

Educational (1898) Department.

ED 7243
18/11/98

ORDINARY MS.

G.O., No. 500-1

DATED 12-8-98

* Donor's duty
from
11/12/98

9-9

[Despatch Abstract.]

Requesting the S. G. I. to sanction the proposal to permit the Professor of Engineering, Engineering College, Madras, to retain two-thirds of the fees paid by private persons for testing work done for them at the college workshops & to credit to him the remaining one-third to cover the wear & tear of the machines.

Printed by the Govt. Press
18/11/98

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11/11/98

BACK PAPERS.

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

FURTHER PAPERS.

G.O.	No.	Department.	Date.	G.O.	No.	Department.	Date.
g.o.	1604	Home	22.5.44				

Educational (1898) Department.

CURRENT No. 520



From the Dir. of Pub. Instruction
re: as

For Order

As to whether the G.O. may be addressed to allow Mr. Chatterton to retain two-thirds of the fee paid for testing work done by him at the Eng. College work shop!

Submitted that this may be addressed to that effect. The principle has already been admitted in G.O. 1054 of 8th Aug. 1897 and 1773 of 28 Dec. 1897

23/3
20.4.98

Yes
24/4/98
21.4.98

No. 3388

Dated 23 March 1898.
Received 18th April, 98
Registered 18th ..
Enclosures ~~Two~~ Three
Spare copies

SUBJECT.

Requesting sanction for the arrangement proposed by Mr. Chatterton regarding the disposal of fees paid by private bodies for the testing work at the College Workshops.



BACK PAPERS.

G.O.	No.	Department.	Date.
pc	1054	Public	8-8-77
"	1733	"	26-12-77.

FURTHER PAPERS.

G.O.	No.	Department.	Date.

10
N^o 310/S

Dated 19 January 1898

From

Major H. D. Lowe, R E
Principal, College of Engineering
Madras.

To

The Director of Public Instruction
Madras.

Encl: 1.

Sir,

In continuation of my N^o 306/S dated 17 January 1898, I have the honor to enclose copy of a note from the Professor of Engineering, in which Mr. Chatterton states the mode in which he considers the fees received for testing should be allocated for the present.

2. It appears reasonable that the Professor of Engineering and the members of the Workshop staff whom he may employ should be specially

remunerated for testing-work un-
connected with regular college in-
struction, which is performed out of
College hours. At the same time,
there might arise a temptation,
if the amount of public testing-
work were ~~very~~ large, to subordin-
ate regular college duties to
such specially remunerated work.

3. For the present no apprehen-
sion need be felt; but the princi-
ples that the Testing machine is
primarily intended for instruct-
ional purposes, and that the
ordinary college hours of the
Professor should not be encroached
on for testing work for other
Departments or for the public,
ought I consider to be carefully
kept in view.

I have the honor to be
Your most obedt Servt.
To O. Lane. Major RE
Principal

Rms. 921/98-
1897-98

College of Engineering.

To

The Director of Public
Instruction,
Madras



N^o 310/S.

Dated } 19 January 1898.
Despt^y }

Encls. 1

Subject.

Submitting for orders copy
of a note from the Professor
of Engineering, re
testing work

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200
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Encl. (2) 8500's letter
no. 3388
23-3-98

for 5000
12-8-98

College of Engineering, Madras.

ENGINEERING LABORATORY.

DIMENSIONS OF TEST SPECIMENS.

The Wicksteed Single Lever Testing Machine is capable of applying and accurately measuring Tensile, Compressive, and Bending Stresses up to 100 tons. The size and shape of the specimens should be regulated as follows:—

SECTIONAL AREA.

