscellaneous), to the Governments of Madras, Bombay, Bengal, North-Western Provinces and Oudh, in the Public Works Department; the Chief Commissioners, Central Provinces, Burma, Assam and Coorg; the Resident at Hyderabad; the Agents to the Governor-General for Central India, Rajputana, and Biluchistan; the Accountant-General, Public Works Department; the Inspector-General of Military Works, dated Fort William, 30th November 1886, No. 506 M. :—

The following is forwarded to the Local Governments and Administrations, and officers noted above, for information and guidance, in continuation of Public Works Department letter, No. 12 M., dated 12th January 1886.

(By Order.)

(Signed) G. F. L. MARSHALL, Major R.E.,
Under Secy. to the Govt. of India.

To the Secretary to the Government of Madras,
Public Works Department.

ENCLOSURE.

From the Government of India, Public Works Department, to the Secretary to the Government of the Punjab, Public Works Department, dated 29th October 1886, No. 467 M. :—

I am directed to acknowledge the receipt of your letter, No. 3664 A.—I., dated 6th September 1886, inquiring whether Public Works Department Circular, No. 12 M., dated 12th January 1886, contemplates that the Local Government should ordinarily sanction the local purchase of such stores as panes of glass, &c., and, if so, whether it is necessary that the reports on and details of each purchase should be furnished to the Examiner of Public Works Accounts, as prescribed in paragraphs 2 and 3 of that circular.

2. In reply, I am to state that the intention is that the Local Government should obtain articles of European manufacture through the India office, if, by a little foresight, it can be advantageously arranged, and that, when it cannot be so arranged, and the value of the local purchases at any one time and place shall exceed Rs. 50, they must be sanctioned by the Local Government.

3. Details of each purchase need only be furnished to the Examiner when the aggregate value of any article purchased during the year exceeds Rs. 1,000—vide paragraph 27 of Finance Department Resolution, No. 185, dated 10th January 1883.

ORDER—dated 7th January 1887, No. 20 W., Public Works.

Communicated, in continuation of G.O., No. 202 W., dated 25th January 1886, to officers of the Public Works Department, for information and for guidance, in supersession of previous orders on the subject.

(True Extract.)

(Signed) J. O. HASTED, Colonel, R.E.,
Secretary to Govt., P.W.D.

To the Chief Engineer for Irrigation.
„ Superintending Engineers.
„ the Consulting Architect to Government.
„ the Examiner, Public Works Accounts.
„ the Secretary, Code Committee.

Exd. P. L. Pereira.
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GENERAL.
ESTABLISHMENT.

Govt. of {1894} Madras.

PUBLIC WORKS.

Dated December, 27th.

Recd.

Encl.

G.O., 17th Dec. 1894, No. 3230 W.

DECEMBER.

Lieut.-Colonel A. W. Smart, R.E.,
Executive Engineer

Deputation on duty in Europe of — to inspect a limited number of French canals and rivers and to select two current meters suitable for use on the Gódávári delta works.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

General.
Establishment.

READ—the following paper:—

From A. H. GARRETT, Esq., Superintending Engineer, I Circle, to the Chief Engineer for Irrigation, dated Dowlaishweram, 29th September 1894, No. 1264 G.D.

Referring to your No. I/83 G.D., dated 4th September 1894, I have the honour to inform you that there is only one old fashioned current meter in this circle.

2. I believe that the best meters are now provided with electrical recording apparatus and I request that a couple of these instruments may be obtained for use in the delta.

3. I would submit an indent for two of these instruments, but do not know the name of the makers.

No. 52 W.

Forwarded to the Secretary to Government, Public Works Department.

2. Colonel A. W. Smart, R.E., who has recently proceeded on furlough to Europe, has expressed his willingness to undertake the purchase of suitable current meters for use in this Presidency on condition that he is also allowed to inspect two or three French canals and rivers (the latter with regard to training) at Government expense. It is understood that a new form of sluice valve has been adopted in France within the last few years which may be found useful in this country and a knowledge of the French system of training rivers cannot fail to be of advantage. I have no hesitation therefore in requesting that a recommendation may be made to the Secretary of State for India to grant Colonel Smart permission to inspect a limited number of French canals and rivers according to the usual terms and conditions. Colonel Smart should, however, be requested to lose no time in selecting and purchasing one or two current meters of the type most suitable for use in this country bearing in mind that the greater part of any experiments which will be made will be carried out by subordinates and that therefore the type of current meter selected should be simple, easy to work and not liable to get out of order. Taking Colonel Smart's qualifications into consideration and his long and intimate acquaintance with hydraulic works in this Presidency, I may safely predicate that any expense incurred on his deputation will not be money thrown away.

