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(3) Initials of the Referencer

MADRAS RECORD OFFICE.

Government of Madras.

DEPARTMENT.

G.O. No. Press Mis.

Dated 18

Not to be folded or roughly handled

No. 80. Read the following letter from Colonel C. E. FABER, Chief Engineer; to J. D. BOURDILLON, Esq., Secretary to Government, dated 8th March 1859, No. 8410.

SIR,

In forwarding with reference to Extract Minutes Consultation, under date the 4th February 1859, No. 308, the accompanying copy of the Proceedings of a Committee assembled by my orders to determine the site of the Boiler House of the Steam Engine to be erected for driving the Printing Presses attached to the Government Office, and to report upon the suggestions of the Superintendent of the Press, respecting the Engine in his Memo. of the 13th January 1859, I have the honor to recommend that, pending the Garrison Engineer's preparation of complete Estimates for providing every probable requisite for the whole project, the immediate commencement of the building for the Boiler and of the underground flue and Chimney by the Garrison Engineer may be authorized on emergency.

Proceedings of a Committee assembled at the Government Office in the Fort, on the 3rd March 1859, by order of the Chief Engineer, Madras.

President.

Captain C. A. Orr, Superintending Engineer, Northern Circle.

Members.

Captain H. L. Prendergast, Acting Garrison Engineer.

Mr. Flockhart, and Mr. Thompkinson. } Mechanical Engineers.

The Committee having assembled pursuant to orders, proceed to inspect the site on which it is proposed to erect the Boiler House, and set up the Engine for driving the large Printing Presses attached to the Government Office, and likewise to examine the Boiler with a view to making such suggestions as occur to it for carrying out the measures proposed in Mr. Smith's Memo. of the 13th January 1859, for the prevention of sparks from the Chimney, and the consumption by the furnace of its own smoke.

2. The questions of the most suitable position for the Boiler and Engine, respectively, do not appear to have been referred to the Committee, but the Superintendent of the Press having requested its advice, the Committee, after careful examination of the ground and the existing buildings with Mr. Smith, is unanimously of opinion that the Engine should be set up in the small room adjoining the Press room originally intended for, but not now required by the Electric Telegraph Department, so as to allow of motion being communicated with facility, and without loss of power, direct to shafting taken through the party wall, and onward over the Presses, and carrying the pullies from which those Machines will be driven. The Boiler should be placed a few feet outside the same room under a house erected for the purpose, and in order to prevent any inconvenience being felt in the upper rooms of the Government buildings from its propinquity, either from the smoke or hot air generated in the furnace, the Committee would recommend that the flue should be carried in an under-ground Masonry Tunnel to the ramparts, and be terminated there by a Chimney of sufficient elevation to create a powerful draft to the furnace for the necessarily rapid production of steam.

3. In considering the subject of the prevention of sparks and the self-consumption of smoke, the Committee would, in the first place remark, that inasmuch as the former consist of red-hot cinders, which can only be thrown off when the fuel is thoroughly ignited, and burning bright without emitting smoke, the consumption of the latter, which is evolved only in any quantity after each addition of fresh fuel, will in no way effect theejection of sparks.

4. The Committee, however, notwithstanding the weighty opinion already recorded of the danger likely to arise from the erection of a Steam Engine in the Fort, does not believe that from the furnace of the Boiler under examination, any danger need be anticipated from hot cinders, because, owing to the great length of its flue surface, Coal, which contrary to Mr. Smith's supposition is less liable to produce sparks than Coke, will be found far the best description of

fuel, and the draft will not be so rapid as to convey solid atoms, in a state of ignition, so far as the orifice of the Chimney, even if the latter were placed immediately over the Boiler instead of at a considerable distance as above recommended.

