

- (1) பக்கங்களின் எண்ணிக்கை 16
 (2) புதுக்கித் திருப்பிய நாள் 6/12
 (3) ஆதாரங்குறிப்பவர் சுருக்கொப்பம் 2

தமிழ்நாடு ஆவணக் காப்பகம்.

தமிழ்நாடு அரசு

PWD துறை

104

அரசாணை எண். மு. கோப்புத் தாள் எண். 2074-2	அச்சகம் பலவகை
நாள் : 25-7-1882	198 .

மடிக்கவோ கண்டபடி கையாளவோ கூடாது

8 Sheet

ஆவண. கா-1-18,008-15-6-87.

[Signature]

Aug 7308

Dear

For orders as to the
reply to be given to the
S.G. of Stores - ^{21/1}
The S.G. ^{21/1} ~~was~~ ^{was}

Cons. div., expresses no
opinion as to whether
Copper Tape as recom-
mended by the India
Store Dept. will be
suitable, but merely
states that the Copper
rod indicated for by
him is in accordance
with the recom-
mendation of Mr. Douglas.
The tone of his reply
to the S.G. Dept. P.W.
Stores does not seem
proper.

The S.G. II Circle
is of opinion that the
section of Copper Tape
mentioned by the India
Store Dept. will
answer the purpose.
Chs 16/74

in dupl^{ts}. may have
 reported that Copper
 Tape $1\frac{1}{2}$ " $\times$ $\frac{1}{8}$ " with
 answer the purpose
 to D.G. of stores may
 be asked to supply
 with the indent with
 this section - I think
 copy of Mr. Douglas
 Report might be
 forwarded to him - or
 para 19 extracted &
 forwarded -

I think Mr. Joyce's
 letter requires some
 notice to be taken of;
 the draft I see is written
 under the Ch. Secy.
 Sub. no. 8003
 to state his objections
 to the correspondence
 is quite uncalled for.
 Only
 13.7.92

No 2071. W. of 25 July 1892
 PUBLIC WORKS DEPARTMENT.

PROCEEDINGS OF THE MADRAS GOVERNMENT.

Read the following

Letter from the Dir. Genl of Stores,
 India Office (H.E. No. 5.4901 d/17. v. 92)

Letter from the Genl Supdt P.W.S. (.. 185. d/8. vi. 92)
 Encl. therein leaf S.E. I (.. 313 W d/13. vi. 92)

The Director
 General of Stores
 will be requested
 to supply copper tape
 $1\frac{1}{2}$ inch wide leaf
 $\frac{1}{8}$ inch thick with
 clamps and nails
 for securing it to the
 building and the
 additional lengths
 necessary for the

1460
 20/7/92

earth connection.

2. The Supt. Eng^r
will point out to
Mr. Joyce, Executive
Engineer, that the
tone of his letter
is most improper
and that it is his
duty to answer a
question put to him
without commenting
on the necessity
or otherwise for
its being put.

27/7

OWB
19.7.92

S. E. IV (make)
I do with Extract
para 1. &
28/7

Am

No. 2072 W. D. 25 July 1892

Government of Madras.

PUBLIC WORKS DEPARTMENT.

To The Director General of
Stores, India Office,
London.

25 July 1892

2071/27

SIR,

I am directed
to acknowledge the
receipt of your letter
No. 54901 dated
17th May 1892 in
regard to the copper
tape indented for
in Madras P. W. Dept
indent No. 25 of 29th
March 1892, and to
inform you in reply
that tape 1 1/2 inch

do by $\frac{1}{8}$ inch
 inch, as suggested
 you, may be
 applied with
 lumps and nails
 securing it to
 the building and
 the additional
 length for the
 with connection