MATERIAL.	TENSION.		COMPRESSION.	
	AREA.	EQUIVALENT DIAMETER.	AREA.	EQUIVALENT DIAMETER.
HARD STEEL	2 sq. ins.	1 $\frac{1}{8}$ "	1 sq. in.	1 $\frac{1}{8}$ "
SOFT STEEL, Rolled and Forged Bronzes, Special Alloys, &c.	3 $\frac{1}{2}$ "	2 $\frac{1}{8}$ "	1 "	1 $\frac{1}{8}$ "
IRON, CAST ALLOYS, &c.	4 "	2 $\frac{1}{4}$ "	1 $\frac{1}{4}$ "	1 $\frac{1}{4}$ "

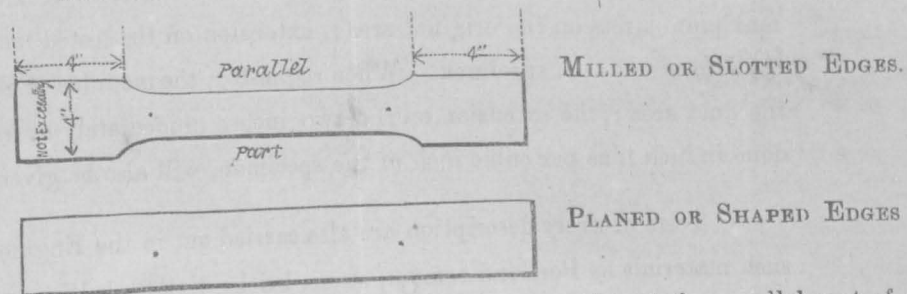
LENGTH.

Tensile and compressive specimens may be of any convenient length, not exceeding 3 feet. The length most usually adopted is 10 inches between the gauge points for tensile tests, and three diameters for compressive tests.

The span for beams must not exceed 6 feet and the specimens should not be more than 9" wide or 12" deep.

The machine will hold bars of almost any shape, but the following forms are the most convenient:—

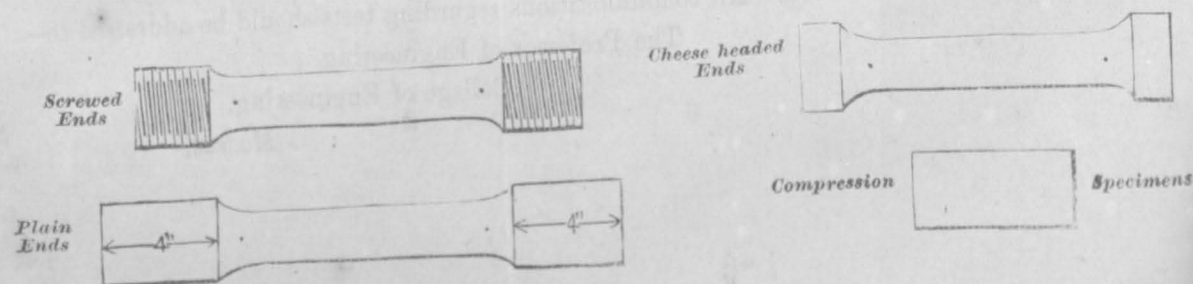
FLAT SPECIMENS.—Cut from plates, bars, angles, &c.



The width of the ends must not exceed 4", and the parallel part of milled or slotted specimens must be at least $\frac{3}{8}$ " narrower than the ends.

The thickness must not exceed 1 $\frac{1}{2}$ ".

ROUND SPECIMENS—



When the ends are screwed, the following proportions should be observed:—

DIAMETER OF PARALLEL PART.	Diam of Screwed End . .							
	1"	1 $\frac{1}{4}$ "	1 $\frac{1}{2}$ "	1 $\frac{3}{4}$ "	2"	2 $\frac{1}{4}$ "	2 $\frac{1}{2}$ "	SMALLER FOR CAST MATERIALS.
	12 V Threads per inch	1 $\frac{3}{8}$ "	1 $\frac{1}{8}$ "	1 $\frac{1}{4}$ "	1 $\frac{1}{2}$ "	1 $\frac{3}{4}$ "	2"	
	Whitworth Thread	3 $\frac{3}{4}$ "	1 $\frac{5}{8}$ "	1 $\frac{1}{2}$ "	1"	1"	1"	
	Length of Screwed Ends . .	1 $\frac{1}{2}$ "	1 $\frac{3}{4}$ "	2"	2 $\frac{1}{4}$ "	2 $\frac{1}{2}$ "	3"	

When Whitworth Threads are used faced nuts should be sent with specimen.

