

Public Works (1897) Department.

G.O., No. 3465 W

DATED 10 December 1897

[Despatch Abstract.]

Stoney's Sluice: Letter from the Dy. District Engineer
of Stoney enquiring whether certain arrangements
for the supply of - via for the Periyar Project
will meet requirements, Comd to the officers concerned
with Remarks.

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

CURRENT No. 11989

Sp. 3465 Hg 10.12.97

From The District General
of Stores, India Office.

Order

Committee to
of friends concerned, with
reference to 30. 40

No. S. D. O. 5910

2394 W 7 30. ant. 1877.

Dated 12th November 1899

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Received 3. 12. 97

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Enclosures 4 (15.07.8-1)

a reply to the question

Spare copies

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going better.

SUBJECT

Stoney's Juice Tea for the

Verigar Project.

Informing that the Contract

for — has been placed

with Ingers Ransomes

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1,000-22-4-97.

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DUPLICATE

S.D.O. 5910.

12th November 1897.

Sir,

Referring to your indent No. 9 dated 29th July 1897 for Stoney's Sluice etc. for the Periyar Project I have the honour to inform you that the contract has been placed with Messrs Ransomes and Rapier at a cost of Rs 57,500 for the material demanded in the indent, together with the whole of the ironwork shown on your revised drawing replacing your drawing 10275 except that specially excluded in the letter of 22nd October 1897 (copy of which is enclosed together with subsequent correspondence) The Consulting Engineer remarks in his memorandum on the tender of Messrs. Ransomes & Rapier, "we conclude that the screen will be made in India from the material supplied under item 3, 4 and 5, and it would seem from the correspondence between India and Messrs. Ransomes & Rapier, that the carrying joist will be supplied in India".

I shall be obliged by your informing me whether these arrangements will meet your requirements.

The time by which the contractors undertake to deliver the work is 26th Jan, 1898, but they will do their best to expedite the delivery if they can possibly do so.

I have the honour to be, Sir,

Your obedient Servant,

R. G. CROZIER

Deputy Director General of Stores.

The Secretary
to the Government, Public Works Dept.
Madras.

3 letters.

India Office
Warrant
London S.W.
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Dupli

On 11/8/97

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Pinjar Head Sluice Specification

• Shutter The mechanism consists of the following parts: - Beginning on the upstream side: there is built into a groove provided in the masonry, a cast iron frame-work or truss, consisting of a sill girder, a lintel girder and two jamb pieces. These castings are all bolted together at machined faces, so that true and rigid work is secured, the inside edges are also planed, where bottom and sides and top of the gate come in contact with them, thus securing a close and satisfactory fit.

The side castings extend sideways into the wall and are securely built into place to them are united by means of short lengths of steel joists, the roller path castings. The joists are 3'8" long and placed about every 2' so that the whole forms one rigid structure. The roller path casting has a projecting ledge or ridge down its whole length. On this rests the actual roller path. This is of cast iron, and truly machined on its face and also in the groove, which fits on the ridge.

The width of the roller face is 11", this being necessary, owing to the great pressure to which the sluice may be subjected.

The roller path is free to rock slightly on the ridge so as to ensure the pressure of the rollers coming equally on the whole width of the roller path.

The main roller path casting, which is built into the wall, carries a strong steel shield plate to protect the rollers and path against the rush of water when the gate is lifted. This shield plate is easily removable for purposes of inspection.

The gate is directly supported against the water pressure by 20 pairs of cast iron rollers. The skin of the gate is of exceptional strength, being $\frac{3}{4}$ " thick steel plate.

The clear opening of the gate is 12'4" high & 4'6" wide, equal to $118\frac{1}{4}$ square feet against 46 square feet given by you as the average sectional area of the tunnel.

The form of the gate is narrower and higher than that of the tunnel, but this proportion of height to width is much more economical for heavy pressure sluices, as the greater height gives more length of roller path, and the width of the rollers, &c can then be proportionately reduced.

The skin of the gate is supported by 14 steel joists, 15" x 6", which transmit the load to sand castings which rest on the rollers.

The gate is operated by a screw

Masonry - The sluice chamber is formed by the existing masonry at the back and on the other three sides by new masonry. The internal dimensions of the chamber are 15' 6" deep and 15' 0" wide. On the upstream side a strong screen is provided to prevent drifting trees, &c., being carried into the tunnel. At the junction of the side walls into the sluice chamber grooves are provided for a temporary door or horizontal baulk. The sides of the culvert converge at an angle of 1 in 3 for the double purpose of getting the best efficiency from the sluice and directing the stream so that it may not strike the rollers but first touch the shield plates. The thickness of the front and side walls is made sufficient to ensure their safety should the lake fill before the masonry has had time to set fully. The rock floor under the shutter will be truly dressed to the required level. Elsewhere it may be left rough. The sloping rock on which a portion of the masonry is to be built will be carefully cut in broad steps so that there may be no leakage or slipping under the great pressure to which the walls will be subjected. All dressed stone will have beds and joints dressed truly at right angles to face for whole depth. Rubble will be roughly hammer dressed.

to suit work. All masonry will be built in Portland cement mortar up to level + 124.00, the mortar being composed of one part cement to three sand, and care being taken not to use more water than required above level + 124.00 work will be built in mortar composed of one part lime, one and a half sand and one sack. The face work will be pointed with mortar composed of one part cement and one and a half sand. The walls of screen will be built in sack mortar.

Platform. The platform will be carried on the walls and on a steel beam across the chamber. A portion of the flooring as shown in the drawing will consist of steel foot plates, the edge of which will rest in a $1\frac{1}{2}'' \times \frac{1}{2}''$ rebate cut in the coping stones. The remainder of the flooring will be of 2 plank on wooden joists. A manhole will be left in a convenient place and a fixed iron ladder provided for descending to the ledge at level + 124.00 a portable ladder will be used if it be necessary to descend to the floor.

General. All required materials should be ready at site by end of February and the channel should be banded as soon as the level and flow of water permit and work put in hand without delay. It will have

to be remembered that there have
been freshes in the Periyar even in
March and it is of the utmost
importance to push on the work
as rapidly as possible. As soon as
it is brought in to level of the
top of the arch, boulders should be
put in the temporary grade as water
cannot be allowed through the vent
until the shutter is fixed.

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