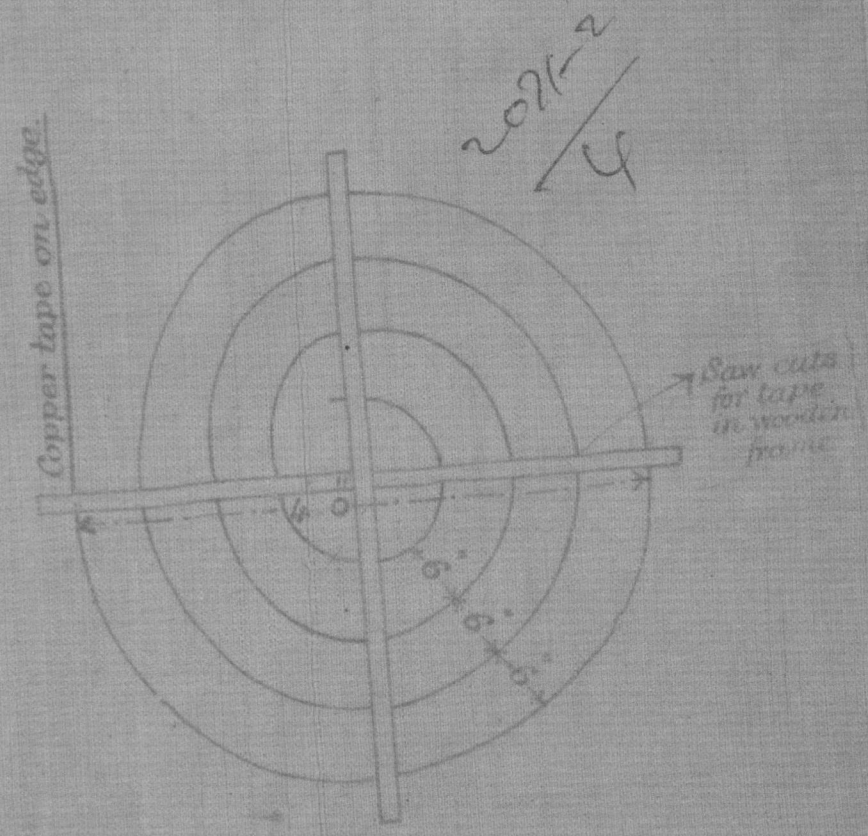
No 2071-72 W. 2/25 July/91

Lightning Conductors,
 Earth Connections.

Extract from Appendix issued with Cl. 203
 Army Circulars. Nov. 1887.

Rule XIII ----- a better plan is to coil
 the end of the conductor spirally on a
 wooden frame, the external diameter
 of the coil being 4 feet with 6 inch
 intervals between the turns. About
 33 feet of tape are required for this
 earth connection: it obviates the necessity
 of any underground joint

Rough Sketch of Earth coil.



It is requested that in any further communication on this subject the under-mentioned letter and number may be quoted, and the reply addressed to
The Director General of Stores,
India Office,
Whitehall,
London, S.W.
S. 4901.

India Office,
Whitehall, S.W.

17th May 1892.

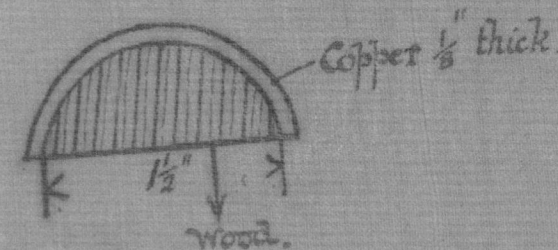
Sir,

With reference to the demand in Madras Public Works indent No. 25 of 29th March 1892, received with your letter No. 1022 W dated 29th March 1892, for 130 feet of copper half round $1\frac{1}{2}$ inch diameter for lightning conductor, I have the honour to inform you that this is a very unusual and heavy section for a lightning conductor and it would also be very difficult to obtain it and coil it one length so as to avoid joints which are always objectionable in a conductor.

The material generally used is copper tape $\frac{1}{8}$ inch thick, 1 inch wide for ordinary conductors and $1\frac{1}{2}$ inch wide for very long lengths or tall chimneys.

I have therefore to enquire whether copper tape $1\frac{1}{2}$ inch $\times$ $\frac{1}{8}$ inch may be supplied with the necessary clamps and nails for securing it to the building, a greater length than 130 feet might be required if a coil of tape is used for the "Earth" as shewn in the annexed extract from the War Department regulations.