PLAIN ENDS.—The diameter of plain ends may be of any size from $\frac{1}{2}$ " up to 2", the length of the ends not less than 4". The parallel part should be at least $\frac{1}{4}$ " smaller than the ends. (These ends are not suitable for cast materials.)

CHEESE-HEADED ENDS.—The diameter of the head should be $\frac{3}{8}$ " larger than the parallel part, and the thickness about equal to the latter diameter. The parallel part may be made of any size from $\frac{1}{2}$ " diameter up to 1 $\frac{5}{8}$ ".

WIRE ROPES.

CAST MATERIALS.

BUILDING MATERIALS.

REPORTS.

The ends require special preparation, which can only be done at the College. All cast and brittle materials should be made with either screwed, or cheese-headed, or bulb ends, with very easy curves at the shoulders.

Specimens to be crushed should be in the form of cubes which for hard stones should not exceed 3" length of side, Portland cement may be made into 6" cubes and concrete into 9" cubes. In no case should specimens be more than 10" square or 2'-6" high.

The usual test report on tensile experiments gives the following data:—Test number; marks; dimensions; sectional area; reduction of area; elastic limit and maximum stress on the original area; extension on the tested length; also remarks on the fracture of each specimen. When requested, the modulus of elasticity; the stress on the final area; the extension on the two inches immediately at fracture; and the work done in inch tons per cubic inch of the specimen, will also be given.

Tests of every description are also carried out in the Engineering Laboratory, on such materials as Portland cement, stone, bricks, timber, belting, wire, &c.

ALFRED CHATTERTON, B.Sc., M.I.M.E., A.M.I.C.E.,
(Professor of Engineering).

NOTE.—All communications regarding tests should be addressed to—
The Professor of Engineering,
College of Engineering,
Madras.

To

28/12

The Principal,
College of Engineering,
Madras.

The scale of fees drawn up and printed in the circular herewith is a very low one and it is proposed that it should only be adopted as a temporary arrangement till we are able to form a more accurate estimate of the amount of work which is likely to be sent to the College for testing.

As the testing will mainly have to be done out of College hours or on holidays and as it throws in some cases a very considerable amount of responsibility on me, I think it is only fair that for this extra work I should receive a share of the fees. For the present I would suggest that one-third be placed to the credit of Government and two-thirds be allotted to me. At the end of a year or two years, the proportion might be readjusted if found desirable. The amount of outside testing

College of Engineering,
Madras.

Engineering Laboratory.

DIMENSIONS OF TEST
SPECIMENS.

Specimen	Length	Width	Thickness
1	10	1	1/4
2	10	1	1/4
3	10	1	1/4
4	10	1	1/4
5	10	1	1/4
6	10	1	1/4
7	10	1	1/4
8	10	1	1/4
9	10	1	1/4
10	10	1	1/4

that will be received depends almost entirely upon the reputation of the Engineer in charge of the testing machine and the trouble and care with which he carries on the work. If this is well done, the one-third share which I suggest Government should receive will amount to considerably more than it would do if the officer in charge of the machine is not interested in the work.

The proposal to give the officer in charge a personal allowance is in many ways the most satisfactory but it will entail a considerable loss to Government at the outset, as it will probably take several years before the testing laboratory is much used.

(Signed) Alfred Chatterton.

18th January 1898

Professor of Engineering

(True Copy)

To the Hon. Secy. to Govt.
Principal

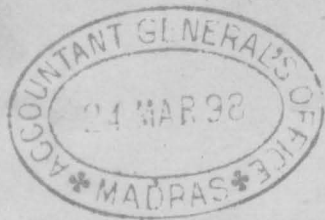
19th Jan 1898

CURRENT No. 520

OFFICE OF THE DIRECTOR OF

PUBLIC INSTRUCTION,

Madras, 23rd March 1898



No. 3388

From

THE HONORABLE MR. D. DUNCAN, M.A., D.S.C., LL.D.,

DIRECTOR OF PUBLIC INSTRUCTION,

Madras,

To

THE SECRETARY TO GOVERNMENT,

Educational DEPARTMENT,

(Thro' the Accountant General) Fort St. George.