5. With respect to adapting the furnace to the consumption of its own smoke, the Committee is of opinion that, as the Boiler, consisting of a simple Cylinder of the unusual length of 30 feet, has to be embedded into masonry, built in such a way as to form a furnace 3 feet in depth and a flue under the remaining 27 feet, it is only necessary to extend the fire grate to six feet, and to place a bridge of fire brick, say nine inches high, about five feet from the furnace door; the fire place will be thus greatly improved, and the smoke having then to pass over the red hot fire brick and the bright embers near it, will be so heated as to ignite and enter the flue as flame on being mixed with the oxygin of the air, which will enter through the small space of open fire bars behind the bridge, at a high temperature from having traversed the ash pit close below the fire bars. The means of closing or opening this small aperture, for the admission of air according to the state of the fire, must be afforded by fitting below it a moveable iron shutter.

6. Time does not admit of the Committee preparing for submission with these Proceedings, a Plan for carrying out the arrangements proposed, but one will be prepared without delay, and in the meantime the Garrison Engineer, in estimating for the Boiler House and the cost of erecting the Machinery, will provide for what is necessary.

7. In conclusion, the Committee would recommend the immediate commencement of the Engine House and Chimney, as their erection and the construction of the connecting underground Masonry Tunnel will occupy sometime, and it appears inexpedient that the excellent Steam Machinery ready at hand should longer remain unavailable.

For the Committee.

Fort Saint George, 5th March 1859. } (Signed) C. A. ORR, Captain, *President.*

No. 81. ORDER THEREON, No. 646; dated 19th March 1859.

Referred to the Military Department. The order in that Department dated 4th March 1859, has been referred to the Chief Engineer for report with Extract Minutes Consultation dated 10th March 1859, No. 530.

(Signed) W. C. SIM,
Ag. Dy. Secretary to Government.

Proceedings of a Committee assembled at the Government Office in the Fort on the 3d. March 1859. by order of the Chief Engineer Madras.

President

Captain C. A. Orr Superint.t Engineer Nilgiri Circle

Members

Captain H. L. Prendergast Acting Garrison Engineer

Mr. Rockhart and Mr. Thompkinson } Mechanical Engineers.

The Committee, having assembled pursuant to orders, proceed to inspect the Site on which it is proposed to erect the Boiler House, and set up the Engine for driving the large printing Presses attached to the Government Offices, and likewise to examine the Boiler with a view to making such suggestions as occur to it for carrying out the measures proposed in Mr. Smith's Memo: of the 13th January 1859. for the prevention of sparks from the Chimney, and the consumption by the furnace of its own smoke.

2. The questions of the most suitable positions for the Boiler and Engine, respectively, do not appear to have been referred to the Committee, but the Superintendent of the Press having requested its advice, the Committee, after careful examination of the ground and the existing buildings with Mr. Smith, is unanimously of opinion that the Engine should be set up in the small room adjoining the Press room originally intended for, but not now required

required by the Electric Telegraph Department, so as to allow of motion being communicated with facility, and without loss of power, direct to shafting taken through the party wall, and onward over the Prefect, and carrying the Pullies from which those machines will be driven. The Boiler should be placed a few feet outside the same room under a house erected for the purpose, and in order to prevent any inconvenience being felt in the upper rooms of the Government buildings from its proximity, either from the smoke or hot air generated in the furnace, the Committee would recommend that the flue should be carried in an under-ground Masonry tunnel to the ramparts, and be terminated there by a Chimney of sufficient elevation to create a powerful draft to the furnace for the necessarily rapid production of steam.—

3. In considering the subject of the prevention of sparks and the self consumption of smoke, the Committee would, in the first place remark that inasmuch as the former consist of redhot cinders, which can only be thrown off when the fuel is thoroughly ignited, and burning bright without emitting smoke, the consumption of the latter, which is evolved only in any quantity after each addition of fresh fuel, will in no way affect the ejection of sparks.—

4. The Committee however notwithstanding the weighty opinion already recorded of the danger likely to arise from the ejection of a Steam Engine in the Fort, does not believe that from the furnace of the boiler under examination any danger need be anticipated from hot cinders, because, owing to the great length of its flue surface, Coal, which contrary to Mr Smiths supposition is less liable to produce sparks than Coke, will be found far the best description of fuel, and the draft will not be so rapid as to convey solid atoms in a state of ignition, so far as the orifice of the Chimney, even if the latter were placed immediately over the boiler instead of at a considerable distance as above recommended.