If for some special reason it is essential that the external form should be half round, then it is recommended that tape $2\frac{1}{2}$ inch $\times$ $\frac{1}{8}$ inch should be supplied and bent in India over a half round piece of wood $1\frac{1}{2}$ inch in diameter thus



The Secretary to Government,
Public Works Department,
Madras.

2071-72
6

If this alternative should be adopted it will be necessary that the form of fastening required to admit of expansion and contraction should be considered; with flat tape, loops are left thus near the clamps.



I have the honour to be, Sir,

Your obedient servant,

J. T. Barker

Director General of Stores.

Q. No. 469 m.
18.6.92

P. W. CURRENT No. 6057

3/212 m
7308/92

No. 3003 C d/13 June 1892

Part up with one 239 in CS.

Referred to the
Superintending Engineer
V circle for report
whether a copper
conductor of a lighter
section would do
for the required
purpose. The demand
appears as item
102 of indent no
25.

2/9 20 m
2. 10. 92

19/10.6.92

21

Col. R. B.
Chief Engineer, P. W. D.

To be returned

Engr. Engineer's office, West Coast Division
Calicut 29 June 1892

No. 1864

From A. Joyce Esquire
Engr. Engineer West Coast Division
To The General Superintendent
P. W. Stores, Madras

Sir
With reference to your No. 20 dated 20th instant,
I have the honor to state that the form required is
that recommended by Mr. Douglas who was specially
appointed to report on Light Houses. It is recommended
according to his account by Faraday. If Mr. Douglas
opinion is not worth much, I do not think that
Her Majesty's Advisors would have been so foolish
as to get him specially out from England at very
considerable expense. It would be much better,
I think, if the half round copper rod were supplied
instead of additional correspondence. The half
round copper rod, I should be glad to get, I
am not grateful for this correspondence.

I have the honor to be
Sir
Your most obed^t serv^t

1891 A. Joyce
Executive Engineer

/True Copy/

100/ L. L. Wickham

General Supt. P.W. Stores.

No. 18. S.

Presidency P.W. Stores.

Madras 8th July 1892

From

L. L. Wickham Esquire

General Superintendent P.W. Stores

To

The Superintending Engineer

5th Circle, Chepauk

Sir

With reference to your No. 257 P.W.S. dated 16th June 1892, I have the honor to return the Chief Engineer's No 3003 b dated 13th June 1892, with its enclosures, and submit herewith a copy of letter No. 1846 d/29th June 1892, from the En. Engineer West Coast Division, by whom the half round copper tape is required.

Yours &c

100/ L. L. Wickham

Genl Supt. P.W. Stores

No. 313 X

Forwarded to the Chief Engineer P.W. Department with reference to his Indorsement

No.

No. 3003 c dated 13th June 1892 returned.

2. It appears the Executive Engineer West Coast Division indicated for half round $1\frac{3}{4}$ inch diameter copper bar as that was the dimension laid down by Mr. Douglas in para 19 of his report, see page 4 of G. O. Marine Department No. 25 d/22nd January 1892 I agree with the Director General of Stores, that copper tape $1\frac{1}{2}$ inch wide by $\frac{1}{8}$ inch thick will answer the purpose required.

2071X
1/8

J. H. C. Russell Esq. M.A. R.E.

13th July 1892.

Engr. Engineer 8th Circle

From CURRENT No. 7308

The Chief Engineer
Fifth Mile

To

The Chief Engineer

P. W. Department

Dated 13th }
Recd 15th } July 1892

Encls. 72

Nos. 2071-2 w/d 25-7-92

No. 313 W

Half round Copper

Tape.

Submits correspondence -

- Letter regarding the -

required by the Comm -

- Chief Engineer West Coast

Division -

0 16/7 25-7-92

0, 16/7

Memos no 2011 C of 12-4-92
to H. no 104 W of 19-3-92
" " 1022 C of 19-3-92
" " 1282 C of 19-3-92
" " 1929 C of 4-7-92
Memos no 3560 C of 16-7-92
to B. no 314 W of 3-2-91
" " 743-44-45 W of 14-3-91
Memos 1533 C of 24-3-92
" " 2745 C of 10-6-92
to B. no 2230-1 W of 17-8-91