SIR,

In submitting a letter from the Principal, College of Engineering, No 310-S dated 19th January 1898, together with its enclosure, I have the honour to request that the sanction of Government may be obtained for the arrangement proposed by Mr. Chatterton regarding the disposal of fees paid by private bodies for the testing work done at the College Workshops. The work is no part of Mr. Chatterton's legitimate duties; it is done out of college hours and on holidays, and does not interfere with his regular duties.

2. Under G.O. No 1054 Public dated 8th August 1877, the Chemical Examiner draws a remuneration of 96 per cent of the value of work done by him for private bodies, 4 per cent being credited to Government to cover the cost of chemicals used in carrying out the analysis. Mr. Chatterton's proposal to credit one-third of the fee receipts to Government to cover wear and tear seems reasonable and may be sanctioned for two years tentatively. The arrangement may be re-considered at the end of two years, when sufficient experience will have been gained working.

3. As in the case of the Chemical Examiner I would suggest the Professor of Engineering make his own arrangements and to allow the Professor of Engineering to have testing College laboratory

such of his subordinates as may assist him.

I have the honour to be,

Sir,

Your most obedient servant,

S. G. Suman

Director of Public Instruction.

No. 1478

Fort St. George,
Accountant General's Office,
16th April 1898.

Forwarded to Government. Under Article 91(c) Civil Service Regulations, the sanction of the Government of India will be necessary to Mr. A. Chatterton being permitted to retain $\frac{2}{3}$ of the fees paid by private bodies for getting their work done at the College Workshops as the amount will exceed Rs. 500.

W. H. B. P.
Accountant General.

To
The Secretary to Government,
Educational Department.

18th January

19th Jan 1898

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1,000-18-9-97.

Papers to be read in proceedings:--

Again G.O., No.	, dated	189 .
Again G.O., No.	, dated	189 .
Current No. 520	of 1898, dated 23 rd March, from the D.P.O.	
" "	" 189 , "	" "
" "	" 189 , "	" "

ORDER.
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No 500 of 12-8-98

The Govt of I will
be addressed.

(from orders)

To The D.P.O. 940
8/8/98

Letter No 501 of 12-8-98

To The Secy to the Govt of I.
Home Dept.

Sir,

I am directed to state that the Engineering Laboratory attached to the College of Eng-
Madras, has lately been ^{provided} ~~equipped~~ with testing machines for testing materials used in Engineering construction and that it is proposed to allow private ^{persons} ~~parties~~ to have testing work done at the College laboratory

on payment of certain fixed fees, a scale of which is given in the copy of the notice herein enclosed. The testing work will be done by the Professor of Eng^g, and ^{the work done by} ~~that~~ for private ^{persons} ~~parties~~ will be unconnected with the College duties of the Professor and will be done out of college hours and on holidays. The amount of private work that will be received will depend to a great extent on the reputation of the officer doing the work and the trouble and care with which it is done. In view of these facts and on the analogy of the case of Chemical Examiners to Govt who are allowed to receive 96 percent of fees for all analyses not effected on behalf of Govt of vide correspondence recorded in the Home Dept. Resⁿ no 302 Ind. D 5th May 1877 - it is proposed that the Professor of Engineering ^{should} be permitted to retain two-thirds of the fees received and to credit to Govt the remaining one-third to

cover ^{the} wear and tear of the machines. A.R. the Government in Council Approves of this proposal and with reference to art 91(c) of the Civil Service Regulations requests that the sanction of the Govt of I may be accorded thereto.

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8/8/98

MA
5-4-98

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When given for copying

When copied

When examined

When signed

1898

READ AGAIN G.O., No
189

DATED

CURRENT No.

ENCLOSURES TO C. No.

ORDER OF GOVERNMENT.

LETTER OF GOVERNMENT.

STATEMENT WITH DITTO

PAPERS NOT FILED UP, BEING MEANT FOR DESPATCH
IN ORIGINAL.

N.B.—

A = Copy in full.

B = Not to be copied.

P = Copy abstract only.

Q = Copy heading only.