MADRAS, (Signed) R. R. E. DRAKE-BROCKMAN, Colonel, R.E.,
12th Nov. 1894. Chief Engineer for Irrigation.

ORDER—dated 17th December 1894, No. 3230 W., Public Works.

His Excellency the Governor in Council approves the proposals of the Chief Engineer for Irrigation and accordingly resolves to request the Secretary of State to sanction Lieut.-Colonel Smart's deputation on duty in Europe under article 104

(1), Civil Service Regulations, to inspect a limited number of French canals and rivers and to select two current meters suitable for use in this country. Lieut.-Colonel Smart's attention will be drawn to the latter part of the endorsement by the Chief Engineer for Irrigation regarding the type of meter to be procured. His duty will be confined to selecting the instruments, as their actual purchase and despatch to this country will devolve on the Stores Department of the India office in accordance with rule 2, page xc, appendix X, volume II, Public Works Code.

2. With the approval of the Secretary of State, Lieut.-Colonel Smart will forward to this Government, through the India office, a copy of his notes of inspection of the French canals and rivers which may be seen by him.

3. The Secretary of State will be requested to intimate in due course the period employed by Lieut.-Colonel Smart on special duty.

(True Extract.)

(Signed) J. PENNYCUICK, Colonel, R.E.,
Secretary to Govt., P.W.D.

To the Chief Engineer for Irrigation.
 „ the Superintending Engineer, I Circle.
 „ the „ V „
 „ the Examiner, Public Works Accounts.
 „ Lieut.-Colonel A. W. Smart, R.E., Executive Engineer,
 Public Works Department (through India office).

CHIEF ENGINEER
FOR IRRIGATION

9277

IRRIGATION.

Govt. of {1896} Madras.
PUBLIC WORKS.

Dated May, 13th.

Recd.

Encl.

G.O. No. 420 I., 13th May 1896.

MAY.

Current Meters

Ordered that a letter be sent to the Secretary of State stating that, under the circumstances explained, Lieutenant-Colonel Smart's action in ordering three — instead of two as desired by Government, may be approved.

No. 420 I., 13TH MAY 1896.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Irrigation.

READ—the following papers:—

Despatch from Her Majesty's Secretary of State for India, to His Excellency the Governor in Council, dated India Office, London, 23rd January 1896, No. 1, Public Works.

In continuation of my despatch No. 4, Public Works, dated 19th September last, on the subject of the deputation of Lieutenant-Colonel Smart, while on furlough, to select two current meters of a type suitable for use on the Gódávári Delta Works, I have now to inform your Excellency that the instruments said to have been ordered by Lieutenant-Colonel Smart have been received from the manufacturer M. A. Démichel, of 24, Rue Pavée au Marais, Paris, and have been transmitted to Madras. A copy of the invoice supplied with the instruments is enclosed for the information of your Government.

2. It appears that Lieutenant-Colonel Smart went beyond his instructions by ordering three current meters instead of two, as desired by your Government. As he however returned to duty without furnishing any explanation of his action in this matter, he should be called upon to state his reasons for ordering the additional current meter.

ENCLOSURE.

Mons. J. SALLEROU, A. Démichel, Succr., 24, Rue Pavée au Marais 24.
Doit M., India Office, Whitehall, London, S.W.

PARIS, le 12 Novembre 1895.

	FRCS.	Cts.
1 Hydrotochymètre flotteur Ritter complet en boîte	220	0
Addition d'une tige rigide pour profondeurs moindres que 2 mètres	80	0
2 Hydrotochymètres de pêche	160	0
Caisse A.D. 536 Emballage	5	75
Caisse A.D. 537 „	3	75
Total	469	50

(Instruments commandés par M. le Lt.-Col. Smart.)

From the Joint Secretary to Government, Public Works Department, dated 22nd February 1896, No. 1037 C.
To Lieut.-Col. A. W. Smart, R.E., dated 27th February 1896, No. V./33 S.A.

From Lieutenant-Colonel A. W. SMART, R.E., Superintending Engineer, on Special duty, to the Chief Engineer for Irrigation, dated Tanjore, 12th March 1896, No. 121.

