MRO 1—10,006—28-2-50

(1) Number of pages _____

(2) Date of repair _____

(3) Initials of the Referencer _____

MADRAS RECORD OFFICE

Government of Madras

Public Works DEPARTMENT

G.O. No. / B.P. No.	2058-57	Press / Mis.
		1875
Dated	20-7-	195

Not to be folded or roughly handled

Proceedings of the Madras Government, Public Works Department,
20th July 1875.

No 488 Read the following letter from Lieutenant-Colonel J H M. SHAW-STEWART, R E, Consulting Engineer for Railways, to Lieut-Colonel J. MULLINS, R E, Officiating Secretary to Government, Public Works Department, dated Madras, 8th July 1875, No 382 —

ADVERTING to the Proceedings of Government, under date the 19th April 1875, No 1,090, I have the honor to enclose a copy of the opinion expressed by the Consulting Engineer to the Madras Railway Company with regard to the cylinders which were fractured in their lowest segments at the Huggry bridge, and with regard to the necessity for embedding every cylinder in the solid rock

2. It will be seen that Sir John Hawkshaw does not anticipate injury to the piers on account of the fractured segments, and he states that "if the hard stratum immediately above the rock be really a good material it may be better to stop them a foot or two into it rather than run the risk of breaking the cylinders, provided the hard stratum is met with at a good depth from the surface and cannot be gone through without excessive weighting" Nothing definite is here said with regard to the depth and the weight, two important points; but the opinion may probably be accepted as endorsing Mr. Going's, *viz*, when a cylinder has reached a hard substratum immediately overlying solid rock, at a depth of not less than 40 feet below the river bed, that such cylinder may be held to be perfectly safe provided that it is able to sustain a weight of 120 tons.

From Sir JOHN HAWKSHAW, to JULIAN BYRNE, Esq, dated Madras Railway Engineer's Office, 33 Great George Street, Westminster, 13th April 1875

I BEG to reply to yours of the 10th instant with extract of a letter from the Agent and Manager relative to difficulties encountered and anticipated in sinking the pier cylinders of the Cheyar and Huggry bridges

2 It is found that the pneumatic apparatus cannot be used with the cylinders that have been put together owing to the joints of the cylinders having been insufficiently caulked, the necessary care not having been taken, as at the time the caulking was done it was not intended to use the apparatus It is too late now, or, at any rate, it would be a troublesome process to remedy this defect, and the piers with the insufficient caulking should now be sunk in place by divers working in helmets The pneumatic apparatus should be used with the cylinders now in India which have not been pitched, or with cylinders which may yet have to be sent out, and in order to do this it is only necessary that the caulking be carefully done

3 As regards some of the cylinders which have cracked in the bottom segments owing to having been heavily weighted, probably no injury will result to the pier from this circumstance It is not an unfrequent occurrence especially where loose stones are met with in the material penetrated, but if the hard stratum, alluded to by Mr Going, immediately above the rock be really a good material it may be better to stop them a foot or two into it rather than run the risk of breaking the cylinders, provided this hard stratum is met with at a good depth from the surface and cannot be gone through without excessive weighting The bottom segments have been cast half as thick again as the upper segments, so it will require very heavy weights to crack them

Proceedings of the Madras Government, Public Works Department,
20th July 1875.

No 489 ORDER THEREON, 20th July 1875, No 2,058

RAILWAY, No 43

ORDERED to be recorded and communicated for the information of the Government of India in continuation of previous correspondence

(True Extract)

(Signed) J. O. HASTED, Major, R E,
Offg Joint Secretary to Government

No 490 (DOCKET No 2,059, dated 20th July 1875)

COPY of the above forwarded to the Government of India in continuation of letter No 1,091, dated 19th April 1875, paragraph 2

(True Extract)

Railway Department. CONSULTING ENGINEER'S OFFICE.

No. 382 Madras 8th July 1875.

From
LIEUT. COLONEL J H. M. SHAW STEWART, R E,
Consulting Engineer for Railways,

To Lt.Col. J. Mullins R.E.
~~COLONEL C. W. WALKER, R E~~,
Offg. *Secretary to Government,*
Public Works Department,
Fort Saint George.

SIR,

Adverting to the Proceedings of Government under date the 19th April 1875, No 1090, I have the honour to enclose a copy of the opinion expressed by the Consulting Engineer to the Madras Railway Company with regard to the cylinders which were fractured in their lowest segments at the Muggy bridge, and with regard to the necessity for embedding every cylinder in the solid rock.

It will be seen that Sir

Sir John Hawkshaw does not
anticipate injury to the piers on
account of the fractured segments
and he states that "if the hard
"stratum immediately above the
"rock be really a good material,
"it may be better to stop there
"a foot or two into it rather than
"run the risk of breaking the cy-
"linders; provided the hard stratum
"is met with at a good depth from
"the surface and cannot be gone
"through without excessive weighting."
Nothing definite is here said with
regard to the depth and the weight
two important points, but the
opinion may probably be accepted
as endorsing Mr. Going's, namely,
when a cylinder has reached a
hard

hard substratum immediately over-
lying solid rock, at a depth of not
less than 40 feet below the river
bed, that such cylinder may be
held to be perfectly safe provided
that it is able to sustain a weight
of 120 tons.

I have the honour to be

Sir

Your most obedient Servant

Macdonald Lt. Col. R.E.

Govt. Engineer for Railways

Copy: April/75. Nos 475 & 477.

P W. 1875 Deptt.

RAILWAY DEPARTMENT.

No: 4492

From
The Consulting Engineer,
for Railways,

To
The Secretary to Government,
P W Department,
Fort Saint George

Dated 8
Recd 10 July 1875

No 382

Enclosure 1

Submitting Report from the Cons. Engr to the N.W.C. on the question of embedding ends of new cylinders in the solid rock.

With Order.

Ry. 488-490.
Cir. 73-7-75 Dtd 16/7/75
Despatched 19-7-75

I

Govt no 205-8 d/ 20 July 75

Ordered to be recorded and Communicated for the information of the Govt of India, in continuation of previous correspondence.

Cir. Engr for Rlys. No 205 d/ 20 July 75.

Copy of the above forwarded to the Govt of India in continuation of letter. No: 1091 d/ 19 April 1875 from. 2.

6 Sc 26/2

3-8-75

4492

Govt. of India.

PUBLIC WORKS.

Dated 1875

Rec'd 1875

To

Commanding Officer

Nos. 1428 - 4492

1490

Commander's report

Letter from the Commanding Engr. to the Madras Sub: Co:

Engrs: for Revision

submitting report

the Commanding Engrs:

the Madras Sub: Co:

on the question of

enveloping cylinders

cylinders - in the

Rock, Nagapatam

information
i continuation
ner.
2057 dt. 20 Jan 1875
w forwarded
continuation
april 1875

Forwarded, copy of
Engrs: on Letter of the
Commanding Engrs: for
Revn:, submitting
Report from the
Commanding Engrs: to the
Madras Sub: Co: on the
question of enveloping
every new cylinder
in the sea work.

with order.