

Home (1918) Department.
(Education)

Ordinary SERIES.

G.O. No. 342

DATED 16-3-1918

INDEXED

[Despatch Abstract.]

Indian Munitions Board.

Furnishing the-----with a list of pyrometers
in scientific and technical institutions in the Presidency.

All communications should
be addressed to the Secretary,
Munitions Board, by title, not
by name.
Telegrams:-
"MUNIBOARD."

204A
3812
GOVERNMENT OF INDIA.



INDIAN MUNITIONS BOARD.

(Mineral Branch).

No. M-140.

Delhi, 24th
Dated ~~24th~~ the of December 1917.

From

The Secretary,
Indian Munitions Board.

To

The Secretary to the Government of Madras,
Home (Education) Department,
MADRAS.

Sir,

Several urgent demands have been made for
pyrometers and it is probable that scientific and
technical institutions may have pyrometers in their
possession which they could spare for munitions work,
at least for a time. I am to request that with the
permission of His Excellency the Governor in Council
the Board may be furnished with a list of pyrometers
in scientific and technical institutions in the Madras
Presidency. A short description should be given of
each instrument and a note regarding the period and
conditions on which it can be made available. The
Munitions Board hopes that the information will be
collected at as early a date as possible.

I have the honour to be,
Sir,

Your most obedient servant,

G. C. Srinivas

Assistant Secretary.

D.A.Nil.

Home Cdn Dept

CNo 3812 A.

Memo 3812 A-103.1.18

Referred to the D.P.D and
to the Officer in Charge of the
Dept of Industries for early
report

RS
3-1-18

RS
3-1-18

RS
3-1-18

Reed Wood
interviewed
MRS
4-1-18

To the D.P.D (L & M)
The Officer in Charge of the Dept of Industries
& memo.

continued

X Home (Education)

3/ DEPARTMENT.

4
C.F.-29.
EONA
C.O. 193

Received



Registered 24 1 1918

Subject.

Replying to Government Memo No. 3812 A-1 Home, Education, dated 3rd January 1918 regarding Pyrometers which can be spared for munitions work.

ENCLOS RES.

No.

Dis.

No. 467/18

Spare copies

Station Madras, Dated the 22nd January 1918

From (Name) The Hon. Mr. J. H. Stone, M.A., F.R.H.S., C.I.E.
(Designation) Director of Public Instruction.

To The Secretary to the Government of Madras,
Home (Education) Department.

Sir,

With reference to Government Memo. No. 3812 A-1, Home (Education) dated 3rd January 1918 in connection with the report called for by the Government of India regarding Pyrometers which can be spared for munitions work, I have the honour to submit copies of letters from the Principal, College of Engineering, Madras, R.C.No. 648/18, dated 15th January 1918 and the Principal, Government Arts College, Rajahmundry, R.C.No. 13/18, dated 15th January 1918, and to state that there are no Pyrometers in other Government institutions in this Presidency.

I have the honour to be,
Sir,
Your most obedient servant,

R. Narayana
for Director of Public Instruction.

P.T.O.

42
Letter from the Principal, College of Engineering, Madras, to the
Director of Public Instruction, R.C.No.648/18, dated 15th January 1918.

"With reference to your Proceedings R.C.No. 112/18, dated January 8th
1918, I have the honour to state that the College possesses only one
pyrometer, of which a short description is enclosed herewith.

2. The instrument is used here chiefly in connection with class
demonstrations, but recently it has been lent locally for munition work
and in fact is at present for the same purpose on loan with Dr.Sud-
borough, Indian Institute of Science, Bangalore.

3. It can be lent in this way without much inconvenience and all
we desire is that it should be returned here from time to time.

The Stereo-pyrometer
English patent 10617/1905.

The instrument consists of a pair of small glass cells con-
taining a coloured liquid which absorb all the light emitted by a hot
body, irrespective of its colour and through which the hot body is
viewed. If the hot body is visible through one pair of cells and
invisible through another, its temperature lies between the tempera-
tures corresponding to those cells.

The instrument is used for direct observation only and it cannot be
used unless the hot body is visible either directly or by reflection.
The six pairs of cells we have correspond to the following ranges of
temperature.

1000° to 1100° C
1100° to 1150° C
1150° to 1200° C
1200° to 1475° C
1475° to 1525° C

Letter from the Principal, Government Arts College, Rajahmundry,
R.C.No. 13/18, dated 15th January 1918.

" With reference to your Proceedings R.C.No. 112/18, dated
8th January 1918, I have the honour to state that the only pyrometer
in the college laboratory is Callenden and Griffith's Patent Platinum
Thermometer.

