

Gobt. of Madras.

27.4.85 - 3699c
24.10.84 - 3297c
18.6.95 - 2572c
28.6.93 - 1699c Encls 1 plan -
5.5.93 - 1244c
5.10.92 - 2764c Recd: 16.12.95

To

The Public Works Dept

No 3236 W of 18 Dec 1895

Proceedings, dated 11 December 1895
No. 925

Subject.

Approving the proposal of the Director of Public Instruction for making certain alterations in the College of Engineering Workshops and stating that the Consulting Architect will be instructed in the Public Works Dept to proceed at an early date with the erection of a hundred ton testing machine.

Communicated to the Messrs. Architects for early necessary action, with reference to para 2.

C.M.S.
16
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T.M.
B.G.

DESPATCHED
19 DEC. 95

C.A. & Govt. with plan.

229/12



PROCEEDINGS OF THE MADRAS GOVERNMENT.

Read the following paper:—

From the Director of Public Instruction, Madras,
dated 1st. November 1895, No. 11721.

The Engine intended for the College of Engineering Workshop arrived about the middle of 1894 and was set up in the room originally designed for it. Lieut. Colonel Smart, who was then Acting Principal, apprehended that its position was dangerous and requested Mr. Phipps, the Locomotive Superintendent of the Madras Railway, to inspect the College Workshop and give his opinion on the point. Mr. Phipps considered the position of the Engine dangerous, and his views were generally endorsed by the Chief Engineer who subsequently inspected the College Workshop. Mr. Phipps's report and the Chief Engineer's note on the subject are submitted for information.

2. Major Love writes "It was proposed that the Engine should be removed to the south end of the shop, and that steam should, as a temporary measure, be supplied from the present boiler room by a long steam pipe running through the building. It was intended to build a new boiler room ultimately near the Engine. Mr. Davidson, who had in the meantime assumed charge of the Principalship from Colonel Smart, considered that there was no urgency for the removal of the engine, and the matter

was

was allowed to lie over until my arrival. I first conferred with Mr. Phipps, pointing out that certain minor alterations in the arrangement of the Engine had already been made, and enquiring whether, if certain others were effected, he would consider the Engine safe. In reply Mr. Phipps stated that he would regard the Engine as dangerous so long as the driving ropes from the fly wheel passed back alongside of the valve gear. Mr. Chatterton remarked that a similar arrangement holds good in the case of the Engine belonging to the London Technical Institute at Finsbury, and that no accident has ever taken place there. Whatever weight may be attached to this circumstance, the fact remains that a specialist has been called in to advise regarding the College Workshops, and that he records and re-iterates the opinion that the Engine is unsafe. If any accident should occur, the responsibility for it in these circumstances would rest on me. I consider therefore that Mr. Phipps' advice must be adopted, and that the Engine must be disposed so that the driving ropes from the flywheel pass away from the Engine instead of alongside it.

The question then presents itself how this alteration may best be made. The position for the Engine proposed by Mr. Phipps in his report of August 1894 has many disadvantages, and is, I think, undesirable. The position is cramped, there would not be space for students to assemble round it, to take indicator diagrams &c; the long steampipe would be an expense and an inconvenience; one or more of the machine tools would have to be shifted; the exhaust steam could not be delivered into the Chimney; and the location would be generally inconvenient in view of future developments in the Workshops. I suggested to Mr. Phipps that these objections might best be met by constructing

a new Engine and boiler room, the shops being extended towards the south. That gentleman agreed with me that this proposal furnished the best means of meeting the requirements of the case and he kindly prepared a plan showing an arrangement that might be made. Mr. Chatterton also accepts the proposal if the removal of the Engine from its present position is decided on. The Chief Engineer, it appears, would not object to the appropriation of the land, judging from paras. 6 and 9 of his note No. 3297 C. dated 23rd. October 1894.

I have caused an estimate to be prepared in the College for an extension of the Workshops by 20 ft. to the South. Space for this extension is available without encroaching on the roadway leading to the Public Works Department Offices. The extension would be divided into an Engine room 40' x 30' and a boiler room 22' x 20' as per accompanying tracing. The window openings at the South end of the present building would be cut down to the floorline and the window frames transferred to the new South wall. The advantages which the proposed arrangement will secure are:-

- (a) the safety of the Engine for students' work
- (b) convenience for experimental working
- (c) space in the Engine room for a small dynamo which will eventually be required.
- (d) the gain of additional space in the workshop proper.
- (e) the conversion of the existing boiler room into a small forge.

I estimate the cost of the proposed extension building at Rs. 7,500. This figure might be reduced by about Rs. 1,000 if the extension were made 15 ft. wide instead of 20 ft; but I recommend the larger dimension. The cost of removing Engine and boiler, putting

in new foundations, extending the shafting, re-arranging steam and water pipes and water tanks, converting old boiler room into forge &c may be put down roughly at Rs. 1500, making a total of Rs. 9000. If the proposals generally are approved, detailed estimates may be prepared, that for the building by the Consulting Architect and that for the machinery by Messrs. Massey & Co. The tracing referred to is herewith submitted.

3. The total expenditure which the alterations above suggested will involve is estimated at ^{Rs 2000 to which should be added} Rs. 3000 the estimated cost of the erection of the 100-ton testing machine. The whole of the outlay may, perhaps, be kept within Rs. 10,000.

4. I have the honour to request that the Consulting Architect may be instructed to prepare the necessary estimates for the buildings, as soon as possible, and in view of the emergency of the case to proceed with the work of erecting the tester in anticipation of the sanction of Government for the detailed estimates. Messrs. Massey & Co. will, on receipt of the orders of Government, be requested to prepare the necessary estimates for the machinery. Funds have to be allotted from the Provincial Reserve, if no savings are available out of the sanctioned allotments for the current year. The additional cost, which was not anticipated, seems unavoidable and is at any rate absolutely necessary for the efficient working of the workshops.

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Endorsement of the Public Works Department, dated 27th. November 1895, No. 3699C.

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O R D E R, dated 11th. December 1895, No. 925.

The proposals of the Director of Public

Instruc.

Instruction are approved.

2. The Consulting Architect will be instructed in the Public Works Department to proceed with the work of erecting the tester at an early date and to submit the necessary estimates for the buildings for sanction.

(True extract)

Ranis

Ag. Under Secretary,
for Chief Secretary.

To,

The Public Works Department. *(with tracing)*
.. Director of Public Instruction.

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