

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

General.
Account.

READ—the following letter from J. W. BRASSINGTON, Esq., Consulting Architect to the Government of Madras, to the Chief Engineer, Public Works Department, dated Chépák, 19th November 1887, No. 1086 :—

I have the honor to submit the final report of the committee appointed to examine and test the columns supplied by the Public Works Department Workshops to the College of Engineering, Madras.

ENCLOSURE.

Final Report of the Committee appointed by the Chief Engineer, Public Works Department, in his memorandum, No. 3647 C., of 22nd October 1887.

In accordance with the first resolution of their meeting on the 24th October all the columns have been removed from the College of Engineering to the Public Works Workshops, and the committee having assembled at that place on the 14th November 1887 proceeded to examine and, as far as possible, test the columns.

2. Careful consideration had convinced the committee that, in the absence of suitable hydraulic appliances, it was impossible to subject the columns to any compression approaching that which they would be subjected to in the building; but, as the thickness of metal allowed in the columns is ample, it was decided that all those that were free from dangerous flaws should be passed after being carefully examined and rung with a hammer.

3. There being no doubt that the failure of the column which led to this inquiry was due chiefly to the shifting of the core, the committee broke up under a steam hammer one of three rejected columns (marked L in the drawings), and they found that, though the column had been rejected in the Public Works Workshops foundry on account of flaws, the core had not shifted to any dangerous extent.

4. The conclusion arrived at by the committee with regard to the long columns marked M and L in the drawings was that the columns M were suitable for lighter loads, and that they should be kept on the stock of the Public Works Stores and be issued when an opportunity occurs, and that the columns marked L were suitable for the centre line of pillars in the building. Three only of these columns having been cast, the committee decided to use four of the columns marked M to make up the total number of seven pillars required down the centre of the building.

5. The smaller columns N and O were next examined, and two of them marked N were rejected as not sufficiently sound for the heavy load they would have to carry; but the committee consider that these rejected columns are quite sound enough for a lighter load.

6. Of the columns marked O one was considered doubtful as regards soundness, but, on drilling a hole at the suspected place, the thickness of metal was found to be $\frac{1}{8}$ inch as compared with the specified thickness of 1 inch, and accordingly this column was passed.

7. The general results of the inspection may be summed up as follows :—

- (a) Of the long columns marked L and M (of which 15 had been cast) eight were rejected for the college buildings, leaving seven that can be used for the centre line of pillars which carry only a single roof, that is, four columns marked M, three columns marked L.
- (b) All the twenty-four short columns marked N and O were passed, with the exception of two marked N, which had flaws.
- (c) None of the rejected columns are sufficiently unsound to be useless, and they could all be used to carry lighter loads.

(d) If stone pillars are substituted for the long columns that have been rejected, the only work remaining to be done by the Public Works Workshops is to (1) cast two new columns marked N, (2) cut four columns marked M to the same length as the columns marked L.

(e) The quality of metal in all the columns that were broken or drilled was uniform and good throughout.

8. With regard to the general question of the precautions to be taken against unsound castings being sent out of the shops, the committee understand that in future the Superintendent will use much stiffer cores, and by this means he will be able to reduce the number of chaplets when casting columns. The committee also consider it necessary that columns should be cast with the moulds on a slope, so as to facilitate the escape of gas as much as possible from the moulds. Beyond careful examination of each casting before it leaves the shops and the issue of strict orders that no hole or flaw is to be filled up without the express permission of the foreman, the committee have no further suggestions to make for improving the foundry work of the Public Works Workshops, but they are of opinion that, though the quality of the ordinary castings turned out from the Public Works Workshops is very good, it is not advisable to attempt the manufacture of such heavy and difficult castings as columns of 17 feet in length, and $1\frac{1}{4}$ inch metal, which might more economically be obtained from England, and which cannot be cast with any certainty as to quality without special appliances, for which there is no room or constant demand for in the foundry of the Public Works Workshops.

ORDER—dated 25th November 1887, No. 3220 W., Public Works.

The recommendations of the committee are accepted, and the proposed substitution of stone for iron pillars in the College of Engineering approved. The Consulting Architect should report whether additional funds are required for expenditure on the building in consequence.

(True Extract.)

(Signed) J. O. HASTED, Colonel, R.E.,
Secretary to Govt., P.W.D.

To the Consulting Architect to Government.
To Captain W. L. C. Baddeley, R.E.
„ A. Joyce, Esq., through Superintending Engineer, V Circle.

Exd. J. Moses.
Spare Copies

GENERAL.
ACCOUNT.

Govt. of 1887 Madras.

PUBLIC WORKS.

Dated November, 25th.

Recd.

Encl.

G.O., 25th Nov. 1887, No. 3220 W.

NOVEMBER.

College of Engineering,
Madras.

Orders on report of the committee
appointed to examine and test the iron pillars
supplied for the—.

P. W. D.

Consulting Architect's Office,

Chepauk, Madras,

21st December 1887.

No. 1233.

From J. W. Brassington Esq.
The Consulting Architect

to the Government of Madras.

To

The Chief Engineer
Public Works Department.

Sir,

Enclosure.

With reference to G.O. No. 3220 W
dated the 25th November 1887, I have the honor
to report that additional funds, if required
will be applied for later on in the year for
additions to the College of Engineering.

I have the honor to be

Sir

Your most obedient Servant.

J. W. Brassington

Consulting Architect
to Government.

PWC No 10518
Public Works Department.

No. 1W dated 5th January 88

From
THE CONSULTING ARCHITECT
TO THE GOVERNMENT OF MADRAS,

To
The Chief Engineer
P. W. D

Recorded with
reference to G.O. No. 3220W dated
25th November 1887.

23.12.87

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No. 1233.

Dated 21st December 1887.
Received 21-12-87

No. 1W dated 5th January 1888

No. of ENCLOSURES.

Subject.

Reporting that additional
funds for additions to the
College of Engineering,
if necessary will be applied
for later on in the year.

13/11/87

11/04/12

88
10/11 89

With Order

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