The instrument consists of a coil of fine platinum wire wound
on a mica frame and inserted in a glass tube, the increase of
resistance of the platinum coil with rise of temperature being a
measure of that temperature. It is provided with flexible leads and

35
is suitable for temperatures up to 300° C made by the Cambridge
Scientific Instrument Company.

The instrument referred to above can be spared for munitions
work. It would be of advantage to students if it could be convenient-
ly returned before March 1919.

/True Copy/

R. A. Ramesh
for Director of Public Instruction.

P.V.S. 22/1.

16
22.1.18.

Home Department.
Education Branch.

REMINDER.

REPLY.

To

The Officer in Charge
of the Dept. of Industries

To

The Secretary to Govt.

Home (Eden) Dept.

Fort Saint George

The undersigned ~~has the honour to invite~~
is directed to invite
~~invites~~

attention to the communication noted in the

margin and to
m. no. 3812A/ dated 3.1.18

request that

this reminder may be returned at once with
information as to—

- (1) the stage at which the matter now is,
- (2) the date by which a reply may be expected
- (3) the circumstances which have caused the delay.

2. It is requested that the reply to this
reminder may be sent not later than

I informed the India Munitions Board in January last that I had a Pyrometer in my department but that it was not in working order, and I was doubtful whether it would be of much use as the millivolts does not register. I informed the Board that I did not propose to forward it unless they considered that it could be repaired.

Office Home Dept.

Station Fort St. George

Dated 5th March 1918

Signature,
Designation.

SUBJECT.

To furnish a list of
Pyrometers in Scientific and
Technical institutions in the
Madras Presidency.



C. no. 3812; 193 + 719A - ~~193 + 719A~~

Letter
no 3427
To
The Secretary, Indian
Munitions Board
Delhi.

2. The instrument ⁱⁿ possessed by
¹⁶⁰ ~~the~~ ^{the} ~~Steno-pyrometer~~ / ^{English} Patent 10617/1905 and
the College of Engineering, { Consists of
a pair of small glass cells containing a
Coloured liquid which absorb all the
light emitted by a hot body, ^{these cells} ~~respec-~~
tively of its colour, ~~and~~ ^{through} ~~which~~
the hot body is viewed. If the hot body
is visible through one pair of cells
and ~~invisible~~ ^{invisible} through another, its
temperature lies between the temperatures
corresponding to those cells. —

Dear Mr. Sir

Theresa

The Office in Charge

of Mr. B. of the P. M. J.

SECRETARY 2 foot

Thomas C. Baker, D.D.

I have been thinking of you
 and of the many things
 that have happened since
 we last saw each other.
 I hope you are well and
 happy. I am still the same
 old me, but I have learned
 a great deal in the
 years since we parted.
 I am sure you are the same
 old me, but I hope you
 have learned a great deal
 in the years since we parted.
 I am sure you are the same
 old me, but I hope you
 have learned a great deal
 in the years since we parted.

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The instrument is used for direct observation only and it cannot be used unless the hot body is visible either directly or by reflection. The six pairs of cells in this instrument correspond to the marginally notes

x	1000°	to	1100° C
	1100°	to	1150° C
	1150°	to	1200° C
	1200°	to	1475° C
	1475°	to	1525° C

ranges of temperature. The college authorities state that the instrument is used chiefly in connection with class demonstrations but recently it has been kept locally

for munition work and in fact is at present for the same purpose on loan

to Dr. Sud Brough, Indian Institute of Science, Bangalore. It can be kept at any time without much inconvenience, and all that is desired is that it should be returned to the College from time to time.

3. The ^{instrument} ~~one~~ available in the Govt Arts College Rajahmundry, is Callendar

and Griffith's Patent platinum thermometer by the Cambridge Scientific Instrument Co. It consists of a coil of fine platinum wire wound on a mica frame and inserted in a glass tube, the increase of resistance of the platinum coil with rise of temperature being a measure of that temperature.

It is provided with flexible leads and is suitable for temperatures up to 600° C.

made by the Cambridge Scientific Instrument Co. Rajahmundry

The

has the college authorities in England for its return

The instrument can be spared for munition work, and it would be of advantage to have it if it could be conveniently returned before March 1919.

4. The third instrument, the Dept. of Industries, is not in working order. Mr. James reports that he has already informed the Board that he did not propose to forward it unless they considered that it could be repaired.

14/3/18
Jh.
15.8.18

15/8

When given for copying

When copied

When examined

When signed

191

READ AGAIN G.O. No.
191

DATED

CURRENT No.

ENCLOSURES TO G. No.

ORDER OF GOVERNMENT

A A A A A A A

LETTER OF GOVERNMENT

STATEMENT WITH LETTS.

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IN ORIGINAL.

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