With reference to your No. V./33 S.A., dated 25th February 1896, I have the honour to state that, in purchasing the current meters when in Paris, that I came to the conclusion that it would be better to buy two small Pitot's tubes and one large, instead of two large, as the small ones are, on the whole, the more useful; and, if found suitable, one should be in the hands of every Executive Engineer in charge of an Irrigation division.

2. If the gauging of rivers and canals is to be taken up in earnest, it will be necessary to purchase current meters of another pattern as it will not do to rely exclusively on the Pitot's tubes. I would suggest the purchase of two electric current meters of a similar pattern to the one used by Mr. Chatterton three years ago in the Kistna. They should be of course of the newest make with all recent improvements. With Pitot's tubes, the electric current meters and ordinary tube-floats to check one another, the results should be reliable.

3. I return all the papers connected with the file that were given over to me by Mr. Ashpitel.

To the Joint Secretary to Government, Public Works Department, dated 23rd March 1896, No. 123.

From the Joint Secretary to Government, Public Works Department, dated 25th March 1896, No. 1677 C.

No. 78 I.

Submitted to Government with the remark that Lieutenant-Colonel Smart's explanation be accepted.

2. The suggestion made in paragraph 2 of Lieutenant-Colonel Smart's letter will be disposed of separately.

(Signed) R. R. E. DRAKE-BROCKMAN, Col., R.E.,
1st April 1896. Chief Engineer for Irrigation.

ORDER—No. 420 I., dated 13th May 1896.

Ordered that the following letter be forwarded to the Right Honourable the Secretary of State for India.

[Here enter No. $\frac{16}{420 I.}$, dated 13th May 1896.]

(True Extract.)

(Signed) R. R. E. DRAKE-BROCKMAN, Colonel, R.E.,
Secretary to Govt., P.W.D.,
Irrigation Branch.

To the Chief Engineer for Irrigation.
" Lieutenant-Colonel A. W. Smart, R.E.
" Superintending Engineers of Circles.

Exd. T. K. Narayana Aiyangar.
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GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Irrigation.
Account.

READ—the following paper:—

No. 127 I.

Note by the Chief Engineer for Irrigation.

Lieutenant-Colonel Smart, R.E., who was specially deputed when on furlough in Europe last year to select current meters for use on the Gódávári delta works, remarks in his letter * No. 121, dated 12th March 1896 (paragraph 2), that, if the gauging of rivers and canals is to be taken up in earnest, it will be necessary to purchase electric current meters as it will not do to rely exclusively on the Pitot's tubes just received from Europe, and states that, with Pitot's tubes, the electric current meters and the ordinary tube-floats to check one another, the results should be reliable.

2. The undersigned approves of this proposal and recommends that an electric current meter of the newest make with all recent improvements be obtained from England through the India Office. If possible, the meter should be of English manufacture, and one made by Elliot Brothers and carefully calibrated would be preferred.

(Signed) R. R. E. DRAKE-BROCKMAN, Col., R.E.,
15th June 1896. Chief Engineer for Irrigation.

ORDER—No. 532 I., dated 24th June 1896.

Approved.

2. The General Superintendent, Public Works Stores, will submit, as soon as possible, a special indent for an electric current meter of the kind indicated by the Chief Engineer for Irrigation for transmission to the Director-General of Stores, India Office, for early compliance.

(True Extract.)

(Signed) R. R. E. DRAKE-BROCKMAN, Colonel, R.E.,
Secretary to Govt., P.W.D.,
Irrigation Branch.

To the Chief Engineer for Irrigation.
" Chief Engineer, Public Works Department,
Buildings, Roads and General Branch.
" Superintending Engineer, V Circle.
" Superintending Engineer on Special Duty,
Cauvery Completion Estimate, Tanjore.
" Examiner, Public Works Accounts.

Exd. C. M. Thumbuswamy.
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CHIEF ENGINEER
FOR IRRIGATION.

1- JUL. 96

No. 3679

IRRIGATION.
ACCOUNT.

Govt. of {1896} Madras.

PUBLIC WORKS.

Dated June, 24th.

Recd.

Encl.

G.O. No. 532 I., 24th June 1896.

JUNE.

Electric Current Meter

The recommendation of the Chief Engineer for Irrigation that an — of the newest make with all recent improvements be obtained from England for use on the Gódávári delta works, approved, and the General Superintendent, Public Works Stores, directed to submit a special indent for the same for transmission to the India Office.