5. With respect to adapting the furnace to the consumption of its own smoke, the Committee is of opinion that, as the Boiler, consisting of a simple Cylinder of the unusual length of 30 feet, has to be embedded into masonry, built in such a way as to form a furnace 3 feet in depth and a flue under the remaining 27 feet, it is only necessary to extend the fire grate to six feet, and to place a bridge of fire Brick, say nine inches high, about five feet from the furnace door; the fire place will be thus greatly improved, and the smoke having then to pass over the red hot fire Brick and the bright embers near it, will be so heated as to ignite and enter the flue as flame on being mixed with the oxygen of the air, which will enter through the small space of open fire bars behind the bridge, at a high temperature from having traversed the ash pit close below the fire bars. The means of closing or opening this small aperture, for the admission of air according to the state of the fire, must be afforded by

by fitting below it a moveable iron shutter.—

Time does not admit of the Committee preparing for submission with these proceedings a plan for carrying out the arrangements proposed, but one will be prepared without delay, and in the meantime the Garrison Engineer, in Estimating for the Boiler House and the cost of erecting the Machinery, will provide for what is necessary.—

In conclusion the Committee would recommend the immediate commencement of the Engine House and Chimney, as their erection and the construction of the Connecting underground Masonry tunnel will occupy sometime, and it appears inexpedient that the excellent Steam Machinery ready at hand should longer remain unavailable.—

For the Committee.—

Fort St. George
2nd March 1859.

I. M. C. A. Orr. Captain
President

True Copy

Chas A. Orr Capt
Supg Engr Circle.

Asst Engineer
Chief Engineer

No 8410

Central Office of Public Works.
Fort St George, 8th March, 1859.

From
The Chief Engineer

To
The Secretary to Government
Public Works Department

Public.

Sir.

In forwarding with reference to Extract Minutes Consultations under date the 4th February 1859 No 308, the accompanying copy of the Proceedings of a Committee assembled by my orders to determine the site of the boiler House of the Steam Engine to be erected for driving the Printing Presses attached to the Government office, and to report upon the suggestions of the Superintendent of the Press respecting the Engine in his Memo of the 13th January 1859, I have the honor to recommend that, pending the Garrison Engineer's preparation of complete Estimates for providing every probable requisite for the whole project, the immediate commencement of the building for the boiler and of the underground flue and Chimney by the Garrison Engineer may be authorized on Imprest Agency.

I have the honor to be
Sir
Your Most Obedient Servant
Wm Foster Colonel
Chief Engineer.

Enclosure 1
Copy Proceedings

To
The Secretary to Govt.
Public Works Dept.

No 8410

Dated 8th March 1859

Received

Enclosure in Letter from Chief Engineer dated 8th March 1859

No 8410-

Proceedings of a Committee assembled under the orders of the Chief Engineer to determine the site of the boiler House of the Steam Engine to be erected for driving the Printing Presses attached to the Government Office.

The 3d March 1859.

Present

Lieut Colonel Foster Chief Engineer
Captain Hall Garrison Engineer
Mr Pharoah Superintendent of the Press

Cons. 8th Feby 59 Nos 21 & 22

No 80 - & 81.

P.W. 1859 Department
Cons. 8th Feby & 22nd March.
537

Navy
The Chief Engineer
&
The Secretary to Govs
P.W.O.

Dated 8 March 1859.
Received 8.

No 8410

Encls = 1 = 4 March 1859
From Admy 17 = 4 March 1859
Che 655 - Cons. 22 = 11th - 11th

Forwards with reference to Col Pris Cons No 300 of the 4th February 1859 Copy of the Proc of a Committee of Spending the Construction of plans and Estimates recommended the immediate commencement of the buildings required for the Engine & Boiler of the Mint & Office printing Respectively

From Military Dept 18th / 28th March 59
No 481 in Cons 12th April 10

No 646. 19th March 1859
Written answer

No. 646.

Referred to the Military Department. The order in that Department dated 4 March 1859, has been referred to the Chief Engineer for report with the Mint Cons dated 10 March 1859 No 330

First Wm George
19th March 59

Copies to the Navy Dept. Pris 24